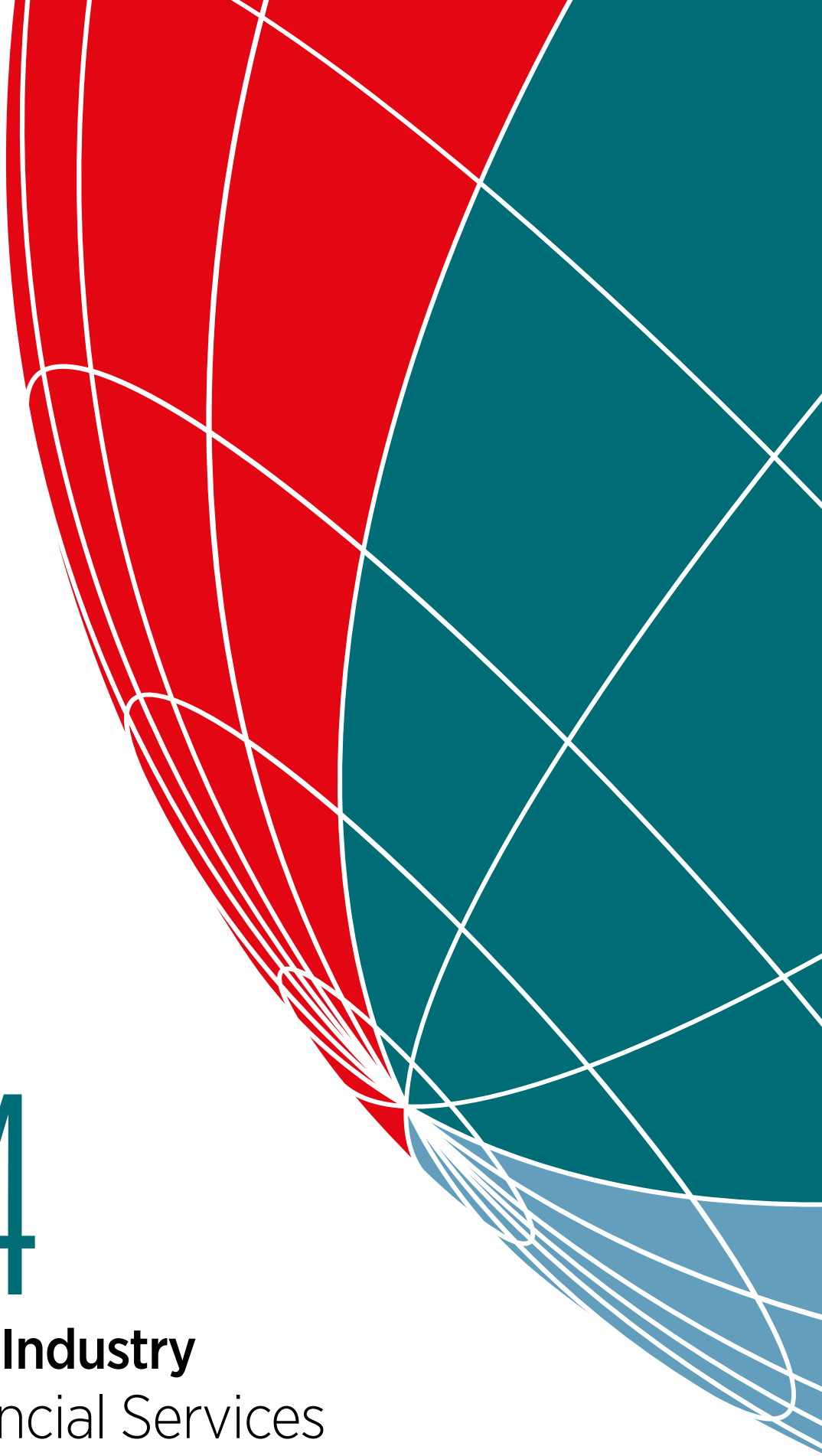

2014

State of the Industry

Mobile Financial Services for the Unbanked

MOBILE MONEY | MOBILE INSURANCE | MOBILE SAVINGS | MOBILE CREDIT

Mobile Money for the Unbanked

The GSMA's Mobile Money for the Unbanked (MMU) programme works to accelerate the growth of commercially viable mobile money services to achieve greater financial inclusion.

For more information visit www.gsma.com/mmu

THE MMU PROGRAMME IS SUPPORTED BY THE BILL & MELINDA GATES FOUNDATION, THE MASTERCARD FOUNDATION, AND OMIDYAR NETWORK

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Finally, the authors would like to thank Bima and MicroEnsure for helping to collect data on mobile insurance services.

DISCLAIMER

This report is based on data collected through MMU's annual Global Adoption Survey of Mobile Financial Services, the MMU Deployment Tracker, MMU Estimates & Forecasts, and internal analysis by the MMU Team.

Survey data - Survey data is self-reported and has not been verified independently by the GSMA. Before data is entered, it is thoroughly checked for what is included and excluded, as well as how the metric is defined by the participant. Data is also cross-checked against regional benchmarks and other data sources.

Estimates & forecasts - For some metrics, GSMA Mobile Money Intelligence uses data modelling to estimate and forecast figures in order to have a more comprehensive representation of the industry, rather than only of survey participants. The methodology used to model these metrics is based on a mixed bottom-up (service-level) and top-down (country-level) approach and uses a number of data sources including MMU's annual Global Adoption Survey of Mobile Financial Services and the MMU Deployment Tracker.

For further details about the methodology used in these estimates and forecasts, see Appendix C.

CONFIDENTIALITY

Data published in this report is always presented in a way to protect the confidentiality of each deployment. We only highlight services where the service provider has granted approval to disclose key performance information.

About Mobile Money for the Unbanked

In developing countries, 2.5 billion people are 'unbanked' and have to rely on cash or informal financial services which are typically unsafe, inconvenient and expensive. Traditional "bricks and mortar" banking infrastructure struggles to make the business model work to serve low-income customers, particularly in rural areas. However, over one billion of these people have access to a mobile phone, which can provide the basis for extending the reach of financial services such as payments, transfers, insurance, savings, and credit.

Since 2009, the MMU programme has been supporting mobile money services to provide convenient, safe and affordable financial services to the underserved, thereby increasing financial inclusion. We do this through close engagement with mobile money providers, providing the mobile industry with tools and insights to help deployments scale sustainably, as well as supporting the creation of enabling regulatory environments to facilitate digital financial inclusion. The programme also supports mobile money operators to implement interoperability of mobile money services, and to further develop the digital ecosystem by facilitating the integration of third parties to mobile money schemes.

For more information, visit www.gsma.com/mmu

Foreword

Once again, we are excited to release our annual State of the Industry Report on Mobile Financial Services, providing the GSMA's latest insights on the performance of the mobile money industry. Indeed, mobile money has been growing at a dizzying rate over the past few years and mobile network operators have played a key role in its development. With more than 250 services deployed in 89 countries globally, mobile money is transforming the way people access financial services, while offering new business opportunities for operators. This report builds on a rich body of knowledge developed by the GSMA's Mobile Money for the Unbanked programme and provides key data to help mobile money practitioners, regulators and other industry partners to better understand the sector.

Building on our work in the Mobile Money for the Unbanked programme, in 2014, the GSMA launched the Mobile Money Interoperability programme with the support of Axiata, Bharti Airtel, Etisalat, Millicom, MTN, Ooredoo, Orange, Telenor, Turk Telekom, Vodafone and Zain. This initiative is accelerating interoperability of mobile money services by identifying and sharing best practices, guidelines and processes and providing regulatory support in a number of leading markets. In 2014, operators in Pakistan, Sri Lanka and Tanzania interconnected their mobile money services, allowing their customers to send money across networks within those countries.

However, to truly bring this industry to scale, operators need to continue to invest in the systems, technology and partnerships that will enable more businesses to use mobile money. The GSMA has a critical role to play in facilitating and supporting industry collaboration, both among our members as well as with banks and other external parties, to enable the creation of a truly ubiquitous digital financial ecosystem. In 2015, we are focused on working to help the mobile money industry mature and reach scale, further proving its commercial and social impact and deepening its contribution to the digital services economy.

On behalf of the GSMA, I look forward to extending and strengthening our engagement with the mobile money industry to help it achieve its full potential, generating even higher performance in the years to come.

Anne Bouverot

Anne Bouverot
Director General
GSMA

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Executive Summary

As the industry moves on one more year, exciting new developments are taking place. In 2014, the mobile financial services sector continued to expand, boosted by the creation of more enabling regulatory frameworks in several markets. Now available in over 60% of developing markets, mobile financial services (MFS) are firmly established in the financial sectors of the majority of the developing world.

2014 saw a number of key trends emerging for the mobile financial services industry:

- 255 mobile money services are now live across 89 countries. In addition to USSD, STK and IVR, these services are increasingly available through mobile applications. This trend will continue to increase as smartphone penetration rises.

- While competition is heating up in markets where mobile money is available, a growing number of mobile network operators (MNOs) are showing interest in the development of interoperable solutions. In 2014, MNOs interconnected their services in Pakistan, Sri Lanka and Tanzania, following in the footsteps of MNOs in Indonesia, where interoperability was implemented in 2013.

- Regulators are increasingly recognising the major role that non-bank providers of mobile money services can play in fostering financial inclusion and, as such, are establishing more enabling regulatory frameworks for the provision of mobile money services. Reforms have been passed in Colombia, India, Kenya and Liberia this year. Today, in 47 out of 89 markets where mobile money is available, regulation allows both banks and non-banks to provide mobile money services in a sustainable way.

- Providers are now expanding into adjacent markets for mobile financial services, leveraging their strengths in mobile money to provide mobile insurance, mobile savings and mobile credit to customers who previously never had access to formal financial services.

For the mobile money industry in particular, 2014 marked the achievement of several important milestones:

- The number of registered mobile money accounts globally grew to reach just under 300 million in 2014. There is still huge potential for future growth, however, as these accounts only represent 8% of mobile connections in the markets where mobile money services are available. In 2014, seven new markets joined the ranks of countries where there are more mobile money accounts than bank accounts. 16 markets now hold this status, indicating that mobile money remains a key enabler of financial inclusion.

- The industry is getting smarter about what it takes to prompt mobile money adoption: active mobile money accounts stand at 103 million as of December 2014 and an increasing number of services are reaching scale. 21 services now have more than one million active accounts.

For investors, industry partners and fellow stakeholders in the financial services industry, this is good news. Mobile money providers are continuing to invest in improving and expanding their services, particularly through the development of the ecosystem, showing important commitment to the long-horizon investment required by this industry. In particular:

- Providers are strengthening their internal capabilities to address an increasing number of users and transactions through platform migrations and extension of application programming interfaces (APIs) to third party users.

- While domestic P2P transfers and airtime top-ups continue to dominate the global product mix in terms of volume and value, the fastest growth in 2014 occurred in bulk disbursements, bill and merchant payments - reflecting an expanding ecosystem of institutional and business users of mobile money.

- 2014 saw a steep increase in the number of international remittances via mobile money, primarily driven by the introduction of a new model using mobile money as both the sending and receiving channel. Mobile money is helping to reduce the costs of international remittances for users: survey respondents reported that the median cost of sending USD 100 via mobile money is USD 4.0, less than half the average cost to send money globally via traditional money transfer channels.

- Merchant payments are on the rise, reflecting strong interest among mobile money providers to facilitate customers' daily expenditures on goods and services. More can be done to drive merchant adoption, however, as only 25.4% of the 258,000 merchants registered to use mobile money are currently active.

Yet, despite these significant achievements, the mobile money industry today still faces challenges that will need to be addressed in order to ensure the healthy provision of mobile financial services to unbanked and underserved users. Regulatory barriers, low levels of investment and lack of industry collaboration limit the ability for mobile money to reach scale. As the sections in this report reveal, mobile money providers are working hard to increase the quality, reach and sustainability of their services. Through industry-led initiatives, including partnerships with banks and other third parties, providers are enhancing the customer experience and reaching scale to evolve the sector to a new phase of maturity.

The GSMA's Mobile Money for the Unbanked (MMU) programme has been tracking the development of mobile financial services for the past six years. Each year, MMU shares key insights on industry trends, as well as data on the evolution of the sector, in its annual State of the Industry Report.

The report is based on data from GSMA Mobile Money Intelligence on planned and live MFS, qualitative insights on these services, as well as quantitative information on numbers of users, distribution points, transaction volumes and values, and revenues. This data is updated regularly, primarily using the results from MMU's annual Global Adoption Survey of Mobile Financial Services, which captured data from 127 respondents from 69 countries in 2014. The report also includes instructive mini case studies on MFS deployments and insights into best practices that can help service providers improve the performance of their services.

Introduction

Mobile money services are a powerful tool for bringing unbanked and underbanked people into the formal financial sector. With an estimated 2.5 billion people in the world still lacking access to formal financial services, mobile phones are increasingly being used to increase access to low-cost financial services including payments, transfers, insurance, credit and savings.

Now established in the majority of emerging economies, mobile money is a maturing industry serving new business areas and enabling a wider range of digital payments. Mobile money has become a core product offering for many MNOs, who have unique assets and incentives to deliver these services in a sustainable and scalable way: trusted brands, widespread distribution, and secure channel access.

About the MMU State of the Industry Report

Each year, the MMU publishes its annual State of the Industry Report on Mobile Financial Services, enabling readers to track the development of the MFS industry over time.

This report is designed to provide MFS practitioners with insights into the important developments taking place in mobile money, mobile insurance, mobile savings and mobile credit (see Table 1 for definitions). It is also designed to provide other stakeholders, such as regulators, senior executives in the telecoms and banking sectors, and international development agencies, with an authoritative overview of the industry and its impact on the financial lives of unbanked and underbanked users.

TABLE 1

DEFINITIONS OF MOBILE FINANCIAL SERVICES

MOBILE MONEY	MOBILE INSURANCE	MOBILE SAVINGS	MOBILE CREDIT
Mobile money uses the mobile phone to transfer money and make payments to the underserved. The MMU team tracks mobile money services which meet the following criteria: • The service must offer at least one of the following products: domestic or international transfer, mobile payments including bill payment, bulk disbursement, and merchant payment. • The service must rely heavily on a network of transactional points outside bank branches	Mobile insurance uses the mobile phone to provide microinsurance services to the underserved. The MMU team tracks mobile insurance services which meet the following criteria: • The service must allow subscribers to manage risks by providing a guarantee of compensation for specified loss, damage, illness, or death. • The service must allow underserved people	Mobile savings uses the mobile phone to provide savings services to the underserved. The MMU team tracks mobile savings services which meet the following criteria: • The service allows subscribers to save money in an account that provides principal security, and, in some cases, an interest rate. • The service must allow underserved people to save money	Mobile credit uses the mobile phone to provide credit services to the underserved. The MMU team tracks mobile credit services which meet the following criteria: • The service allows subscribers to borrow a certain amount of money that they agree to repay within a specified period of time. • The service must allow underserved people to apply for credit and

and ATMs that make the service accessible to unbanked and underbanked people. Customers must be able to use the service without having been previously banked. Mobile banking services that offer the mobile phone as just another channel to access a traditional banking product, and payment services linked to a current bank account or credit card, such as Apple Pay and Google Wallet, are not included. • The service must offer an interface for initiating transactions for agents and/or customers that is available on basic mobile devices.	to access insurance services easily using a mobile device. Services which offer the mobile phone as just another channel for the clients of an insurance company to access a traditional insurance product are not included. • The service must be available on basic mobile devices.	using a mobile device. Services which offer the mobile phone as just another channel to access a traditional savings account are not included. • The service must be available on basic mobile devices.	repay it more easily using a mobile device. Airtime credit products or services which offer the mobile phone as just another channel to access a traditional credit product are not included. • The service must be available on basic mobile devices.

Methodology

This report provides a quantitative assessment of the state of the mobile financial services industry based on GSMA data from the MMU Deployment Tracker, the 2014 Global Adoption Survey of Mobile Financial Services and MMU Estimates and Forecasts.

The report also uses qualitative insights on the performance of mobile financial services based on the MMU programme's engagement with the industry over the past year.

ABOUT THE GSMA DEPLOYMENT TRACKER:

The MMU Deployment Tracker is an online database that monitors the number of live and planned mobile money services for the unbanked across the globe. It also contains information about each live deployment, such as the name of the provider and the name of the mobile money service, its launch date, what financial products are offered, and which partners are involved in delivering each service. In 2014, the MMU Deployment Tracker was extended to include information on mobile insurance, mobile credit, and mobile savings services.

ABOUT THE GSMA GLOBAL ADOPTION SURVEY:

The GSMA Global Adoption Survey is an annual survey designed to capture quantitative information about the performance of mobile financial services around the world. All of the service providers represented in the MMU Deployment Tracker were invited to participate in the 2014 global survey. Respondents supplied standardised operational metrics about their services for the months of September 2013, December 2013, March 2014, and June 2014, on a confidential basis.

A total of 127 service providers from 69 countries participated in the 2014 survey, with 115 submitting information on mobile money, 33 on mobile insurance, and 15 on mobile credit and savings. The full list of survey participants is included in Appendix A.

All data was self-reported by participants. Data provided by the industry has not been verified independently by the GSMA, however all survey responses were carefully checked for consistency.

ABOUT MOBILE MONEY ESTIMATES & FORECASTS:

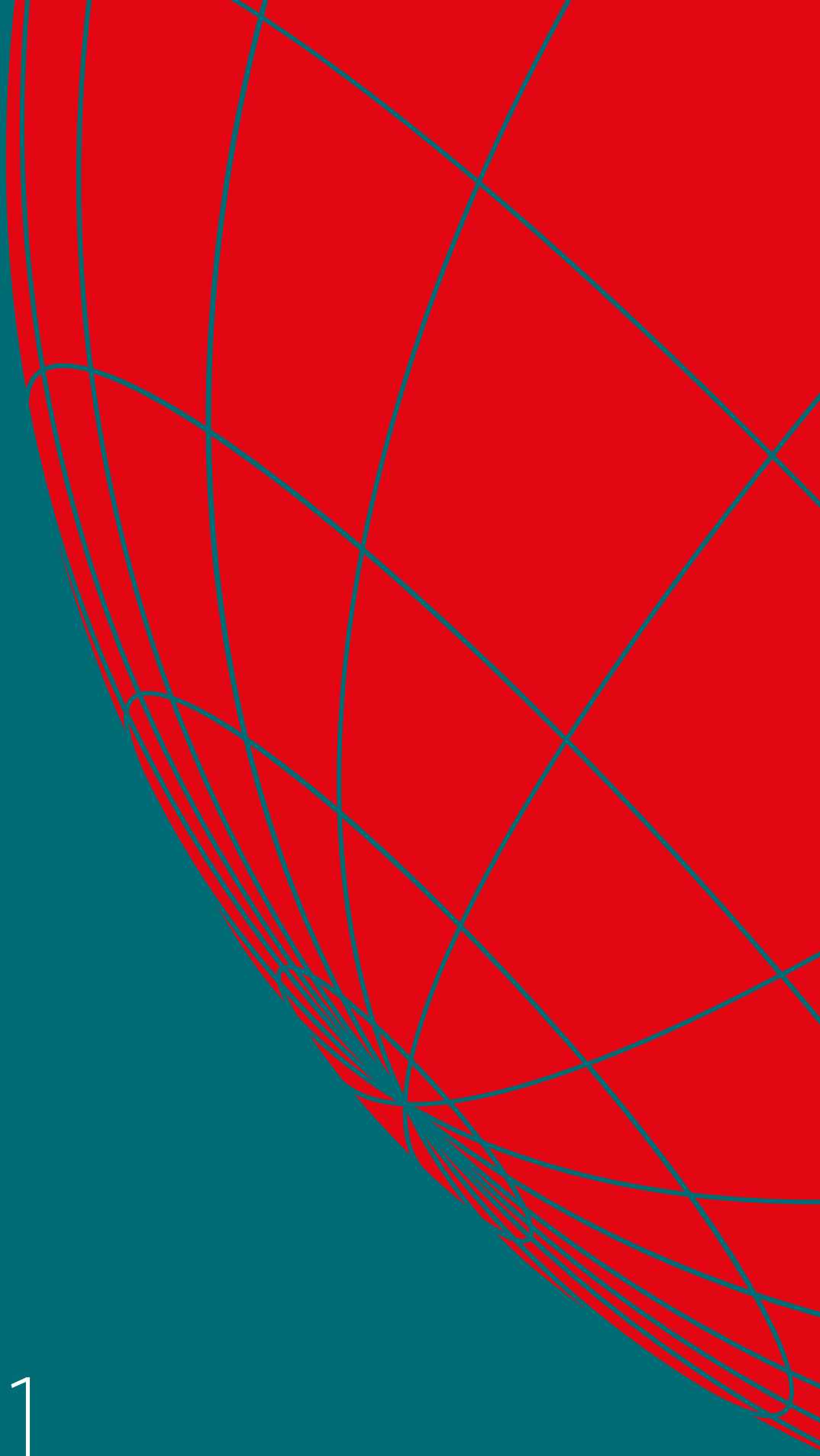
For some metrics, GSMA Mobile Money Intelligence uses data modelling to estimate and forecast these figures, making information available for the entire industry rather than only for survey participants. The methodology used to model these metrics is based on a mixed bottom-up (service-level) and top-down (country-level) approach and uses a number of data sources including MMU's annual Global Adoption Survey of Mobile Financial Services and MMU Deployment Tracker.

For further details about the methodology used in these estimates and forecasts, see Appendix C.

Structure of this report

This report is divided into two parts. Part 1 discusses the state of the mobile money sector and industry trends. The first section provides an overview of the mobile money landscape in 2014, looking at the availability and spread of mobile money services globally and within specific regions. Section 2 outlines how providers are making mobile money services accessible to a broader customer base through expanding and improving distribution networks, while Section 3 considers customer activity levels and how service providers are working to drive further adoption. Section 4 explores which mobile money products are gaining the most traction with service providers and their customers, while Section 5 reviews the industry's revenue streams and business models.

Part 2 provides insights into the rollout and adoption of other mobile financial services: mobile insurance (Section 1), mobile savings (Section 2) and mobile credit (Section 3).



PART 1
MOBILE MONEY

Availability of mobile money services[1]

KEY FINDINGS

- With 255 services in 89 countries as of December 2014, mobile money is now available in 61% of developing markets.
- As markets become increasingly competitive, a growing number of MNOs are showing interest in the development of interoperable solutions. In 2014, MNOs interconnected their services in three markets, following in the footsteps of MNOs in Indonesia, where interoperability was implemented in 2013.
- In markets where mobile money is not yet available, a lack of a strong business case and regulatory hurdles are factors preventing launches of new services.
- Regulators are increasingly recognising the major role that non-bank mobile money providers can play in fostering financial inclusion and are establishing more enabling regulatory frameworks for the provision of mobile money services. New regulations have been issued in Colombia, India, Kenya and Liberia this year, while numerous other countries are working to create windows for new types of providers to enter the market.

Number of mobile money services globally

Mobile money services are now available in 61% of the world's developing countries (85 of 139 markets)[2] (see Figure 1). In the past five years, mobile money services have spread across much of Africa, Asia, Latin America, Europe and the Middle East. As of December 2014, there were 255 live mobile money services in 89 markets compared with 233 live services across 83 markets at the end of 2013 (see Figure 2).

Whilst Sub-Saharan Africa still accounts for the majority of live services globally (53%), half of all launches in 2014 occurred outside the region, with Latin America & the Caribbean, East Asia & Pacific and South Asia all seeing 3 new launches, respectively. Today, Europe & Central Asia is the only region with more planned than live mobile money services.

Now that mobile money is maturing across many developing regions, the number of new launches each year is falling steadily. 22 new services launched in 2014, compared with 59 launches in 2013 and 58 launches in 2012. Mobile money was rolled out in six new markets this year – Dominican Republic, Myanmar, Panama, Romania, Sudan and Timor-Leste - compared to 11 new markets in 2013[3] and 14 in 2012.

1. The data for this section of the report is based on the MMU Deployment Tracker. As of December 2014, there were 255 live services across 89 markets globally.
2. Based on the World Bank list of developing countries. There are four markets where MMU tracks mobile money services for the unbanked, which do not feature on the World Bank's list of 'developing markets'. These are: Chile, Qatar, Singapore and UAE. Full list available at: http://data.worldbank.org/about/country-and-lending-groups
3. The 2013 MMU State of the Industry Report reported that mobile money had launched in 9 new markets in 2013. Subsequent research revealed that the figure was in fact 11. These markets were: Bolivia, Brazil, Egypt, Ethiopia, Guyana, Jamaica, Mauritania, Singapore, Solomon Islands, Togo and Vietnam.

FIGURE 1

PERCENTAGE OF DEVELOPING MARKETS WITH MOBILE MONEY PER REGION
(DECEMBER 2014)

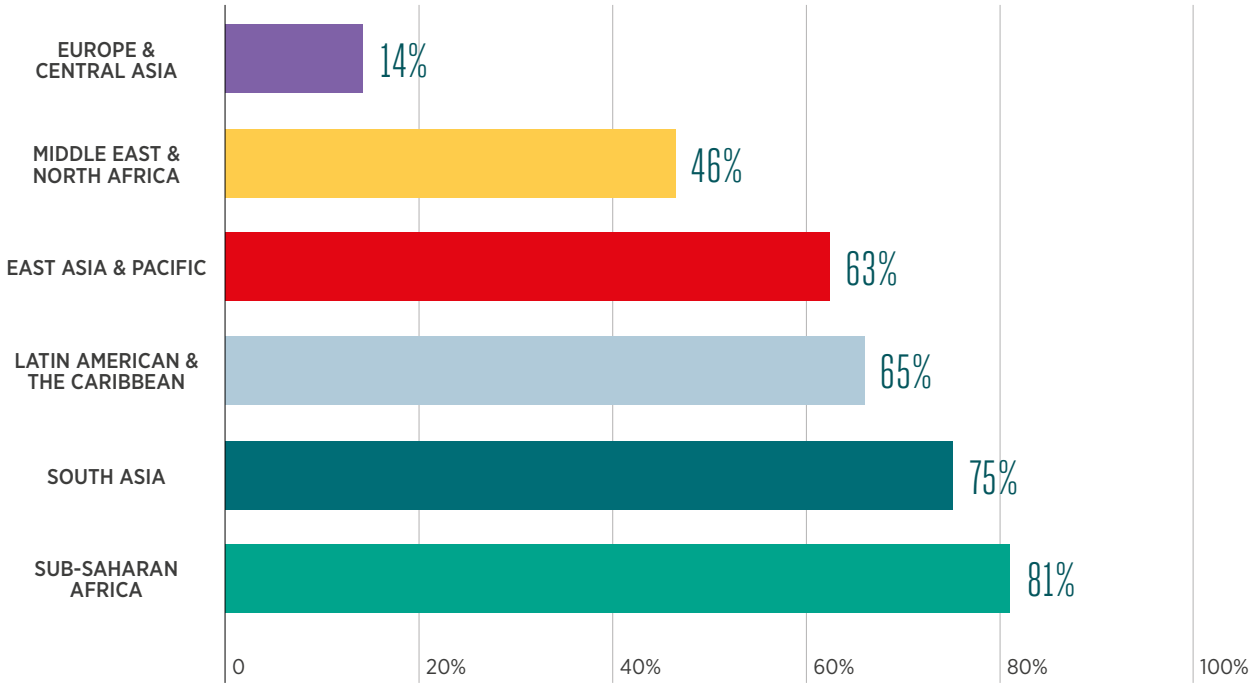
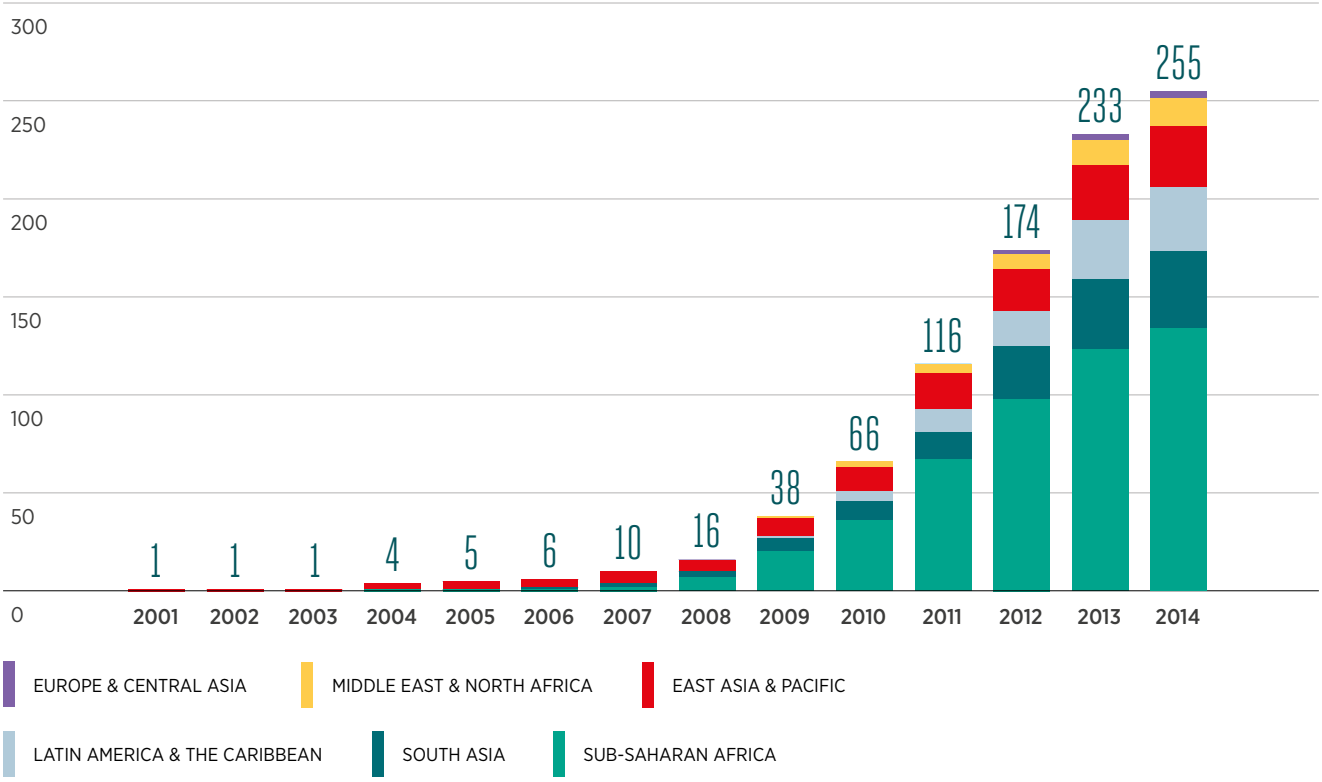


FIGURE 2

NUMBER OF LIVE MOBILE MONEY SERVICES BY REGION
(2001-2014; YEAR-END)



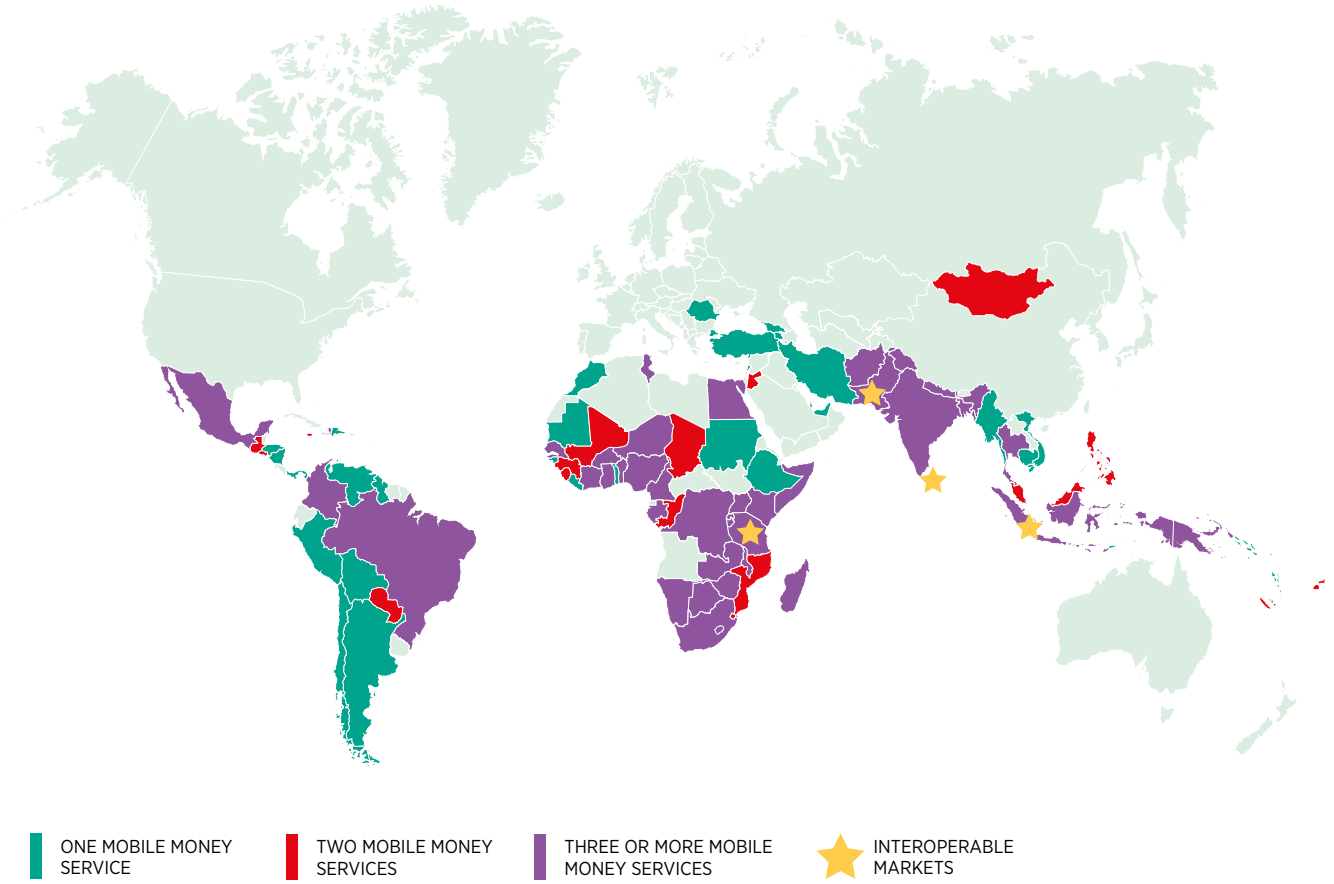
Increased competition and rising interest in interoperability

Globally, as the number of players in individual markets increases, competition is intensifying. Worldwide, 56 markets now have at least two live mobile money services, and 38 of these markets have three or more live services. As markets become increasingly competitive, MNOs are showing a growing interest in the development of interoperable solutions. They are beginning to consider the benefits of A2A (account-to-account) interoperability,[4] both in terms of increasing transaction volumes and revenues, and in terms of improving the customer experience by making it easier for consumers and businesses to send money domestically across networks.

In 2014, MNOs interconnected their services in three markets – Tanzania, Sri Lanka, Pakistan – following in the footsteps of MNOs in Indonesia, where domestic interoperability was implemented for the first time in 2013. In addition, operators in six other markets have already committed to interconnect their services. As industry knowledge on how to implement A2A interoperability increases, this trend is likely to continue.

FIGURE 3

NUMBER OF LIVE MOBILE MONEY SERVICES FOR THE UNBANKED BY COUNTRY (DECEMBER 2014)



4. Account-to-account Interoperability refers to transfers between customer accounts in different mobile money schemes and between accounts at mobile money schemes and accounts at banks. For a comprehensive overview, see Dick Clark & Gunnar Camner (2014), "A2A interoperability: Making mobile money schemes interoperate", GSMA Mobile Money for the Unbanked. Available at http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/03/A2A-interoperability_Online.pdf

Barriers to deploying mobile money in new markets

An analysis of developing economies where mobile money is yet to launch suggests there are two prevalent reasons for this – challenges to building a solid business case due to addressable market size and territory size, and regulatory hurdles.

Today, 54 developing countries do not have a live mobile money service. 70% of these countries have a population of less than 10 million. A small addressable market size makes it harder to build a business case for investment in mobile money, since it is more difficult for a mobile money service provider to achieve scale, lower costs and reach profitability. In addition, many of these markets are small territories, where it can be harder to build a P2P use case. While this doesn't mean that mobile money cannot succeed in these countries, these factors seem to reduce the appetite of operators and banks to invest in mobile money launches.

Just 13 of the 54 developing markets where mobile money services are not yet available have a population of over 10 million.[5] 14 launches are planned in these 13 markets, indicating a high level of interest from mobile money providers. However, in most of these countries, the regulatory approach appears to be slowing down the launch of services.

TEXT BOX 1

CHINA'S APPROACH TO FINANCIAL INCLUSION*

Providing China's 400 million unbanked and underbanked population with access to financial services has recently become a government priority.[1] The strategy is focused on extending traditional banking services to the unbanked using an agency banking model, without specifically leveraging mobile technology. Whilst the Chinese mobile payments industry has grown explosively over the past couple of years, with Alibaba launching Alipay Wallet in 2013 and Tencent launching Weixin Payments in March 2014, each of the services requires users to have a bank account or a bank card, and thus are not playing a direct role in increasing financial inclusion.

Recent reforms in the banking sector have increased the level of market competition, with many newly opened banks now focusing on the needs of specific market segments, including rural customers. As a result, the government opted to transfer subsidies, which reached over 900 million people, via bank accounts rather than in cash. In 2014, guidelines for agency banking were published[2] in the hope of further extending access to financial services to rural areas. Currently, banking agents have limited capacity to facilitate transactions – they cannot open bank accounts for customers, or accept cash-ins. Cash-in services are expected to be enabled for banking agents in March 2015.

Given recent calls for co-operation across stakeholder groups to increase financial inclusion, and the fact that all three major mobile operators received payments licenses in 2011 and have already experienced some success with mobile payments solutions for the banked, there is potential for mobile operators to play a greater role in providing financial services to China's unbanked in the future.

1. Global Envision (2013) "Dear World Bank: focus on these six countries to get the most 'banked' for your buck." Available at: http://www.globalenvision.org/2013/11/04/dear-world-bank-focus-these-six-countries-get-most-%E2%80%98banked%E2%80%99-your-buck
2. People's Bank of China (2014) "Further Improve the Rural Payment Service Environment and Promote the Rural-Urban Integration." Available at: http://www.pbc.gov.cn/publish/english/955/2014/20140925100027134677188/20140925100027134677188_.html

*This text box is based on Charmaine Oak (2015) "Shift Thought Digital Money in China 2015 Viewport," Shift Thought Ltd.

5. Algeria, Angola, China, Cuba, Ecuador, Iraq, Kazakhstan, North Korea, South Sudan, Syrian Arab Republic, Ukraine, Uzbekistan, Yemen

Regulatory developments in 2014

An increasing number of regulators are recognising the major role mobile money services can play in fostering financial inclusion and economic growth and are establishing enabling regulatory frameworks for mobile money.[6] New regulation has been passed in Colombia, Kenya, India and Liberia this year. Today, in 47 out of 89 markets where mobile money is available, regulation allows both banks and non-banks to provide mobile money services in a sustainable way.

It is critical that regulators create an open and level playing field for mobile money services, as there is evidence that regulatory barriers can slow down both market uptake and customer adoption.[7] Globally, MNOs are playing a key role in the delivery of mobile money services - 60% of all mobile money services are operationally run by MNOs[8] and, in Sub-Saharan Africa, over half of all MNOs have already launched a mobile money service (75 out of 144). Indeed, MNOs have expertise in setting up distribution networks, building broad and trusted brand awareness and mass marketing; they also own the USSD (Unstructured Supplementary Service Data) channel that is typically used to enable access to mobile money services from handsets.[9]

6. By an 'enabling regulatory approach' we mean that the rules established by the regulator:
   - Permit non-banks to issue electronic money (or equivalent) by allowing them to:
     - be licensed directly, OR
     - set up a subsidiary for this business, OR
     - apply for a payments bank (or equivalent) license, OR
     - provide the mobile money service under a letter of no-objection to the non-bank or its partner bank, pending the approval of a specific regulation.
   - AND impose initial and ongoing capital requirements that are proportional to the risks of the e-money business
   - AND permit them to use agents for cash-in and cash-out operations
   - AND do not prescribe the implementation of specific interoperability models without allowing for a market-led approach.

   See Simone di Castri (2013), "Mobile Money: Enabling Regulatory solutions", GSMA Mobile Money for the Unbanked.
   Available at http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/02/MMU-Enabling-Regulatory-Solutions-di-Castri-2013.pdf.
7. Simone di Castri (2015) "Is regulation holding back financial inclusion? A look at the evidence." GSMA Mobile Money for the Unbanked.
   Available at: http://www.gsma.com/mobilefordevelopment/is-regulation-holding-back-financial-inclusion-a-look-at-the-evidence
8. By our definition, a mobile money service is operationally run by an MNO when the MNO is ultimately responsible for the design and implementation of the majority of the operational strategy, including distribution, marketing and customer care.
9. A number of banks and third-parties have also launched their own mobile money services, partnering with one or multiple MNOs in order to access and utilise the USSD channel and to leverage the security of the MNO-distributed unique subscriber identity module (SIM) card. In an attempt to gain more direct control over the experience of their mobile money customers, some of these providers are considering applying for MVNO (mobile virtual network operator) licenses. In April 2014, Equity Bank in Kenya was granted an MVNO license using the Airtel network, which it plans to use to expand its mobile money business. It is too early to say whether this model is going to gain traction, but we will continue to watch this space.

TEXT BOX 2

REGULATORY PRIORITIES IDENTIFIED BY SURVEY RESPONDENTS

In many markets, the absence of an enabling licensing or authorisation framework for non-banks to access the mobile money market remains the greatest and most common barrier that is slowing down providers to launch or scale their services. Nonetheless, other critical regulatory barriers persist, and have been identified by bank and non-bank mobile money providers participating in the 2014 survey as:

1. **Transaction/balance limits too low and/or onerous customer identification requirements**
   The Financial Action Task Force (FATF) recommends the design of risk-based AML/CFT regimes, including know-your-customer (KYC) requirements, that may simplify customer due diligence (CDD) based on the specific risk that each product offers. This is particularly important for mobile money, where the regulator can leverage specific operational and transactional mitigation measures that are implemented by the service providers. Misapplying these recommendations with onerous identification requirements will slow the uptake of mobile money and the achievement of financial inclusion and integrity.[1]

2. **Not allowed to earn interest on pooled funds or to utilise interest earned**
   Passing on the interest earned on pooled funds to mobile money customers is very effective for increasing transactionality and would not change the nature of the trust accounts or the role of the non-bank providers (which are not permitted to intermediate the funds).[2]

3. **Restrictions on international remittance business**
   While a number of countries allow in-bound international remittances to be received on a mobile money account, many countries have restrictive laws on outgoing remittances, limiting the ability for mobile money providers to connect their accounts across borders.

1. See Simone di Castri, 2013, cit.; see also Simone di Castri and Raadhika Sihin, "Proportional risk-based AML/CFT regimes for mobile money: A framework for assessing risk factors and mitigating measures", GSMA, forthcoming.

2. These insights were initially published as part of a blog post by Simone di Castri on the MMU website, "Should the interest accrued on the trust account be paid out to mobile money customer?" (8 September 2014) GSMA Mobile Money for the Unbanked. Available at: http://www.gsma.com/mobilefordevelopment/should-the-interest-accrued-on-the-trust-or-escrow-account-be-paid-out-to-mobile-money-customers

Accessibility of mobile money services[10]

KEY FINDINGS

- Mobile money agent networks continue to grow quickly; at the end of 2014, there were 2.3 million mobile money outlets globally. Agent networks now out-size traditional financial and remittance service networks.
- Agent activity rates remained constant at 60% this year. This masks variance across regions, including strong progress in West Africa in 2014.
- In addition to USSD, STK and IVR, growing numbers of mobile money providers are making their services available through applications: 61% of services are now available via an app, a percentage that will continue to increase as smartphone penetration rises.

To access and utilise mobile money services, customers rely on two distinct channels. The first is the network of physical access points where customers can typically deposit cash in to, or take cash out of, their mobile money account – these access points are primarily agent outlets. The second is the technical access channel – the interface which customers use to initiate transfers and payments directly on their mobile handsets. In this section, we discuss the evolution of these two access channels and highlight innovations that are transforming how customers access mobile money services.

Agent networks grow and expand their reach

The number of mobile money agent outlets grew by 45.8% in 2014, reaching a total of 2.3 million globally in December.[11] This is particularly impressive if we consider the size of traditional financial institutions' and remittance services' networks (see Figure 4). In three-quarters of the 89 markets where mobile money is available today, agent outlets outnumber bank branches.[12] In 25 of those markets, there are more than ten times as many mobile money outlets as bank branches.

Whilst today we know how many mobile money agent outlets there are, we know less about the actual reach of this network and just how far it extends access to financial services into hard-to-reach, often underserved, locations. This year, less than a third of survey respondents were able to define what percentage of their

10. In this section, data on mobile money registered and active agent outlets is based Estimates and Forecasts from GSMA Mobile Money Intelligence covering the entire industry (255 services across 89 countries as of December 2014). Information on the gender composition and on the rural/urban split of the mobile money agents is based on data from the MMU 2014 Global Adoption Survey. Information on the technical interfaces offered is based on data from the MMU 2014 Global Adoption Survey.

11. At the end of 2014, there were 2.3 million mobile money agent outlets. However, this is not the number of unique mobile money outlets but rather the sum of the outlets providing cash-in and cash-out services for each of the 255 mobile money services that are available globally. Indeed, in many markets, individual outlets may serve several mobile money service providers. This practice is more pronounced in mature mobile money markets, particularly where competition amongst service providers is high. For that reason, the number of mobile money agent outlets published in this report must be interpreted with care as it does not reflect the number of unique mobile money cash-in and cash-out locations.
In Uganda for example – a market that counts 6 live services and over 17 million registered subscribers* - data from a recent Helix Institute Report estimates that 12% of agent outlets are serving customers from different mobile money providers and are therefore being double counted**.
* Monitor (2014) "Registered mobile money users reach 17 million mark". Available at: http://www.monitor.co.ug/Business/Registered-mobile-money-users-reach-17-million-mark/-/688322/2411528/-/rjcg2z/-/index.html
** These figures have been calculated using the nationally representative agent interviews in the "Agent Network Accelerator Survey: Uganda Country Report 2013". Helix Institute of Digital Finance. (2014). Available at: http://helix-institute.com/sites/default/files/Publications/Agent%20Network%20Accelerator_Uganda%20Country%20Report%202013.pdf

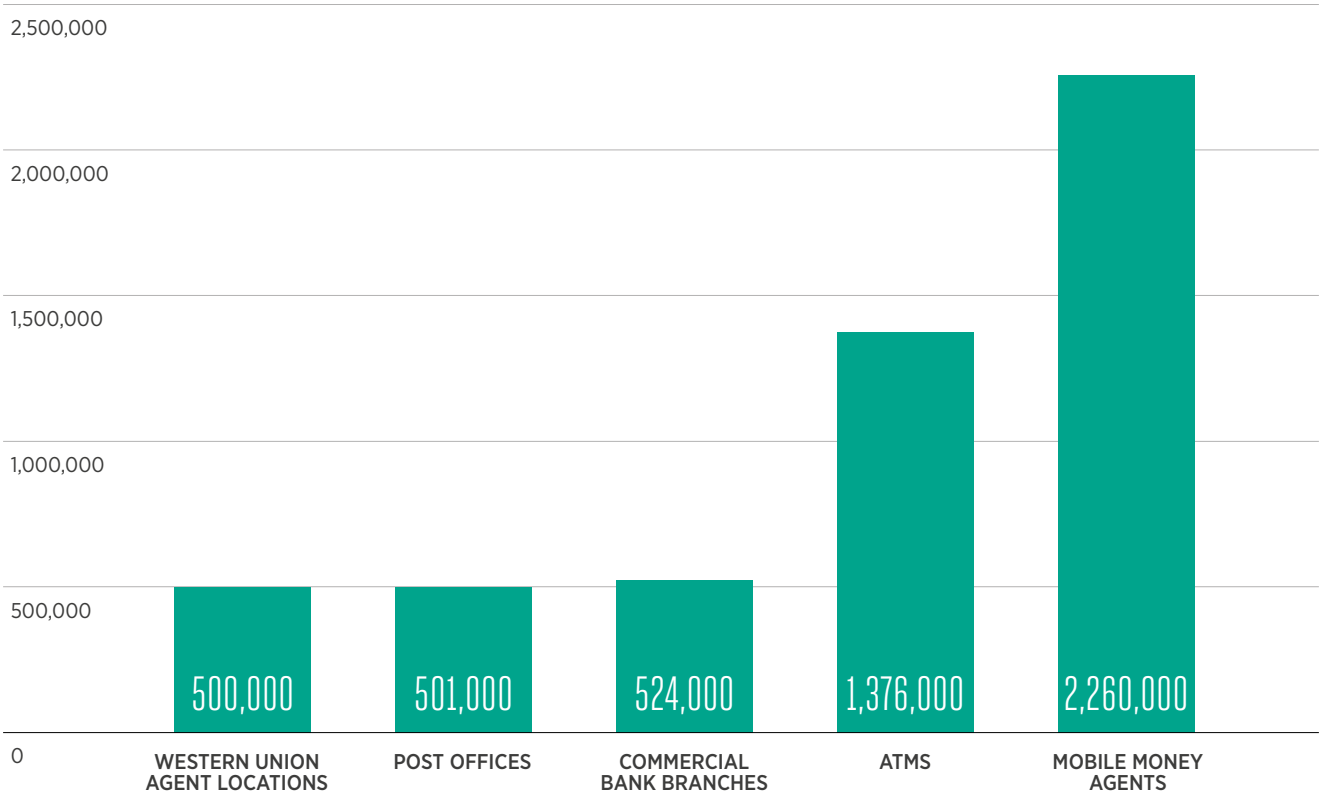
12. Data on bank branches available from the IMF Financial Access Survey (FAS) Database. Available at: http://data.imf.org/

mobile money agents were operating in rural versus urban areas. This represents no improvement on last year's figures and indicates that there is still room for the industry as a whole to better understand the reach of agent networks.

While the bulk of mobile money physical access points are represented by the agent outlets that each provider sets up individually, a growing number of mobile money providers are forming partnerships to leverage alternative existing distribution networks. In areas where there are existing financial access points – such as bank branches, ATMs, microfinance institutions (MFIs) and post offices - mobile money providers are leveraging these networks to efficiently increase the number of cash-in and cash-out points for mobile money customers. For example, the number of ATMs that mobile money customers can use to cash-in and/or cash-out increased by 34.0% in 2014, to 171,000. In harder-to-reach areas, an increasing number of mobile money providers are partnering with existing petrol stations, bus companies, and pharmacies[13] to extend their reach to areas which are not served by traditional financial institutions, in a cost-effective manner.

FIGURE 4

NUMBER OF FINANCIAL ACCESS POINTS ACROSS DEVELOPING COUNTRIES[14]



13. MicroCapital (2014) "Mobile Telecommunications Network (MTN) Ghana Partners with Microfinance Institutions (MFIs) in Ghana to Improve Mobile Money Systems" Available at: http://www.microcapital.org/microcapital-brief-mobile-telecommunications-network-mtn-ghana-partners-with-microfinance-institutions-mfis-in-ghana-to-improve-mobile-money-systems/ Nyasa Times (2014) "TNM Mpamba partners with AXA coach service". Available at: http://www.nyasatimes.com/2014/11/06/tnm-mpamba-partners-with-axa-coach-service/ Developing Telecoms (2013) "Orange and Total partner for mobile money distribution network" Available at: http://www.developingtelecoms.com/tech/apps-services-devices/71-mobile-finance/4756-orange-and-total-partner-for-mobile-money-distribution-network.html

14. Note: Please note that the data points for Figure 4 refer to the developing world only (139 countries as listed by the World Bank). Only the figures for Western Union agent outlets are global figures.
Note: The IMF Financial Access Survey did not include data for the following developing countries: American Samoa, Cuba, Eritrea, Ethiopia, Gambia, Haiti, Iraq, North Korea, Kosovo, Libya, Mauritania, Sierra Leone, Somalia, Swaziland, Syria, Turkmenistan, Tuvalu.
Data sources:
1. Western Union (2014) "Global Organization". Available at: http://corporate.westernunion.com/Global_Organization.html
2. Universal Postal Union (2013) "Global or Regional Estimates". Available at: http://pls.upu.int/pls/ap/ssp_report.main?p_choice=AGGREG&p_language=AN
3. International Monetary Fund (2013) "Financial Access Survey". Available at: http://fas.imf.org
4. International Monetary Fund (2013) "Financial Access Survey". Available at: http://fas.imf.org
5. GSMA Mobile Money for the Unbanked (2014)

Activating registered agents

To successfully serve customers, mobile money providers need to do more than simply register agents; they need to ensure their agents are active, which is significantly more challenging, particularly for service providers that have not yet reached a critical mass of mobile money users in the market.[15] The total number of active mobile money agent outlets that facilitated at least one transaction during the month grew by 44.2%, rising from 946,000 in December 2013 to 1.4 million in December 2014. This year, the global average active rate[16] remained stable at 60.3%, though this global figure masks stark variances across regions.

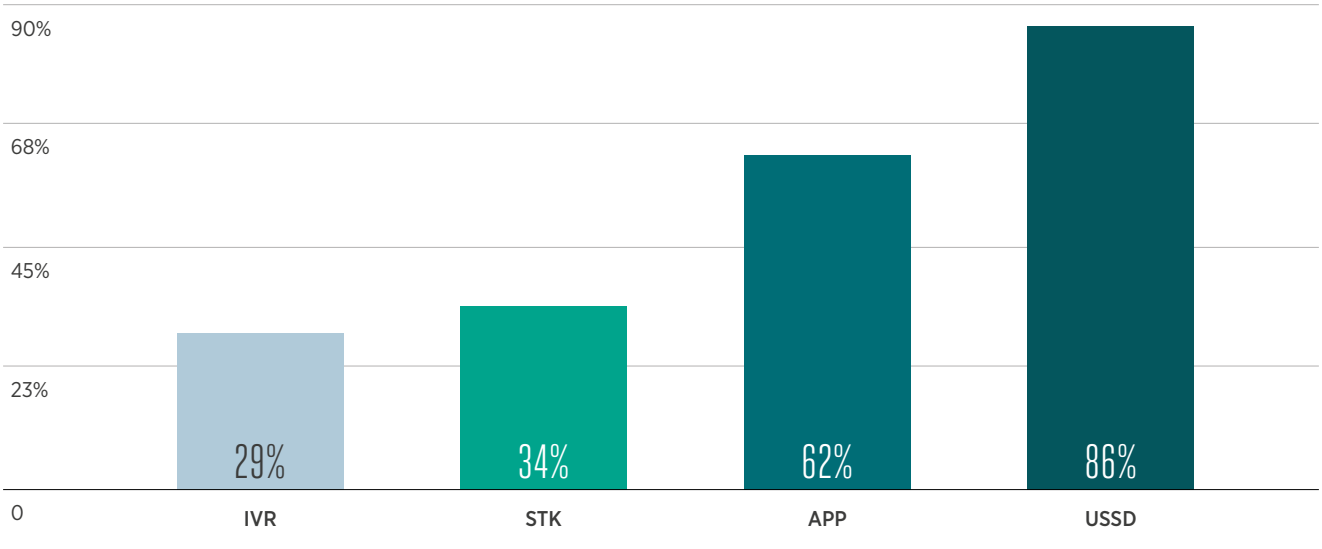
In West Africa for example, a region which has really seen mobile money services take off in the past year and a half,[17] the agent active rate rose faster than anywhere else to reach 43.0% (up by 11 percentage points from last year). This impressive increase is due to two factors: providers focused their efforts on activation rather than registration of agents, and in some cases even cut their inactive agents. By contrast, in both Middle East & North Africa and Latin America & the Caribbean, where mobile money is in earlier stages of development, activity rates fell in 2014, by 9 and 13 percentage points respectively, as mobile money providers focused on quickly registering large numbers of agents to increase the number of access points for customers.

Accessing the mobile money account

The technical interface that a mobile money account holder uses to initiate transactions from the mobile handset can, much like access to mobile money agent outlets, have a significant impact on customer experience. Today, the majority of mobile money services are available through multiple interfaces - including USSD,[18] STK,[19] IVR[20] and Apps.[21]

FIGURE 5

INTERFACES MOST COMMONLY OFFERED BY SURVEY RESPONDENTS (JUNE 2014)

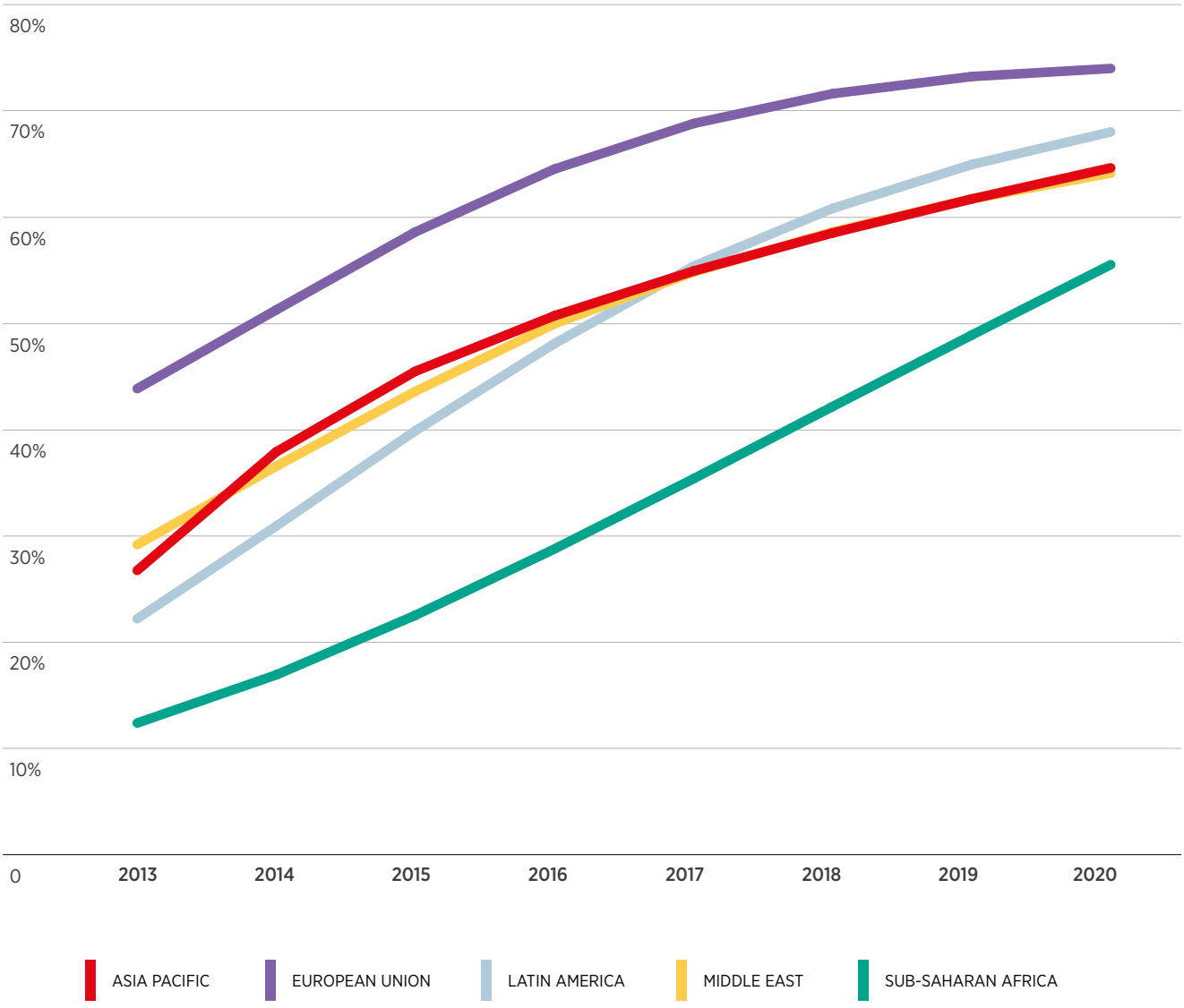


15. For more information on incentivising a network of mobile money agents and boosting activity, see Neil Davidson & Paul Leishman. "Incentivising a Network of Mobile Money Agents" GSMA Mobile Money for the Unbanked. Available at: http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/03/incentivise.pdf
16. The ratio of active agent outlets over registered agent outlets.
17. Claire Pénicaud Scharwatt (2014), "Mobile Money in Côte d'Ivoire: A Turnaround Story", GSMA Mobile Money for the Unbanked. Available at: http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/05/MMU_Cote_dIvoire_Turnaround_Story.pdf
18. USSD (Unstructured Supplementary Service Data) is the protocol for sending text across GSM networks.
19. STK (SIM Application Toolkit) enables the SIM to initiate actions for various value-added services.
20. IVR (Interactive Voice Response) technology allows a computer to interact with humans through the use of voice and DTMF (dual-tone multi-frequency signalling) tones input via keypad.
21. A mobile app is a computer program designed to run on smartphones, tablet computers and other mobile devices.

Diversification of the types of interfaces customers can use to access the mobile money account can help providers to target different market segments. For example, the IVR interface, which can be adapted to numerous local languages and dialects, can help providers target illiterate communities, as well as people who aren't comfortable interacting with data services, typically USSD, on a mobile handset. Additionally, well-designed apps can dramatically improve user experience by providing rich user interfaces and enhanced functionality. Apps are also helping operators to target the growing segment of smartphones users in developing markets. As low cost smartphones and data packages become more widely available, the number of operators offering mobile money apps is likely to increase.

FIGURE 6

SMARTPHONE ADOPTION FORECAST BY REGION[22] (2013-2020)



22. Data on regional smartphone adoption forecast provided by GSMA Intelligence. Available at: https://gsmaintelligence.com/

TEXT BOX 3

CAN SMARTPHONES ENHANCE THE CUSTOMER EXPERIENCE FOR MOBILE MONEY USERS? *

Converging trends hold great promise for the next generation of digital financial inclusion efforts based on smartphones. Devices are getting cheaper, global alliances are advocating for affordable data access, and mobile operators are investing to develop necessary network capacity and pricing models to manage the inevitable transition from feature phones to smartphones.

Mobile money providers can significantly improve their existing service offerings for smartphone users by introducing apps with rich user interfaces and enhanced functionalities.

Smartphone applications for mobile money can potentially address some of the user experience limitations of USSD, including session time-outs and user error. Additionally, the ability for providers to update their applications at a relatively lower cost can help enable continual improvements for customers. Since smartphone operating systems offer a common platform for developers—spanning specific devices and equipment manufacturers—mobile money apps can leverage a host of other functionalities, including integration with other features like contacts, calendars and maps.

Mobile money apps could also help to address customer frustration associated with common limitations in the agent network: a lack of proximate and liquid agents. An agent locator feature can be particularly useful for new customers. We can also imagine features that empower customers to rate agents on customer service or liquidity metrics.

Overall, the feature-rich interfaces and greater functionality of smartphones can offer more intuitive customer experiences, potentially easing adoption and usage.

*This text box is based on the paper Mireya Almazán (2014), "Smartphones & Mobile Money: The Next Generation of Digital Financial Inclusion", GSMA Mobile Money for the Unbanked. Available at: http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/07/2014_MMU_Smartphones-and-Mobile-Money-The-Next-Generation-of-Digital-Financial-Inclusion_Web.pdf

Adoption of mobile money services[23]

KEY FINDINGS

- The number of registered mobile money accounts globally grew to reach just under 300 million in 2014. While this is a significant milestone for the industry, there is still huge potential for future growth as this only represents 8% of mobile connections in the markets where mobile money services are available.
- In 2014, seven new markets joined the ranks of countries where there are more mobile money accounts than bank accounts, bringing the total to 16, indicating that mobile money remains a key enabler of financial inclusion.
- The industry is getting smarter about what it takes to prompt mobile money adoption: active mobile money accounts stand at 103 million as of December 2014, and an increasing number of services are reaching scale. 21 services now have more than one million active accounts.
- Operators are reaching more customers at the bottom of the pyramid. Survey respondents reported an overall increase in the penetration of mobile money services among women and among rural customers.

Registered mobile money accounts

In 2014, 75 million additional mobile money accounts were opened globally, bringing the total to 299 million at the end of December. Though growth in the number of registered mobile money accounts has been significant in the past couple of years, almost doubling since 2012 when it was 155 million, it only represents a penetration of 8% of mobile connections in markets where mobile money is available, highlighting a huge potential for further growth.

299M

REGISTERED MOBILE MONEY ACCOUNTS GLOBALLY AT END OF DECEMBER 2014

Of all regions, Sub-Saharan Africa records the highest level of mobile money penetration. By December 2014, 23.0% of mobile connections in Sub-Saharan Africa were linked with a mobile money account, whereas smartphone connections only represented 16.4%[24] of total mobile connections in this region. In East Africa, the contrast is even starker with almost one mobile money account for every two mobile connections, compared to a smartphone penetration of only 12.5%.[25] While the process to open a mobile money account is very different from buying a smartphone, this comparison gives an idea of the prevalence of mobile money as compared to other fast-growing products and services.

23. In this section, data on mobile money registered, 90-day active, and 30-day active accounts is based on Estimates and Forecasts from GSMA Mobile Money Intelligence covering the entire industry (255 services across 89 countries as of December 2014). Information on unregistered mobile money users transacting over-the-counter and information on the gender composition and on the rural/urban split of the mobile money customer base is based on data from the MMU 2014 Global Adoption Survey.
24. Calculation based on GSMA Intelligence data and only for those Markets in Sub-Saharan Africa where a live mobile money service exists.
25. Calculation based on GSMA Intelligence data and only for those Markets in East Africa where a live mobile money service exists.

The number of mobile money accounts is also growing rapidly outside Sub-Saharan Africa, driven by the development of enabling regulatory environments, new launches and increased investments by service providers. The highest growth was seen in Latin America & the Caribbean, where the number of accounts grew by 50% between December 2013 and December 2014 to reach 14.9 million.

Mobile money is bringing financial services to millions of previously unbanked and underbanked people around the world, making this industry a key enabler of financial inclusion. At the end of 2013, there were already more registered mobile money accounts than banks accounts[26] in Cameroon, the Democratic Republic of the Congo, Gabon, Kenya, Madagascar, Tanzania, Uganda, Zambia and Zimbabwe. In 2014, Burundi, Guinea, Lesotho, Paraguay, Rwanda, the Republic of the Congo and Swaziland passed this threshold, bringing it to a total of 16 countries.[27]

Active mobile money accounts

21

MOBILE MONEY SERVICES WITH OVER ONE MILLION ACTIVE ACCOUNTS

While the number of registered accounts highlights the growing ubiquity of mobile money, the number of active accounts is more important to understand the speed at which customers are adopting mobile money services. In 2014, the number of 90-day active mobile money accounts increased faster than the number of registered accounts, at a rate of 41.7%, to reach 103 million in December, suggesting that the industry is getting smarter about what it takes to prompt usage of the service (see Text Box 4).

In fact, an increasing number of mobile money services are reaching scale: at the end of 2014, 21 services had more than one million 90-day active accounts, seven of which passed this threshold during 2014. Two of these services are based in West Africa, a region where the number of mobile money accounts increased dramatically this year, from 5.7 million in December 2013 to 8.9 million in December 2014. Of the 21 services with over one million active accounts, five actually have over 5 million active accounts.

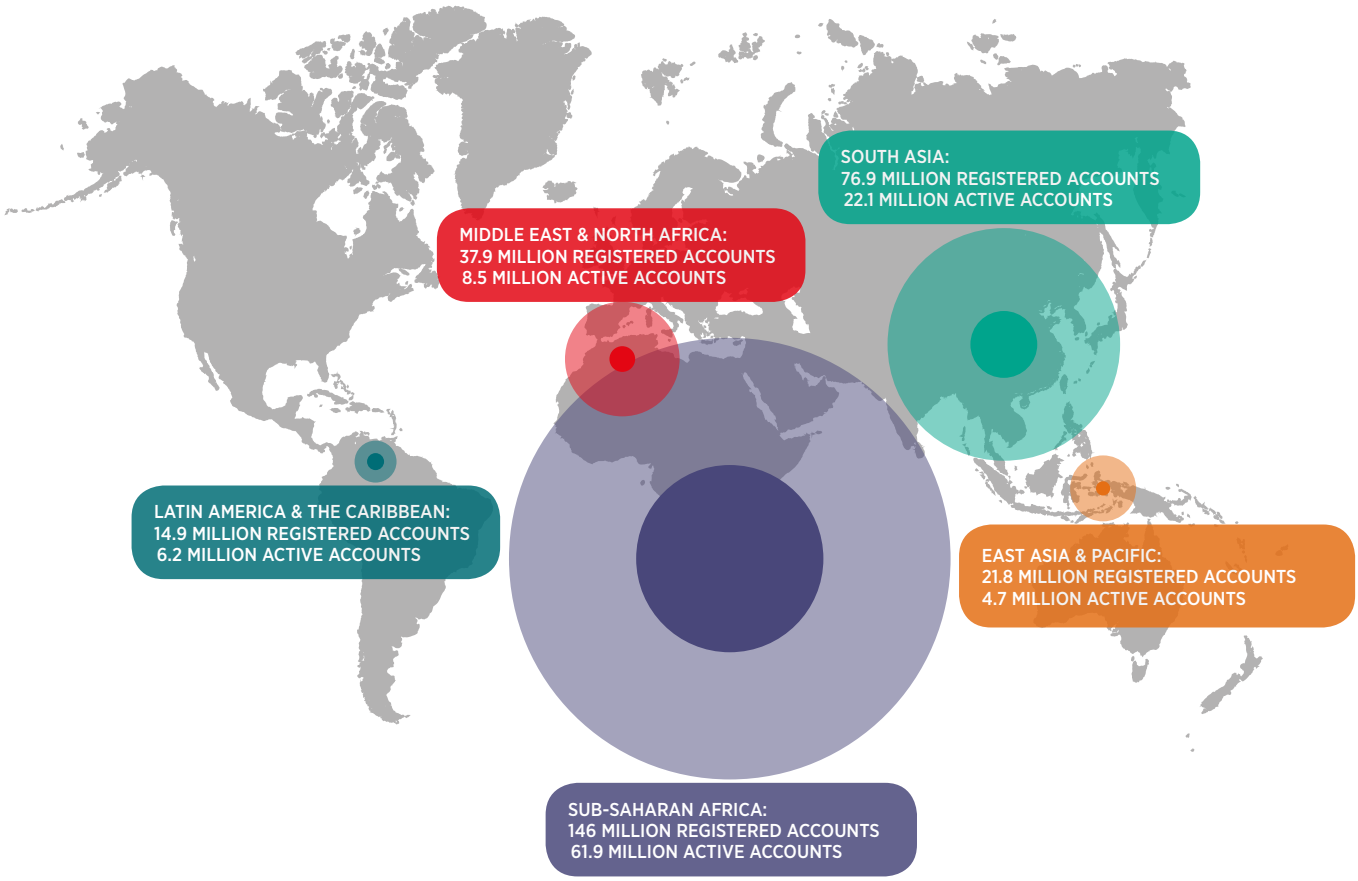
The customer active rate – the percentage of registered accounts that are active on a 90-day basis - increased by 2 percentage points this year and reached 34.6% globally at the end of 2014. However, this masks strong regional differences. The highest increase in the active rate was seen in Middle Africa where 23.9% of accounts were active in December 2014, up from 14.9% in December 2013 and less than 10% in December 2012.

26. Data on bank branches come from the IMF Financial Access Survey (FAS) Database. Available at http://data.imf.org/

27. This number may be even higher as data on the number of bank accounts was not available for a number of countries. The data on bank accounts are from the IMF Financial Access Survey Database and other IMF and World Bank sources where FAS data was not available. We were not able to find data for the following markets: Benin, Burkina Faso, Chad, Cote d'Ivoire, El Salvador, Ethiopia, Guinea-Bissau, Iran, Mali, Mauritania, Niger, Nigeria, Qatar, Romania, Senegal, Sierra Leone, Sri Lanka, Sudan, Swaziland, Togo, Tunisia, Vanuatu, and Vietnam. It might be the case that the percentage of active bank accounts is higher on average than the percentage of active mobile money accounts. Unfortunately, we do not have access to information on the level of activity for bank accounts, which is why the comparison is based on number of registered accounts rather than on numbers of active accounts.

FIGURE 7

NUMBERS OF REGISTERED AND ACTIVE CUSTOMER ACCOUNTS[28] BY REGION (DECEMBER 2014)[29]



28. Active on a 90-day basis.

29. In order to maintain confidentiality of mobile money providers' data, aggregated regional figures on mobile money metrics are only presented where the following criteria have been met:
    1) Regions with 3 or more mobile money services and no service accounts for more than 50% of mobile money metric data in the region: *Regional level figures will be used for reporting and analysis.*
    2) Regions with 3 or more mobile money services and one service accounts for more than 50% of mobile money accounts in the market: *Regional level figures will be used for reporting and analysis only if the leading service provider agrees that aggregated regional data can be published.*
    3) Regions with 1 or 2 mobile money services: *Regional level figures will be used for reporting and analysis only if all mobile money providers in the country agree that aggregated regional data can be published.*

TEXT BOX 4
THE CUSTOMER JOURNEY: ONE YEAR ON

In July 2013, MMU published an analysis on the customer journey and the barriers preventing active usage of mobile money. A year and a half later, activation rates have increased substantially and, most surprisingly, from new regions where mobile money over the past few years had continued to struggle. What changed?

Perhaps some of the growth is attributable to a natural evolution: changing behaviours is a challenging and often slow process, particularly in markets where the majority are low-income and reluctant to risk financial loss on something new and different. But time, albeit helpful, has not been the main driver causing the growth. The industry has gotten more intelligent on the cost of acquisition, and operators are increasing investment and testing innovative tools to better serve active users and reward usage.

Since the analysis on customer journey in 2013, we have seen operators increase investments in active acquisition through outbound calling centres, reiterating and refining agent training programmes and leveraging targeted BTL campaigns. This year, operators have also been more vocal about their use of transactional data to build a clearer view of the behaviours and needs of their customers, particularly in tough markets. Supporting early stage customers through to regular usage is no longer a blind spot, and an increasing number of operators are successfully doubling down on tactics that drive activation.

Beyond new regions, growth continues in strong mobile money markets as well. In East Africa, for example, we see operators testing new strategies to increase usage. Initiatives such as Tigo's launch of Wekeza in Tanzania or M-Ledger in Kenya, as well as the increasing number of interoperability commitments and the increasing appetite to launch and scale international money transfer services, all point to strategic moves to render mobile money more useful to a strong customer base. As customers become fluent with using mobile money as a domestic remittance product, operators are testing how this usage can either increase (for example, through interoperability) or evolve (through a savings and merchant payment product).

Reaching customers at the bottom of the pyramid

To maximise its socio-economic impact, mobile money needs to sustainably reach people at the bottom of the economic pyramid. Unsurprisingly, most studies indicate that mobile money customers are urban, male users – the typical early adopters.[30] [31] This suggests mobile money follows a traditional technology lifecycle and therefore, industry stakeholders should align expectations and strategies to the mass market adoption process.

Regardless of the level of maturity of their service, there are fundamental indicators which mobile money providers can use to improve their visibility of underserved segments, including the collection of demographic data to identify and track usage amongst women and rural customers. However, only 24% of survey respondents said they know what proportion of their customers reside in a "rural area" and only 23% reported that they know the gender composition of their customer base.

Interestingly, the providers who shared data on rural and gender both this year and last year (13 respondents) saw their penetration increase (8 respondents) or remain stable (5 respondents) among both segments. Registered rural users increased to an average of 48% of all users this year from 43% last year.[32] If we consider the average proportion of women in the customer base, it has also slightly increased globally to 38% from 36% last year.[33] Much of this growth may be organic and due to the overall growth of the mobile money registered base, but MNOs who want to drive adoption in the mass market need to adapt their strategies and tactics specifically to tap into the potential of underserved segments (see Text Boxes 5 and 6).

30. GSMA mWomen Programme (2012). "Unlocking the Potential: Women and Mobile Financial Services in Emerging Markets". Available at: http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/02/GSMA-mWomen-Visa_Unlocking-the-Potential_Feb-2013.pdf
31. CGAP (2013), "Rural vs Urban Mobile Money Use: Insights From Demand-Side Data". Available at: http://www.cgap.org/blog/rural-vs-urban-mobile-money-use-insights-demand-side-data
32. The median proportion reported by the participants this year was 53%, up from 42% last year.
33. The median proportion reported by the participants this year was 39%, up from 37% last year.

TEXT BOX 5

FROM MASS MARKET TO RURAL CUSTOMERS: TACTICS TO INTRODUCE MOBILE MONEY IN HARD-TO-REACH AREAS*

In many emerging markets, the majority of the population lives outside urban centres without easy access to infrastructure like banking, transport, electricity, and roads. Rural communities represent a huge potential customer base in communities where mobile money is the only real competitor to cash. Research from other industries, such as Fast Moving Consumer Goods (FMCG), reveal that rural customers tend to be more brand loyal and a valuable market segment,[1] but on average require more training and interaction than their urban counter parts.

Despite the potential size and loyalty of the rural market, the expansion of mobile money has thus far tended to be a gradual diffusion of services beyond urban centres, rather than a strategic effort by providers to tailor services to meet the needs of rural customers. To gain a better understanding of approaches to expansion into harder-to-reach areas, MMU conducted nine interviews with mobile money deployments that have used innovative tactics and made significant strides in developing a targeted rural strategy. The interviews revealed four key challenges that mobile money providers may need to consider when developing a rural strategy:

1. **Overcoming logistics and delivery challenges –** a lack of infrastructure in rural areas creates logistical challenges for agent and cash management. Leveraging local partnerships, flexible agent financing, and smarter transactional data analysis are enabling providers to address these challenges. For example, in a rural area of Chad with no formal banking infrastructure, and where Tigo has more than 90% GSM market share, they started heavily promoting their mobile money service to their existing GSM customers.

2. **Identifying and communicating a compelling value proposition –** understanding the nuances of how rural consumers earn, save, and spend their money can help providers develop a relevant value proposition for rural users, which may well be different to that of their urban users. For instance, in Sri Lanka, where the majority of households are connected to the electricity grid, Dialog experienced significant uptake of its electricity bill payment product in rural areas. Using Dialog's eZ cash service to pay bills reduces both travel time and costs for rural customers, demonstrating another appealing value proposition that mobile money offers to remote users.

3. **Creating a user-friendly service and accessible interface –** as rural customers tend to have lower financial and technical literacy levels, the service will require a user-friendly interface to enable access. While technologies such as IVR can be useful for reaching illiterate users, greater investment in customer education and increased "touch-points" are also proving successful as a means of on-boarding customers in rural areas.

4. **Finding solutions to the lack of formal identification documents –** the absence of compulsory population registration and identification is a common barrier to wide-scale adoption of mobile financial services, but it is even more prevalent in rural areas. In most markets, regulation plays an important role; solutions such as tiered KYC and adjusting acceptable KYC documentation can help providers facilitate customer adoption and increase financial inclusion in rural areas. In a few markets, mobile money service providers have worked with regulators to adjust acceptable KYC documentation to meet market needs. For example, since 80% of the population in Papua New Guinea does not have a formal national identification document, Nationwide Microbank accepts letters from village leaders as a form of identification to open a MiCash mobile money account.

*This text box is based on a paper by Jennifer Frydrych and Hege Aschim (2014) "Extending Reach: Mobile Money in Rural Areas", GSMA Mobile Money for the Unbanked. Available at: http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/10/2014_DI_Extending-reach_Mobile-money-in-rural-areas.pdf

1. Ratan Malli, JWT, (2009). "Why the Rural Market is Different", available at: http://www.wpp.com/wpp/marketing/ marketing/why-the-rural-market-is-different/

TEXT BOX 6

REACHING WOMEN WITH MOBILE MONEY: THE EXAMPLE OF NATIONWIDE MICROBANK IN PAPUA NEW GUINEA*

With only 15-20% of the population having access to financial services, and a mobile penetration of about 70% of the population, mobile money represents a strong opportunity to increase financial inclusion in Papua New Guinea. The MFI Nationwide Microbank grasped this opportunity in 2012, when it launched MiCash, with the clear objective of banking the unbanked. MiCash was initially marketed as a savings product, and the uptake within a few months from launch was relatively high: in June 2012, 70% of MiCash customers were not previous customers of Nationwide.

To date, women constitute 38% of the MiCash customer base and tend to use it primarily for savings purposes. Here are some of the tactics that have allowed Nationwide Microbank to drive usage of MiCash amongst women which can be replicated in other markets.

Using financial literacy as a way to onboard new customers

In order to raise awareness and attract more customers to MiCash, Nationwide has heavily invested in Below-the-Line (BTL) marketing campaigns, visiting villages, plantations and districts to educate women on financial services and on the use of mobile money. This includes a women-targeted financial literacy training, at the end of which, attendees have the opportunity to open a mobile money account.

While in PNG, as in many other markets, it takes time and resources to train new users in using mobile money, this approach not only allowed Nationwide to register more customers, but also resulted in higher customer active rates. In fact, over 90% of MiCash accounts are active on a monthly basis, which is much higher than the global average. *"Training here requires persistence and constant messaging; you are not going to get changes overnight,"* said Tony Westaway, Managing Director, Nationwide Microbank.

Choosing the right ambassador to increase awareness

Another tactic that has allowed Nationwide Microbank to raise awareness about MiCash has been to use active mobile money customers to educate their peers about the use and benefits of mobile money. Specifically, enabling peer-to-peer learning about how to use mobile money was crucial to Nationwide Microbank to increase the penetration of MiCash amongst women. For this purpose, Nationwide has been taking women from south of the capital Port Moresby, who are more "active" when it comes to using MiCash, to the 'impact' villages north of the capital, where mobile money was not being used, to teach them about mobile money.

*This text box is based on a blog by Claire Scharwatt and Elisa Minischetti, published on the MMU website on October 20, 2014.

Over-the-counter and unregistered users[34]

Respondents to MMU Global Adoption Survey collectively reported 33.3 million unregistered customers transacting over-the-counter (OTC) in June 2014, representing an annualised growth rate of 32.6% in the period between September 2013 and June 2014, compared to an annualised growth rate of 102% in the 9 months leading up to June 2013. The number of unregistered mobile money users is now growing at nearly the same rate as registered mobile money accounts and at a lower rate than the number of active accounts; this is actually slower than in previous years. The reasons behind this deceleration vary by market. In some cases, service providers have invested heavily to migrate their OTC customer base to registered users. In other cases, providers have reached a saturation point in the number of unregistered customers transacting OTC.

OTC usage is particularly common in Pakistan, where we find 5 of the 6 services that reported more than one million unregistered users in June 2014. In this market, the OTC model is widely used for a variety of transactions, including bill payments and person-to-person transfers. In 2014, 9.8% of mobile money services globally were being delivered primarily OTC.[35]

10%

OF MOBILE MONEY SERVICES ARE DELIVERED PRIMARILY OVER-THE-COUNTER

34. Some services are offered primarily "over-the-counter" (OTC), rather than the user transacting via their mobile money account. In this scenario, a mobile money agent performs transactions on behalf of the customer, who does not need to register to use the mobile money service. This may happen formally, as a deliberate commercial strategy employed by the mobile money provider, or informally, driven by a myriad of supply and demand-side factors. "Direct deposits" are a sub-set of informal OTC. A direct deposit refers to a money transfer that is conducted by cashing-in directly to the account of the recipient, circumventing the intended flow of a P2P transfer. Customers or agents may see an incentive to cheat the system, or simply prefer the fewer steps involved to transfer funds. This is the type of OTC many mobile money deployments around the globe have experienced. MicroSave has recently analysed this type of OTC in Uganda, highlighting its impact on the business case for mobile operators.
MMU's Global Adoption Survey collected data on formal OTC usage only. Although service providers typically verify and record the identity of OTC customers to comply with customer due diligence requirements, it is challenging to calculate the number of individual users of OTC services, particularly when the transactions are recorded manually. However, based on the stored KYC information, most respondents were able to estimate the number of unique unregistered mobile money users they have on a monthly basis.
Demand-side data, such as Intermedia's Financial Inclusion Insights research, may provide an indication as to the extent of informal OTC usage in select markets:
http://finclusion.org/wp-content/uploads/2014/04/FII-Bangladesh-Wave-One-Survey-QuickSights-Report.pdf

35. Services which had more unregistered users transacting in June 2014 than active accounts during this month were considered as services delivered primarily over-the-counter.

Usage of mobile money services[36]

KEY FINDINGS

- Domestic P2P transfers and airtime top-ups continue to dominate the global product mix in terms of volume and value, but the fastest growth in 2014 occurred in bulk disbursements, bill and merchant payments - reflecting an expanding ecosystem of institutional and business users of mobile money.
- The steep increase in the number of international remittances via mobile money has been primarily driven by the introduction of a new model using mobile money as both the sending and receiving channel. Mobile money is helping to reduce the costs of international remittances for users: survey respondents reported that the median cost of sending USD 100 via mobile money is USD 4.0, less than half the average cost to send money globally via traditional money transfer channels.
- Merchant payments are on the rise, reflecting strong interest among mobile money providers to facilitate customers' daily expenditures on goods and services. More can be done to drive merchant adoption, however, as only 25.4% of the 258,000 merchants registered to use mobile money are currently active.
- As a sign of a maturing industry, in 2014 mobile money providers invested in strengthening their internal capabilities to address an increasing number of users and transactions. Half of all respondents had already completed platform migrations or planned to migrate their platform in 2015.

Overview of the mobile money global product mix

The majority of mobile money transaction types can be grouped into six product areas: domestic P2P transfer, international transfer, airtime top-up, bill payment, bulk disbursement and merchant payment. Of these, domestic P2P transfers and airtime top-ups continue to dominate the global product mix in terms of volume and value, but some of the fastest growth in 2014 occurred in bulk disbursements, bill and merchant payments, reflecting an expanding ecosystem of institutional and business users of mobile money. Despite representing a still relatively small portion of the global product mix, international remittances via mobile money was the fastest growing product in 2014.

Globally, mobile money users transacted a total of USD 16.3 billion through 717.2 million transactions in the month of December 2014. If cash-ins and cash-outs are excluded, mobile money users performed 479.5 million remittance and payment transactions totalling USD 7.5 billion.

36. In this section, data on mobile money transaction volumes and values is based on Estimates and Forecasts from GSMA Mobile Money Intelligence covering the entire industry (255 services across 89 countries as of December 2014).

FIGURE 8

GLOBAL PRODUCT MIX BY VOLUME (DECEMBER 2014)

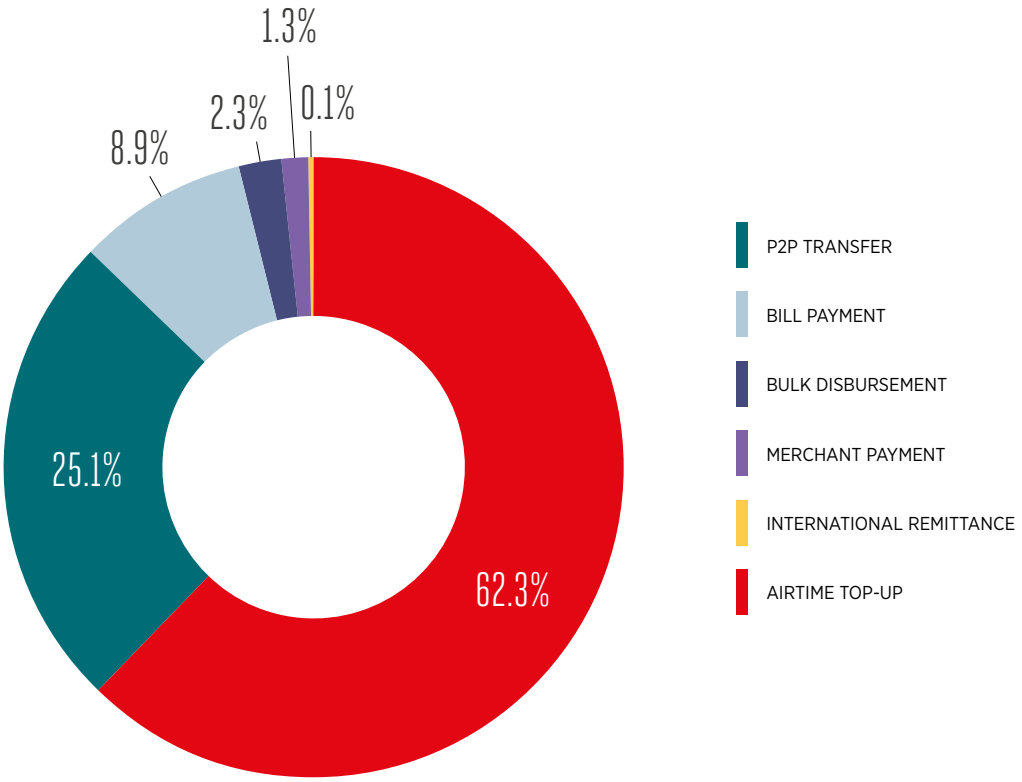
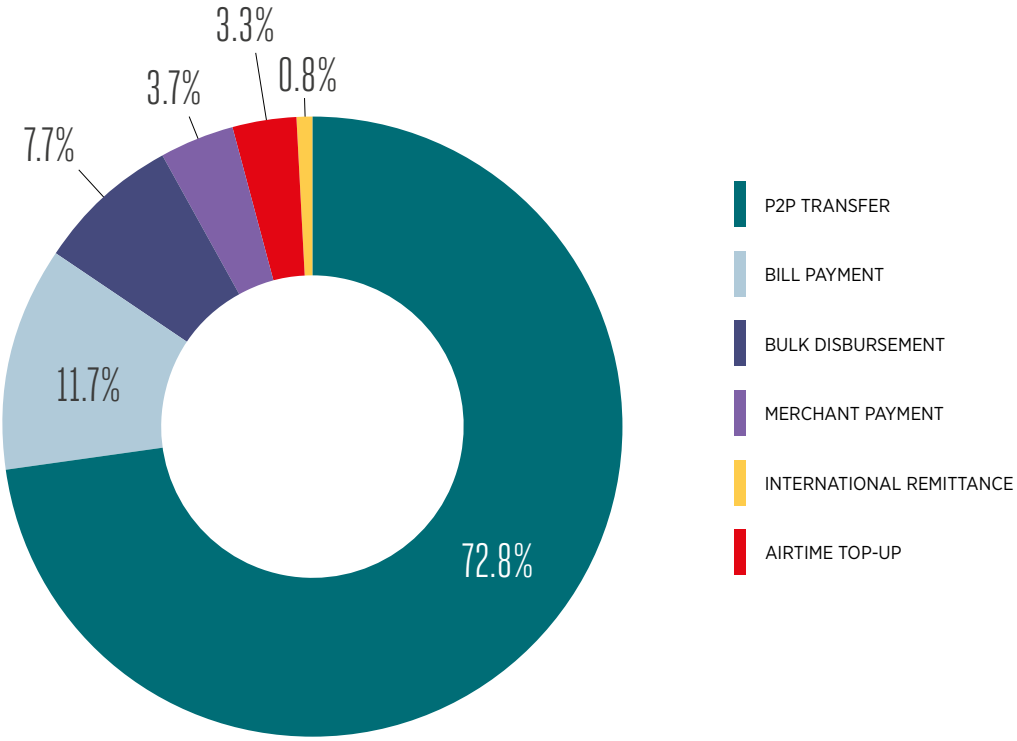


FIGURE 9

GLOBAL PRODUCT MIX BY VALUE (DECEMBER 2014)



TEXT BOX 7

A NOTE ON MOBILE MONEY TRANSACTION VALUE FLOWS

Mobile money transactions involve the conversion of cash to electronic value, as well as the movement of that value between the accounts of individuals, businesses and governments for a wide range of use cases, including payments and purchases of goods and services. Finally, mobile money also includes transactions to enable conversion of electronic value back to cash. Mobile money transaction flows consist of:

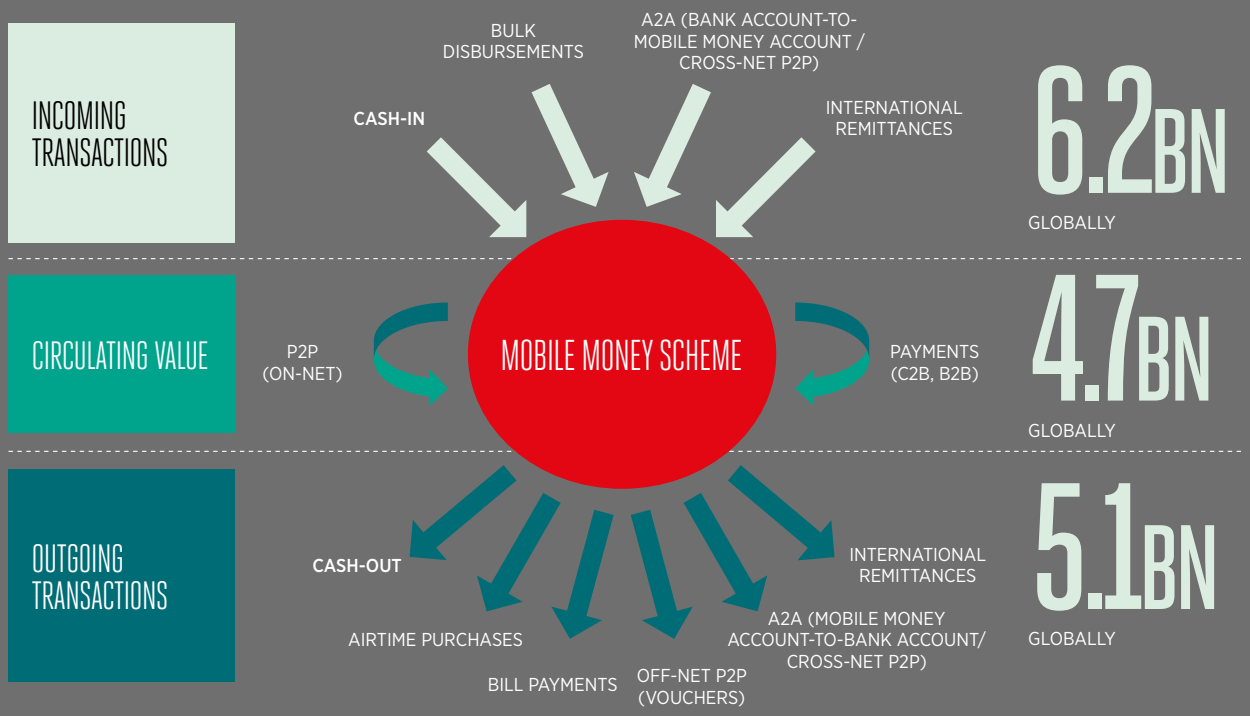
- **Incoming transactions:** Incoming flows of value come from cash-in, bulk disbursements (from external companies or institutions into customer accounts), bank account-to-mobile money account transfers, and inbound domestic cross-net P2P and inbound international remittances.

- **Circulating value:** Value circulating on a mobile money platform is primarily the result of on-net peer-to-peer transactions and payments into someone else's mobile money account (e.g., merchant payments and supply chain payments between businesses).

- **Outgoing transactions:** Outflows of value from the mobile money system include cash-outs, airtime top-ups, bill payments, vouchers, outbound domestic P2P and outbound international remittances.

Looking at the mobile money system in this way helps industry practitioners to understand the drivers of growth for mobile money through transactions which keep value circulating on the mobile money system. As providers look to drive further profitability of mobile money through development of the ecosystem, increasing the channels through which money can enter the system will be integral, while offering a variety of options for re-transacting value once on the system will help to increase growth of both volume and value of transactions.

TRANSACTION FLOWS IN A MOBILE MONEY SYSTEM



Mobile money remittances

Mobile money remittances are expanding to allow users of different networks to transact with each other more directly. This expansion is happening both domestically, beyond the provider's own network through interconnection with other mobile money services, and internationally, through increased partnerships, either within operator groups or with other operators, to enable cross-border mobile money remittances.

DOMESTIC P2P TRANSFERS

In terms of total value processed, domestic P2P transfers remain the largest contributor to the global product mix. They are an integral foundational transaction to any mobile money service; active mobile money users conducted an average of 1.6 P2P transfers in December 2014.[37]

Yet the vast majority of domestic P2P transfers still take place within a single mobile money scheme, meaning that users can only send money directly to the accounts of other mobile money users on the same network. This year, it is now possible to send money directly across schemes in four markets as operators in Pakistan, Sri Lanka and Tanzania joined Indonesia in interconnecting their services. Initial data from Tanzania suggests that interoperability can boost transaction volumes (see Text Box 8).

TEXT BOX 8

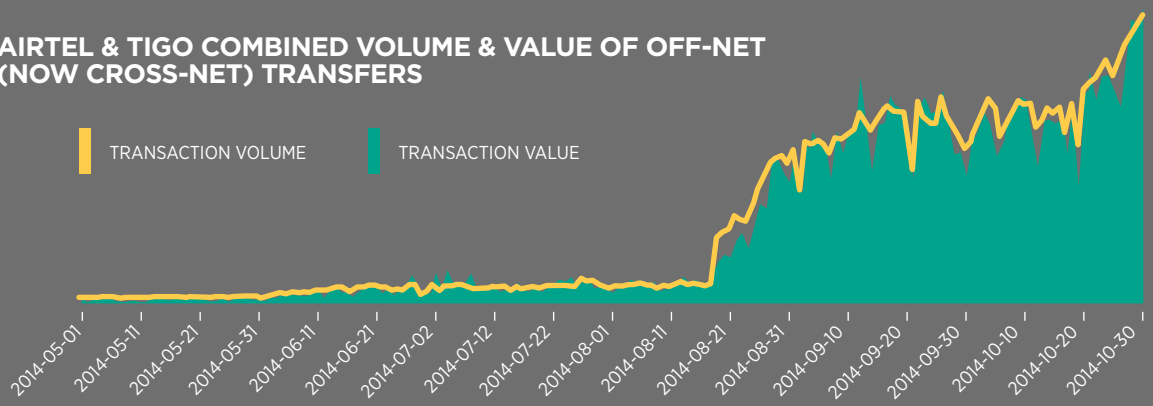
LESSONS FROM ACCOUNT-TO-ACCOUNT INTEROPERABILITY IN TANZANIA

In Tanzania, P2P transactions are a strong driver of mobile money services, making it one of the largest mobile money markets in the world. In early 2012, initial discussions were held among the leading MNOs to explore the potential of interoperability to drive higher P2P transaction volumes and attract more customers to mobile money.

A bilateral approach was chosen, with direct technical connections and bilateral agreements made in a multi-lateral spirit. This approach allowed the MNOs flexibility to move ahead in their own time and carried lower implementation complexity and costs.

As of December 2014, cross-net P2P transfers are live between Tigo and Airtel, and between Tigo and Zantel. While it may be too soon to tell the full impact that interconnection will have on the market, early signs point to an increase in transaction values and overall pick-up in on-net transaction growth. The next step for the operators will be to launch ATL marketing campaigns to educate customers further about the new services.

AIRTEL & TIGO COMBINED VOLUME & VALUE OF OFF-NET (NOW CROSS-NET) TRANSFERS



For confidentiality reasons, the scale has been removed from this graph, provided with permission from Tigo and Airtel Tanzania. Tigo believes that the spike in the number and value of transactions was driven by communication of interoperability in August 2014.

37. Ratios of transactions per active account have been calculated for mobile money account based services using the 30-day definition of active account and therefore excludes OTC transactions.

INTERNATIONAL REMITTANCES

International remittances were the fastest growing product in 2014 (65.5%), a reflection of significant changes taking place in the industry (see Text Box 9). While growth in 2014 took place across all regions, the uptake was particularly significant in West Africa, which accounts for 37.9% of international remittances via mobile money globally. This success is primarily driven by the introduction of cross-border mobile money remittances by mobile operators in the region, allowing users to initiate and receive funds directly to and from their mobile money accounts.

Mobile money represents a strong opportunity to reduce costs for the user: survey respondents reported that the median cost of sending USD 100 using mobile money is USD 4.0, less than half the average cost of sending money globally via traditional money transfer channels (9.0% of face value on average) and three times lower than the cost of sending money to Sub-Saharan Africa (12.4%).[38]

TEXT BOX 9

SPOTLIGHT ON CROSS-BORDER MOBILE MONEY REMITTANCES

International remittances have long been an area of interest for mobile money providers, representing an opportunity to meet the demand from customers wishing to use mobile money to send money to their family members in other countries. However, international remittances via mobile money have had relatively little traction until 2014, partly due to commercial challenges, and partly because of regulatory barriers, including provisions prohibiting cross-border mobile money transfers in many countries.[1]

In recent months, a number of key developments have taken place in the industry which have changed the face of mobile-enabled international remittances. Most notably, the industry witnessed the first launches of several cross-border mobile money remittance services via mobile money, enabling the direct transfer of funds between the accounts of mobile money users in different countries.

- Thanks to enabling regulatory environments in Rwanda and Tanzania, Tigo recently launched a cross-border mobile money remittance service which allows Tigo customers to send money between the two markets. In this model, Tigo manages the currency conversion and foreign exchange risk without the assistance of a traditional Money Transfer Operator (MTO) or hub. The service is currently free for its customers and works in real time, meaning that money can be sent instantaneously across the Tanzanian-Rwandan border.

- In 2013, Orange launched its Orange Money International Transfer service allowing Orange Money customers in Mali, Senegal and Côte d'Ivoire to send and receive money across borders via their Orange Money mobile account. Unlike the Tigo Rwanda-Tanzania service, there is no need for Orange to manage a foreign exchange component since all three markets use the West African Franc. Orange's cross-border remittance service is used both for cross-border trade and for "send money home" purposes.

- In April 2014, MTN Côte d'Ivoire and Airtel Burkina Faso launched a cross-border mobile money remittance service, similarly without the need to manage a foreign exchange component since both markets use the Central African Franc.

As policymakers increasingly start to recognise the secure personal authentication technology offered by the mobile channel, cross border remittances via mobile money will continue to take off. Likewise, new partnerships leveraging web-based and mobile interfaces, as well as greater connectivity between mobile money users and diaspora networks in developed markets, have started to gain traction. With greater regulatory flexibility and continuing innovations such as these, the role of mobile money in international remittances will continue to grow.

This text box was adapted from blog posts by Jennifer Frydrych, published on the MMU website on May 22 2014, and Jeremiah Grossman, published on the MMU website on October 30, 2014.

1. For a full discussion of the key challenges affecting mobile-enabled cross-border remittances and payments, see AFI, Mobile Financial Services: Mobile-Enabled Cross-Border Payments, August 2014, available at: http://www.afi-global.org/sites/default/files/publications/mfswg_guideline_note_no_14_eng.pdf

38. "African Migrants Could Save US $4 Billion Annually on Remittance Fees, Finds World Bank", World Bank, 2013. Available at: http://www.worldbank.org/en/news/press-release/2013/01/28/african-migrants-could-save-US4-billion-annually-remittance-fees-finds-world-bank

Mobile money payments

While airtime top-up continues to be the dominant payment transaction via mobile money, providers are now serving a growing number of verticals such as retail merchants, utility companies, governments and other third parties using mobile money as a payment channel. Just under a quarter (23.1%) of all the value moving through mobile money systems globally in December 2014 was processed in transactions involving these other ecosystem players (bulk disbursements, bill payments and merchant payments).

23.1%

OF ALL VALUE PROCESSED IN DECEMBER 2014 WAS FOR BULK, BILL AND MERCHANT PAYMENTS

MANY TO ONE PAYMENTS INCLUDING: CUSTOMER-TO-BUSINESS (C2B), BUSINESS-TO-BUSINESS (B2B) AND PERSON-TO-GOVERNMENT (P2G)

Airtime top-ups still represent the largest share of total mobile money transaction volumes and are the most frequently transacted product, with active mobile money users performing 4.5 top-ups on average in December 2014.

The number of bill payments through mobile money services increased by 7.2 million transactions during the year to December 2014, with active customers making an average of 0.3 bill payments per month from their mobile money account in that month. Bill payments represent an important product for increasing active usage of mobile money through a regularly recurring transaction, such as a monthly or quarterly electricity bill.

Of all the payment transaction types, merchant payment volumes grew the fastest in 2014 (58.5%), and experienced the highest global increase in value transacted (78.6%), reflecting strong interest among mobile money providers to facilitate customers' daily expenditures on goods and services. Merchant acquisition drives helped to increase the total number of merchants joining mobile money services participating in our survey to 258,000 between September 2013 and June 2014, an increase of 110.4%.[39] Nearly two thirds of this growth took place outside of East Africa. A number of deployments are also beginning to support the online purchase of digital goods and services via mobile money: online merchants represented the majority of merchants for a quarter of survey respondents.

Nevertheless, respondents reported that only 25.4% of registered merchants actually accepted a mobile money payment in June 2014, suggesting that more efforts are now needed to turn these merchants into active users of mobile money.[40] The majority of merchant payments are still driven by relatively few deployments that have managed to address the challenges of building and managing a successful merchant payment network, as well as creating traction among their own customer base. The top five merchant payments services accounted for 77.1% of all merchant payment transactions in December 2014.[41]

39. As reported by respondents to the MMU Survey, inclusive up until 30 June 2014.
40. A merchant is considered active if they have accepted a payment via mobile money in the past 30 days.
41. These services represented a combined 4.9m transactions.

TEXT BOX 10

SCALING THE MERCHANT PAYMENTS OPPORTUNITY*

Merchant payments represent a huge opportunity to increase mobile money transaction volumes and integrate the mobile money account more deeply into everyday life. In a single week, a customer might purchase groceries, visit a pharmacy and eat at a restaurant, but might only send money to a family member once or twice a month. Nevertheless, despite strong enthusiasm within the industry, today only a handful of services are generating merchant payment transactions at scale.

Building an active merchant payment network is a significant endeavour, involving substantial investment in human capital and marketing, and a dedicated strategy for managing merchants on an ongoing basis. Among the providers currently achieving scale in merchant payment services, a few common practices were found to be instrumental in increasing merchant activity rates:

- **Successful providers of merchant payment services via mobile money use targeted initiatives to address market and segment specific pain points.** A strong value proposition is essential to hold merchants' interest and deliver sustainable transaction volumes. Using segmentation to attract the right merchants with an appropriate commission structure will help build a quality merchant network. This requires complex decisions from mobile money providers to navigate local market conditions, and the flexibility to adapt to meet merchant needs.

- **Using an internal dashboard to review merchant activity on a regular basis, and providing merchants with web-based access to transaction reports, help to increase confidence in the system.** Merchants with an interest in analysing how their business is performing, or who need to perform reconciliations, require access to transaction data outside of USSD and SMS channels. Likewise, providers who keep track of their merchant activity are better able to understand what makes them active, what is driving the transaction volumes, what types of businesses are most active, and other insights such as peak transaction times (day or night).

- **Merchant education and support all along the process is key to maintaining a loyal and active merchant network.** Providing merchants with clarity around settlement and how to access their funds is important to making them feel comfortable with the service and effectively manage their cash flows. In turn, they will be more likely to encourage customers to use the service. In some cases, providers have partnered with a third party merchant acquirer or established a dedicated in-house team to provide merchants with support on an ongoing basis.

- **Having a strong foundation for the mobile money service is integral to a successful merchant payment proposition.** Customers need to be accustomed to using mobile money on an active basis, and must be presented with strong incentives to use the functionality to conduct payments that are traditionally cash-based. The top merchant payments services are led by dominant operators with strong customer reach, which in turn is important for generating the network effects required to bring merchants on board. For non-dominant players, an interoperable approach may be an attractive option to help grow the merchant payments ecosystem.

Providers have also experimented with various models in the hope to make a more compelling proposition, including partnership with card networks to employ pre-paid companion cards and mPOS solutions[1] as a low-cost way to extend existing card acceptance networks. Variations in commercial and distribution models make it challenging to identify specific success factors, although creating awareness and communicating the distinct functionalities of each form factor can be a challenge, especially in markets where mobile money is nascent.

* This text box is based on a paper by Arunjay Katakam: "Setting up shop: Strategies for building effective merchant payment networks", published in November 2014.

1. mPOS (mobile POS) solutions combine mobile devices owned by merchants with a hardware dongle to allow the acceptance of card payments

ONE TO MANY PAYMENTS INCLUDING: BUSINESS-TO-CONSUMER (B2C), GOVERNMENT-TO-PERSON (G2P) AND DONOR-TO-PERSON (D2P)

An increasing number of governments and companies are putting their trust in mobile money services for the wide-scale distribution of salary payments, social security and benefits disbursements, agricultural subsidies and other bulk distribution payments.

The value of bulk disbursements globally grew by 59.1% between December 2013 and December 2014, while the average transaction value stayed roughly the same (at USD 52.7 in Dec 2014). South Asia accounted for 46.4% of all bulk payments processed in December 2014, mostly reflecting increased usage by governments to distribute social benefit payments. Salary payments contributed the largest share of bulk disbursement values processed globally among survey respondents.

Bulk disbursements represent an important channel for bringing value into the mobile money system, but enabling bulk disbursements comes with its own challenges for mobile money service providers, as agents need the liquidity to handle significant fluctuations in demand for cash-out of large disbursements. The bulk payments market is likely to continue to grow as the mobile money industry matures. In some cases, the advent of interoperability between mobile money schemes may prompt large-scale institutional providers to opt for mobile money as their preferred disbursement channel.

FIGURE 10

GLOBAL AVERAGE NUMBER OF TRANSACTIONS PER ACTIVE USER (30 DAY) **PER MONTH** (DECEMBER 2014)

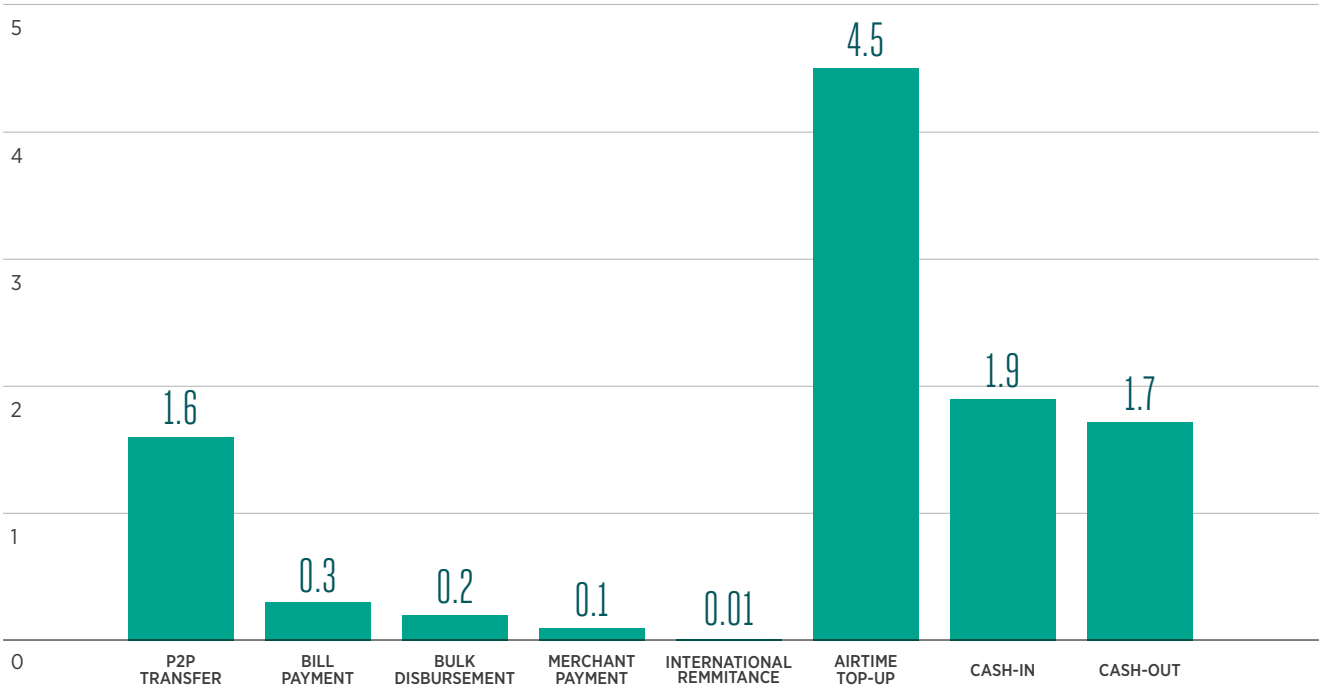
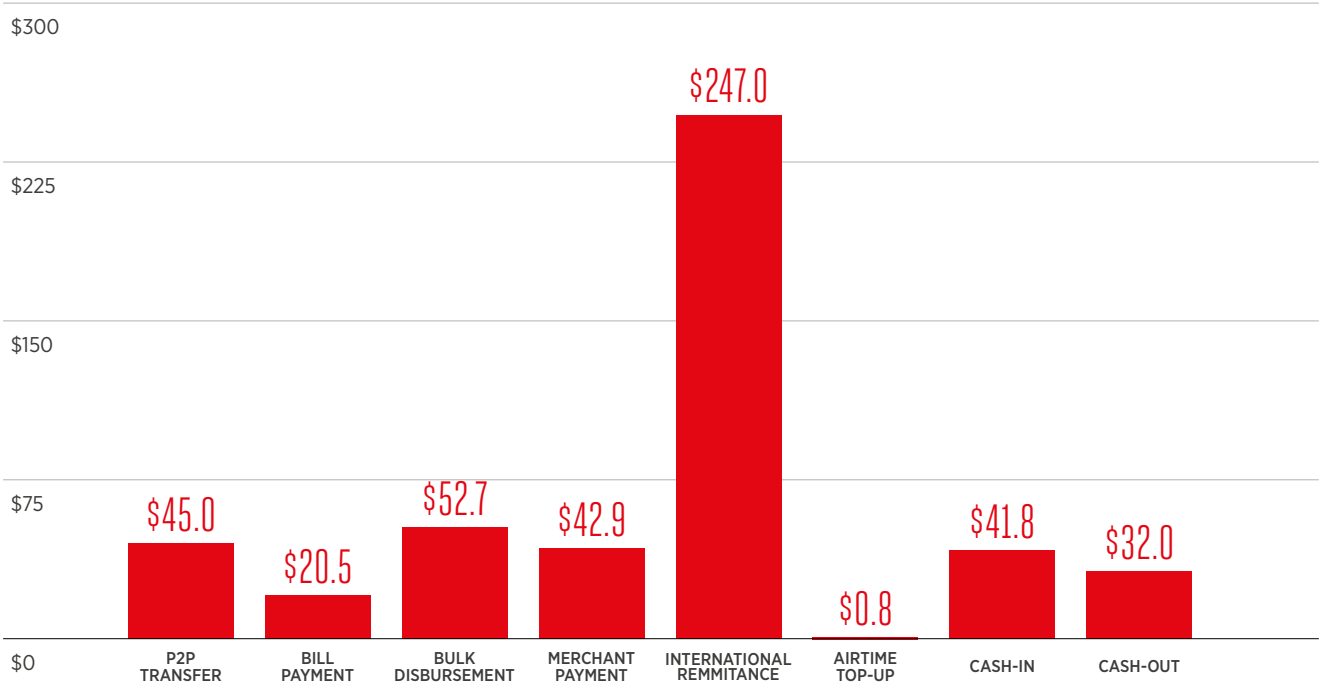


FIGURE 11

GLOBAL AVERAGE VALUE OF TRANSACTIONS (USD)
PER PRODUCT (DECEMBER 2014)



Strengthening capabilities to connect with the ecosystem

49%

OF MOBILE MONEY PROVIDERS HAVE ALREADY MIGRATED THEIR PLATFORMS OR PLAN TO DO SO WITHIN THE NEXT 12 MONTHS

As the mobile money industry matures, service providers are strengthening their internal capabilities to address an increasing number of users and transactions. In 2014, there were a number of major platform migrations, reflecting the changing technical requirements needed to accommodate an increasing number of companies and third party users of mobile money. By June 2014, half of all survey respondents had either already migrated their platform or planned to do so within the next 12 months. As competition increases, platform providers are developing systems that are more reliable, scalable and flexible to the shifting needs of the industry. During 2014, a number of larger players, such as Huawei, Ericsson and MasterCard in Latin America, entered the mobile money platform market.

At the same time, service providers are taking steps to offer merchants and other businesses easier access to their mobile money platforms. Just under two thirds (63%) of respondents already provide third parties with access to their platforms via application programming interfaces (APIs), while a further 24% said they are planning to provide API access within the next 12 months.

TEXT BOX 11

MOBILE MONEY PAYMENTS SUPPORTING SOCIAL AND ECONOMIC DEVELOPMENT*

Mobile money is becoming a powerful tool for socio-economic development, contributing to financial inclusion and enhancing citizen access to basic services.

Access to basic utilities

Among the transactions described in this section, bill payment represents an important avenue for unbanked and underserved users to gain access to essential utilities, such as water and electricity. A 2013 study on mobile water payments in Tanzania[1] found that mobile payments were an effective tool for improvements in revenue collection and controlling governance-related losses. Mobile payments also helped to break down the monthly billing and payment cycle into more manageable portions by allowing households to pay when, where, and how they want.

Smallholder farming and agribusiness

Mobile money providers are beginning to recognise the large untapped segment that farmers and the agricultural industry represent. In some markets, agriculture contributes up to 40% of total GDP, while the global demand for finance from smallholder farmers in 2012 was estimated at $450 billion, with only 2% currently being met by existing financial services.[2] MNOs operating in countries where the agriculture sector is dominated by a few large value chains, such as cocoa, are looking to expand their mobile money service by replacing inefficient cash payments for farmers. For example:

- Orange Uganda is targeting farmers as potential customers with its mobile money service Orange Money, giving them a safe, convenient way to buy farming supplies and get paid for their harvests.
- In Sierra Leone, Airtel partners with the Ministry of Agriculture to provide mobile money to farmers in the district of Kenema.
- In Nigeria, Cellulant and Nigeria's Bank of Agriculture work together to provide mobile money services aimed at driving business transactions in the agricultural sector.

Tax payments via mobile money

2014 also saw the introduction of a number of new initiatives leveraging mobile money to enable P2G (people to government) and B2G (business to government) payments, such as collecting income, sales and value-added tax payments, social security and pension contributions, and company registration fees. Using mobile money instead of cash for P2G and B2G has the potential to reduce fraud, as well as increase both transparency and revenues for tax authorities. For mobile money providers, equipping customers with the ability to make P2G and B2G transactions via mobile money platforms will further expand the digital financial ecosystem, and potentially offer revenue growth. For example:

- Three years after the launch of the first mobile money service in Tanzania, the Tanzania Revenue Authority enabled tax payments over mobile money for property taxes and personal income taxes. One year later, around 15% of the tax base was using mobile money.
- In March 2014, Mauritius Telecom partnered with the Mauritius Revenue Authority and the State Bank of Mauritius to enable income tax payments via mobile for Orange Money customers. In addition to offering payments via SMS, for the 2014 E-Filing season, the Mauritius Revenue Authority reported more than 123,000 returns were received electronically (using mobile devices or online), representing a 12% increase as compared to the 2013 filing season.

*This text box is based on blog posts by Claire Pénicaud Scharwatt, Janet Shulist and insights developed by the GSMA's M4D Utilities and mAgri programmes.

1. University of Oxford, April 2013: "Wireless Water: Improving Urban Water Provision Through Mobile Finance Innovations" http://oxwater.co.uk/#/wireless-water-dar-es-salaam/4575214770.
2. Dalberg Global Development Advisors, Catalyzing Smallholder Agricultural Finance, September 2012 http://dalberg.com/documents/Catalyzing_Smallholder_Ag_Finance.pdf

Mobile money revenues and investment[42]

KEY FINDINGS

- Mobile money providers are continuing to invest in improving and expanding their mobile money services, showing important commitment to the long-horizon investment required by this industry. Over 80% of respondents indicated that they had maintained or increased investment in 2014 over the previous year.
- As the industry matures, mobile money providers are starting to experience sustainable revenue growth now that the long-term investments in operational expenditure are beginning to pay off. Nearly 40% of respondents in our sample more than doubled their revenues in the nine months between September 2013 and June 2014. However, most deployments are still waiting to break even as they invest in foundations.
- Businesses and institutional users of mobile money can be an important source of revenue once the foundational groundwork is laid and the service achieves a sustainable base of active customers. Just under 10% of those who reported earnings derive the majority of their revenues from business fees.
- Some MNOs are also experiencing significant indirect benefits from mobile money, such as churn reduction and savings on airtime distribution. One out of six operators in our sample sell more than 10% of their airtime on mobile money, thus helping to further strengthen the overall business case for deploying mobile money services.

As mobile money providers grow their active customer base and broaden their product portfolios, their ability to generate direct revenues from transactions grows. Increasingly a mainstream offering for MNOs in developing countries, mobile money services that have the patience to continue investing in foundations are now seeing this pay off in greater contribution to operators' overall company revenues.

DIRECT REVENUES[43]

Mobile money is generating substantial revenues for a growing number of MNOs. At least 11 providers reported generating more than USD 1 million in revenues during the month of June 2014, compared to 8 providers in 2013. All but one of these providers were MNOs, highlighting the scale of reach, distribution and investment that mobile network operators are bringing to the industry.

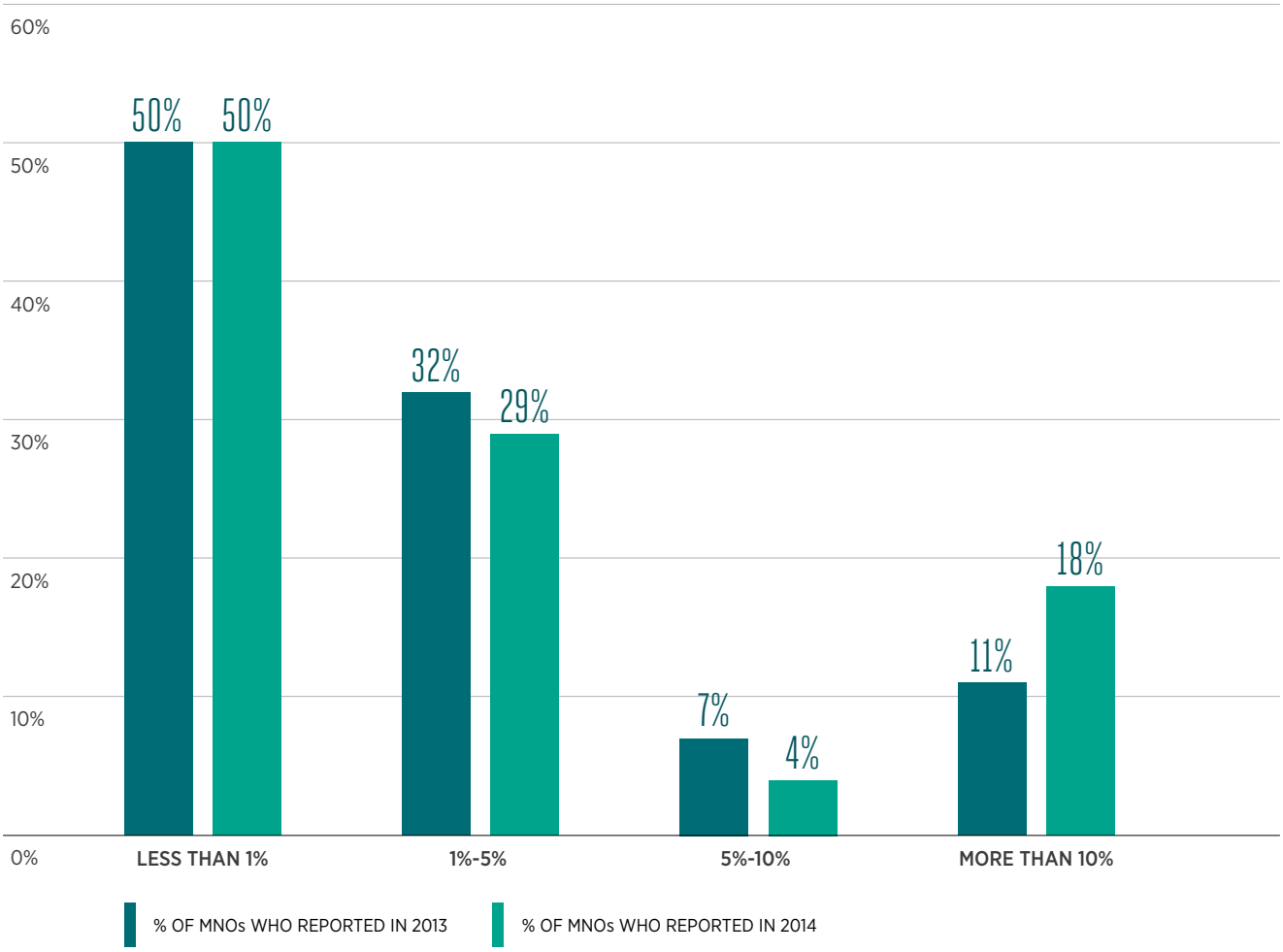
42. In this section, data on mobile money revenues and investments is based on self-reported data by 92 respondents to the MMU Global Adoption Survey.
43. This sub-section is based on information provided by survey respondents, in additional to public information made available by large groups including MTN, Safaricom, Vodacom, Tigo Millicom and others.

The revenues generated by mobile money services grew over three times as fast as transaction volumes in 2014 (126.5% CAGR) as providers expanded their portfolio of transaction options and made progress in strengthening customer activity rates. Nearly 40% of respondents in our sample more than doubled their revenues in the nine months between September 2013 and June 2014.

Half of the MNOs who provided data on revenues reported generating less than 1% of their total revenue from mobile money. While this threshold may appear low, it is important to recognize that the majority of deployments are still at relatively early stages of development, including new launches which took place in 2014. As a comparison, ordinary telco VAS (value added services) offerings, such as ringtones and news or weather content, typically contribute between 2-5%, and sometimes up to 8%, of total company revenues.[44] Encouragingly, in absolute terms, the number of operators now contributing more than 5% of total company revenues from mobile money services is rising steadily (see Figure 12 below).

FIGURE 12

PERCENTAGE OF REVENUES GENERATED BY MOBILE MONEY FOR MNOS
(JUNE 2013 VS. JUNE 2014)



44. Recurring (service) revenue generated from value-added services (VAS) in the period, expressed as a percentage of recurring (service) revenue, GSMA Intelligence data, Q3 2013 - Q2 2014.

11

PROVIDERS EARNED OVER USD1 MILLION IN REVENUES FROM MOBILE MONEY IN JUNE 2014

Despite encouraging growth in the sector globally, in some markets regulatory uncertainty and the lack of a level playing field can deter early-stage deployments from continuing to invest in growth. Moreover, operators are often faced with pressure from declining voice revenue and price wars. These and other commercial factors can result in diverted investment away from mobile money, which in turn impacts revenue. Two MNOs in the sample reported a fall in revenues of more than 50% between September 2013 and June 2014.

As mobile money providers expand their product portfolios, businesses and institutional users of mobile money can be an important source of revenue. Survey respondents reveal that the majority of mobile money revenues for providers in 2014 continue to originate from fees charged to consumers.[45] Nevertheless, this year, ten respondents reported earning the majority of their revenues from business fees, reinforcing the growing importance of mobile money as a payment channel for businesses to conduct B2B and B2C transactions, such as bulk disbursement of salaries.

For those MNOs that have reached significant scale and operate a mature, ecosystem-based service, mobile money revenues can contribute well above 10% of total company earnings. Public reports from several major MNOs show how these earnings continue to increase as transaction rates grow, driven by an increasingly active customer base:

- Safaricom reported 24.7% growth in M-PESA revenue to KES 15.59 billion in the year to September 2014, driven by a 10.8% increase in active 30-day users and a rise is B2C and C2B transactions. M-PESA revenues continue to contribute just under 20% of total revenues for Safaricom.[46]

- The Millicom Group reported a 44.6% year-on-year increase in revenue from mobile financial services in Q3 2014, driven by an 8% rise in new active users in that quarter.[47]

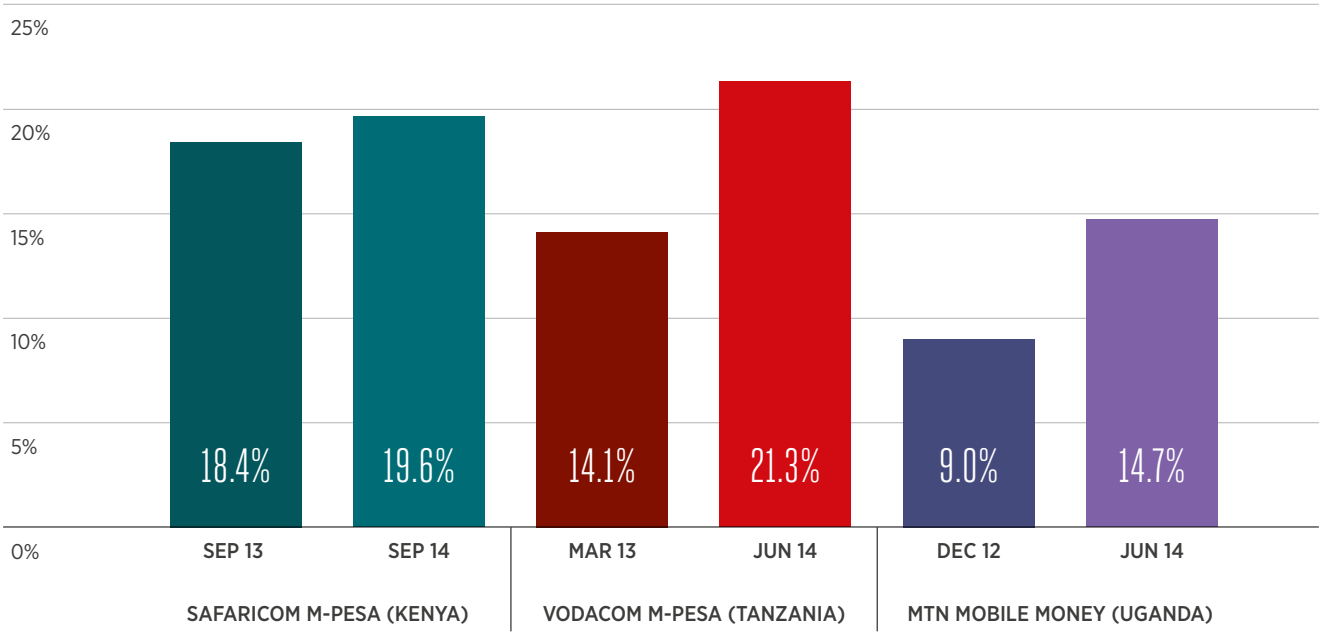
- MTN Uganda recorded a 39.4% increase in mobile money-related revenue in the six-month period to June 2014, resulting in 14.7% contribution to total company revenues. MTN Uganda's mobile money users generated more than 28.5 million transactions per month in the same period.[48]

- Vodacom Tanzania's M-Pesa service increased its contribution to total company revenues by 2 percentage points between December 2013 and June 2014. M-Pesa now contributes 21.3% of the operator's total service revenue.[49]

45. Mobile money fees charged to customers are typically made on a per-transaction basis. While pricing strategies vary widely across deployments, providers typically pay the agent a commission for every transaction based on the value of the transaction. GSMA research on profitability finds that agent commissions for cash-in and cash-out can consume 40–80% of mobile money revenues.
46. Safaricom FY15 Half-Year Results, available at: http://www.safaricom.co.ke/images/Downloads/Resources_Downloads/Half_Year_2014-2015_Results_Presentation.pdf
47. Millicom's Q3 Results, 22 October 2014, available at: http://www.millicom.com/media/1596321/millicomearningsreleaseq32014frontoct21final.pdf
48. MTN Group announcement, Interim Results for the period ending 30 June 2014, available at: http://www.mtn.co.ug/About-MTN/News-Room/2014/August/MTN-Group-Interim-results-for.aspx
49. Vodacom Group Limited, Quarterly update for the period ended 30 June 2014, available at: http://www.vodacom.co.za/cs/groups/public/documents/vodacom.co.za_portal_webassets/quarterly_update_30_jun_2014.pdf

FIGURE 13

PERCENTAGE OF TOTAL REVENUES GENERATED BY MOBILE MONEY FOR SAFARICOM, VODACOM (TANZANIA) AND MTN (UGANDA)[50]



INDIRECT REVENUES

For mobile operators, indirect benefits, such as churn reduction, increases in average revenue per user (ARPU) on the GSM business, and savings on airtime distribution, also serve to strengthen the overall business case for deploying mobile money services.

Mobile money's ability to reduce customer churn simply as a new service offering diminishes once it becomes a mainstream service in the majority of markets. Providers are now recognising the need to focus on quality of service and differentiated product offerings to maintain customer loyalty. However, as mobile money becomes more valuable to customers, with more linkages to a range of financial services providers and businesses, the stickier it can become. For Safaricom, M-PESA users are stickier than non-users by 10–30%, contributing to an annual savings of USD 1.60 – USD 5.60 for every M-PESA user.[51]

Reducing costs of airtime distribution via agents can also be a motivating factor in the decision to offer mobile money services. Safaricom noted that commissions to airtime agents represented one of its greatest sources of operating costs.[52] To mitigate this potential dilution of profit margins, operators need to increase the number of non-agent transactions happening between cash-in and cash-out (in order to grow revenues without increasing costs).

Nevertheless, the majority of MNOs still sell less than 1% of their total airtime sales via their mobile money services (see Figure 14).

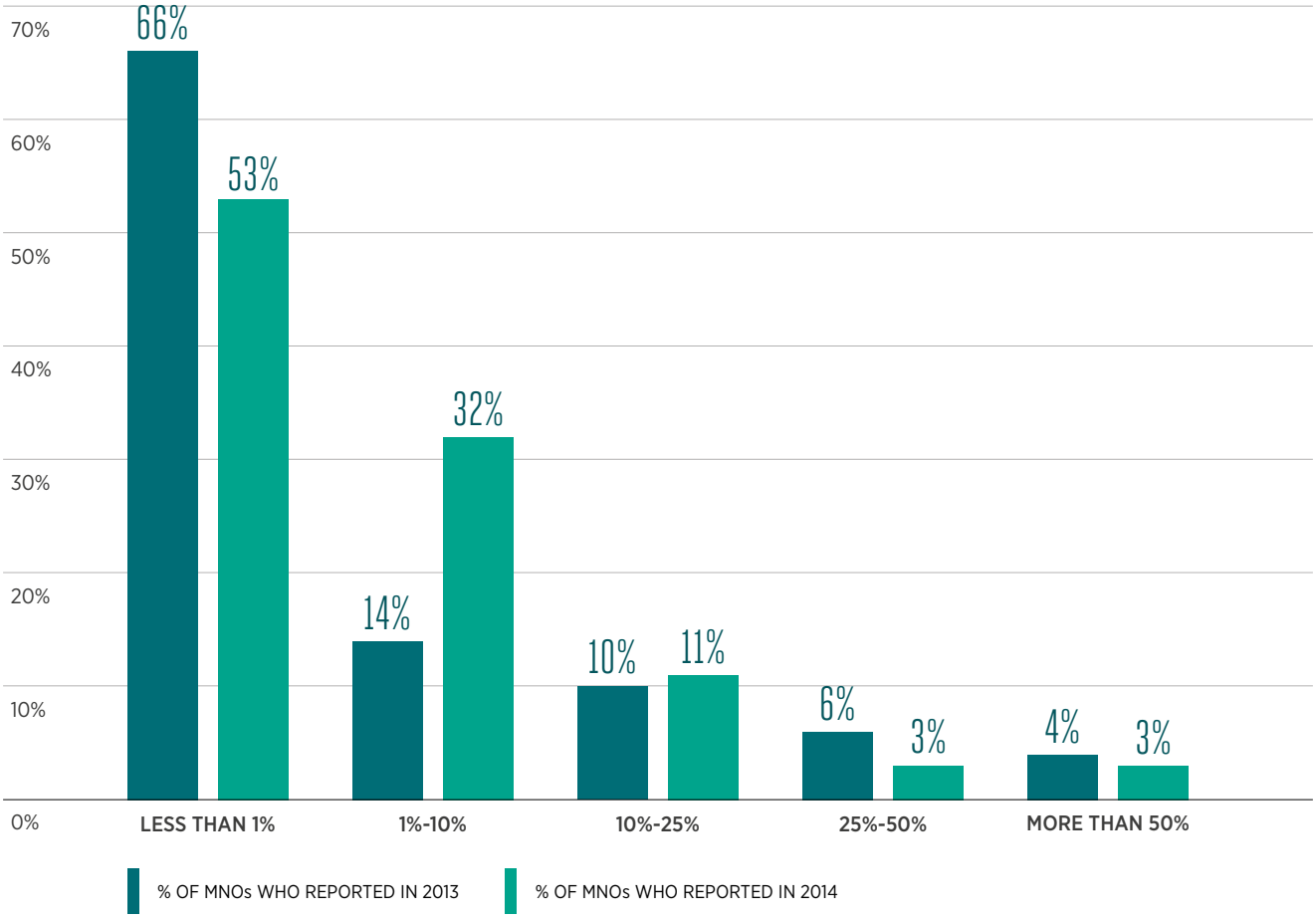
50. Safaricom, available at: http://www.safaricom.co.ke/images/Downloads/Resources_Downloads/Half_Year_2014-2015_Results_Presentation.pdf
Vodacom, available at: http://www.vodacom.co.za/cs/groups/public/documents/vodacom.co.za_portal_webassets/quarterly_update_30_jun_2014.pdf
MTN, available at: https://www.mtn.com/Investors/FinancialReporting/Documents/INTERIMREPORTS/2014/Booklet/MTN_Interim_Results_booklet_Aug__2014.pdf

51. The Bill & Melinda Gates Foundation (2013), "Fighting poverty, profitably: Transforming the economics of payments to build sustainable, inclusive financial systems," Special Report Annex: Country-specific data on payments systems and financial inclusion, available at: https://docs.gatesfoundation.org/Documents/Fighting Poverty Profitably Full Report.pdf

52. Safaricom Half Year 2013-2014 Results, available at: http://www.safaricom.co.ke/images/Downloads/Resources_Downloads/Half_Year_2013-2014_Results_Presentation.pdf

FIGURE 14

PERCENTAGE OF AIRTIME SOLD VIA MOBILE MONEY (JUNE 2013 VS. JUNE 2014)



THE IMPORTANCE OF INVESTMENTS IN MOBILE MONEY

Mobile money can be profitable for MNOs who have the patience to invest sufficiently in operational expenditure (OPEX) on an ongoing basis. GSMA research on profitability[53] suggests that, in the early stages, mobile money providers must be willing to invest seven to eight times the amount of revenue generated to build out an agent network, generate customer awareness, and begin the journey towards profitability. The research found that mobile money deployments can expect to break-even after 36 months of operation and can generate profit margins of ~20%, provided the requisite OPEX investments are sustained through the high-growth stage.

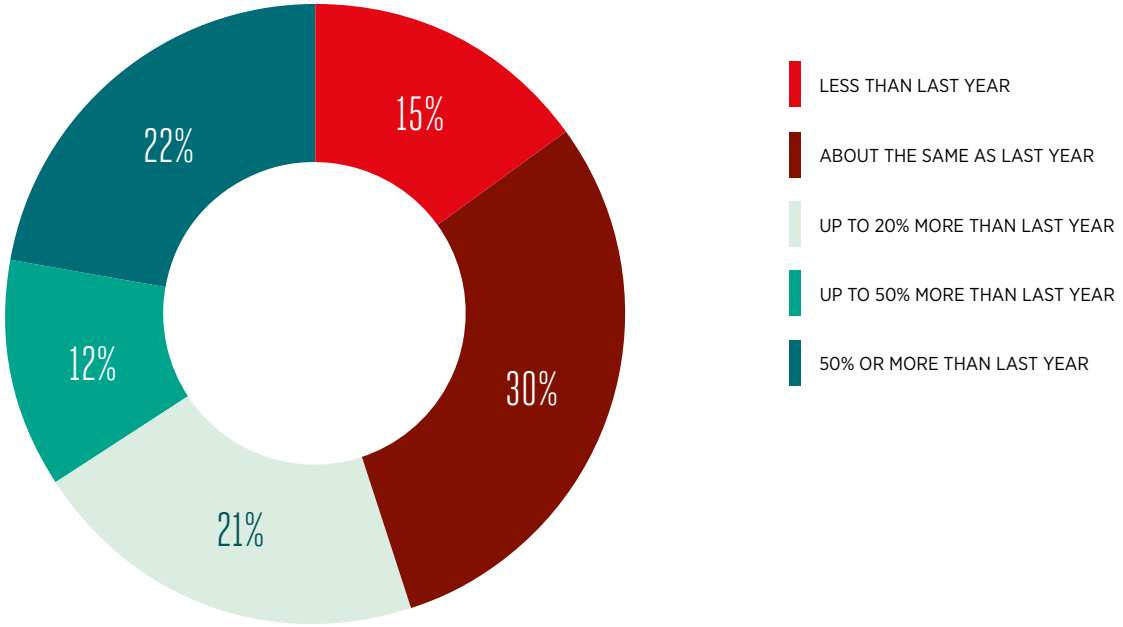
Over four fifths of the respondents in the sample said they had maintained or even increased investment over the previous year (see Figure 15). Among these respondents, we noted that nearly half of the providers earning mobile money revenues over USD 1 million reported having invested up to 50% or more than the previous year.

Nevertheless, pressure from other parts of the MNO's mobile portfolio (from price competition, regulation on mobile termination rates, rising energy costs, and inflation), often makes mobile money vulnerable to budget cuts, forcing operators to defend margins by accelerating efficiency programs or cutting into operational expenditures. 15% of the sample decreased investment compared to the previous year.

53. Mireya Almazán and Nicolas Vonthron (November 2014), "Mobile Money Profitability: A digital ecosystem to drive healthy margins", GSMA Mobile Money for the Unbanked (MMU), Available at: http://www.gsma.com/mobilefordevelopment/mobile-money-profitability-a-digital-ecosystem-to-drive-healthy-margins

FIGURE 15

PERCENTAGE OF INVESTMENT IN MOBILE MONEY COMPARED TO LAST YEAR
(2013 VS. 2014)



TEXT BOX 12

MOBILE MONEY PROFITABILITY: A DIGITAL ECOSYSTEM TO DRIVE HEALTHY MARGINS*

Is mobile money profitable? It can be, but getting there requires heavy ongoing investments in operational expenditures (OPEX) and a shift away from cash-based transactions towards a mature digital ecosystem.

Today, mobile money occupies the "missing middle" of telecom investment: it does not yet yield short-term return on investment like many value-added services, nor is it tied to a long cycle of massive capital expenditures for network investments. As a result, the vast majority of deployments launched to date suffer from underinvestment and struggle to become profitable.

Mobile money is first and foremost an OPEX business, driven by agent commissions, marketing, and personnel expenditures. It cannot compete with EBITDA margins of ~35% now seen in GSM, but the capital expenditure (CAPEX) required to launch and run a mobile money business is significantly lower.

The GSMA analysed three scenarios, each representing different stages of a mobile money deployment to determine an illustrative path to profitability for mobile money providers: (1) start-up, early-stage deployments, (2) high-growth, remittance-based deployments, and (3) mature, ecosystem-based deployments.

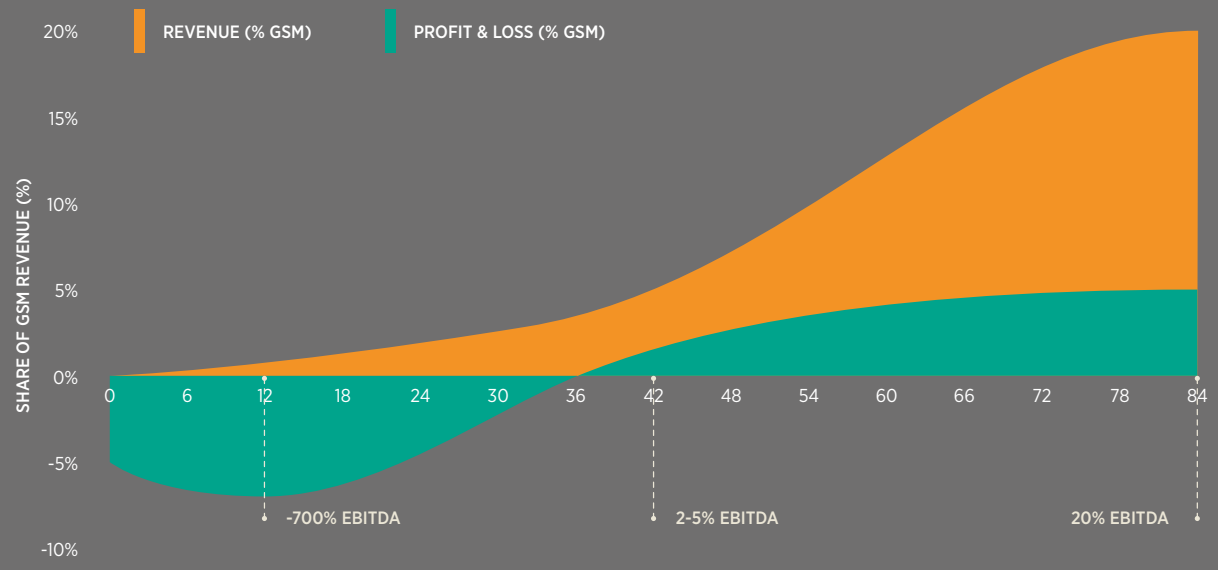
1. **In start-up, early-stage deployments**, commercial and operating costs are up to seven times higher than revenue, with the vast majority of costs coming from customer acquisition and building the agent network. When an operator's total P&L is under pressure from price wars on core business, management will seek to cut costs in low-revenue areas. However, underinvestment in OPEX will keep mobile money from advancing to the high-growth stage. The focus of early-stage deployments should be on sustaining high levels of OPEX investment and acquiring customers as fast as possible. Profitability should not be a focus in the early years, but it is wise to keep an eye on transaction margins to prevent uncontrolled expansion.

2. In **high-growth, remittance-based deployments**, commercial and operating costs remain high as operators continue to build an agent network and may even begin to acquire merchants. Nevertheless, transaction revenue will carry the deployment to a positive cash flow stage and an operator can expect modest, positive EBITDA margins (~2%) as transaction volumes gain traction. The key message for high-growth deployments is to continue to scale up payments volumes and values, with a special focus on expanding customer usage from one or two primary use cases to a more diverse set of transactions. In addition to creating a compelling value proposition for consumers, operators must also integrate their platforms with a range of institutions to stimulate B2C and C2B payments.

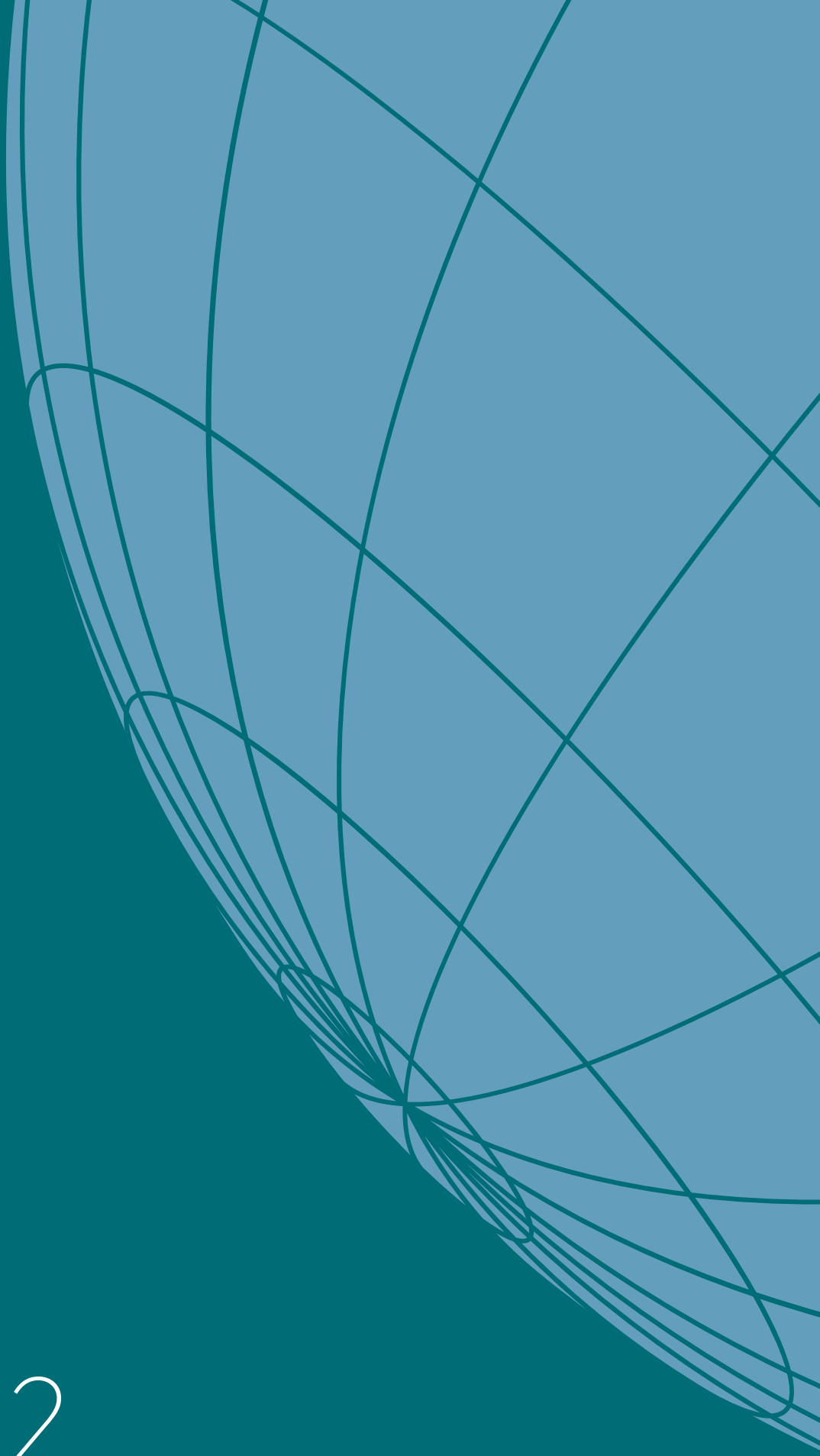
3. In **mature, ecosystem-based deployments**, operators can expect EBITDA margins of roughly 20% and cash flow margins of over 15%. Profitability is driven primarily by a higher number of electronic transactions, which make cash-in and cash-out transaction costs a smaller percentage of total costs. Commercial and operating costs, however, will not decline materially as a percentage of revenue. Deployments in this stage benefit most from more sources of digital inflows, rather than physical cash-in (e.g., bulk payments, account-to-account activity to and from the banking system, or alternative mobile money platforms), and healthy growth in a range of digital payments (e.g., P2P, C2B, and B2B). Of course, deployments may also capitalise on adjacent revenue pools, such as monetising data for credit scoring, which can make mobile money even more profitable.

Ultimately, with rising transaction values and volumes, a deployment can break even in 36 months. Since revenue generation exceeds operational costs, mobile money profits can grow steadily. The figure below illustrates what the journey to profitability can look like for the three scenarios over a period of 84 months:

MOBILE MONEY PROFITABILITY OVER TIME



*This text box is based on a publication by Mireya Almazán and Nicolas Vonthron, published in November 2014: "Mobile money profitability: A digital ecosystem to drive healthy margins."



PART 2
MOBILE INSURANCE, SAVINGS & CREDIT

Mobile insurance[54]

KEY FINDINGS

- 10 new mobile insurance services were launched in 2014, increasing total availability to 100 live services.
- Having found sustainable commercial and partnership models, mobile insurance services are now scaling: as of June 2014, 17 million policies had been issued and five services had provided more than one million policies.
- After several years of experimentation, two distinct distribution models have emerged: low-touch and high-touch, both of which are proving to be successful in achieving scale.

It has taken the insurance industry approximately a decade to find the right commercial and partnership models, but mobile insurance services are now achieving scale. Whilst some MNOs use mobile money to collect premiums, many MNOs are deducting premiums from customers' purchased airtime or providing insurance as a reward for purchasing a specific amount of airtime. In fact, insurance is increasingly used by MNOs as a loyalty product, designed to reduce churn and increase ARPU through minimum spends to qualify for particular products and service offerings.

AVAILABILITY OF MOBILE INSURANCE SERVICES

Mobile insurance is becoming increasingly widely available. The MMU Deployment Tracker shows that 10 new services were launched in 2014, taking the total to 100 live services across 30 different countries. Fifty six of these mobile insurance services are led by MNOs.[55]

54. The data for this section of the report is based on the MMU Deployment Tracker. As of December 2014, there were 100 live services across 30 markets globally. Information on mobile insurance policies is based on data from MMU 2014 Global Adoption Survey.
55. MNO-led services are those which are marketed by mobile operators in partnership with insurance companies.

TEXT BOX 13

THE APPEAL OF MOBILE INSURANCE FOR LOW INCOME INDIVIDUALS

Mobile insurance can be very appealing to people on low incomes, who are vulnerable to financial shocks that can have devastating long-term consequences. For example, in India, one in four families who experience a medical emergency drop below the poverty line.[1] Insurance is designed to insulate consumers against these financial shocks. However, the cost of selling and administering low-value policies has been uneconomical for many traditional providers whose cost structures are fixed and geared towards high value policies.

While the cost of collecting and disbursing cash-based insurance payments hurts the business case for insurance, the greatest challenge is reaching a large, diverse pool of customers. To build a solid business case, an insurance provider typically needs to attract both high-risk and low-risk customers. In the case of agriculture insurance, for example, the provider wants to serve a wide range of farmers, not just those in drought-prone areas. If the customer base is too homogenous, there is a danger that a specific event, such as a drought, could mean the insurance provider has to make large numbers of pay outs to almost all their customers.

As a result, in Africa, for example, the 44.4 million lives and properties covered by insurance pale in comparison to the more than 600 million mobile phone subscribers.[2]

Unlike traditional insurance, the low cost of distribution for mobile insurance is what makes it possible to serve low-income individuals.

1. Harshal T Pandve and Chandrakant V Parulekar (2013), "Health insurance: Is Indian rural population aware?" Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3783668/
2. ILO, Mobile phones and Microinsurance, available at: http://www.microinsurancefacility.org/sites/default/files/bn21_en.pdf

MOBILE INSURANCE IS SCALING

As of June 2014, the industry had issued more than 17 million mobile insurance policies, representing annualised growth of 263%. By way of comparison, Bangladesh, with an adult population of 107 million, has issued 18 million traditional insurance policies.[56]

In the MMU Global Adoption Survey, 13 out of 33 services reported data on the number of policies still in force and the number of beneficiaries covered by active policies. Based on this limited sample, there were 5.5 million active policies and 6.1 million beneficiaries as of June 2014. For those 13 respondents who provided figures on total policies issued and policies in force, the active rate is 44.9%, which compares well to the global active rate of 34.4% for mobile money. Five services have issued more than one million mobile insurance policies since their launch. All of these services are led by MNOs working in partnership with specialist solution providers, and have launched within the last three years, highlighting a possible model which others could use.

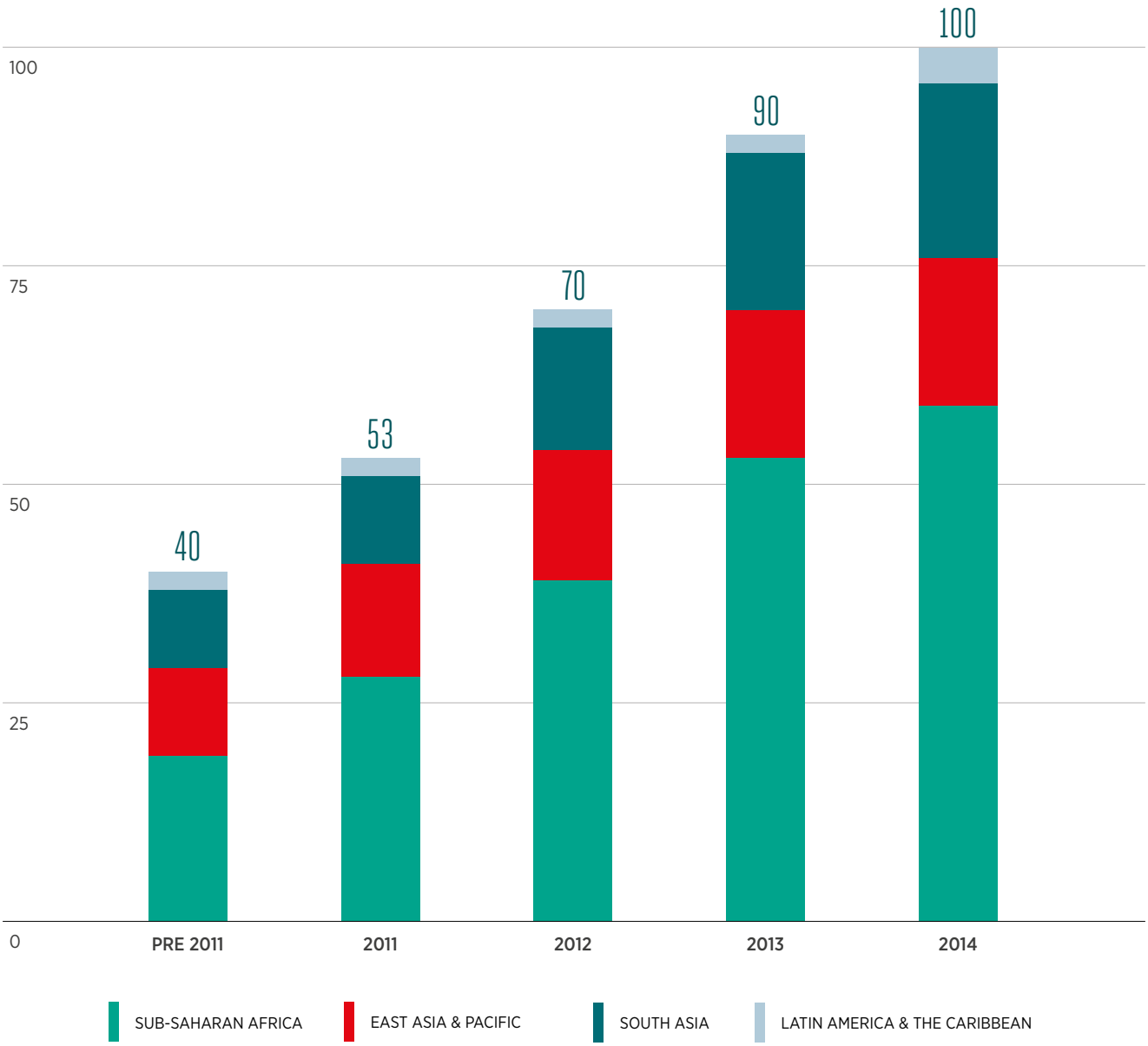
17M

MOBILE INSURANCE POLICIES HAD BEEN ISSUED AS OF JUNE 2014

56. Data on traditional insurance policies issued come from the IMF Financial Access Survey (FAS) Database. Available at http://data.imf.org/

FIGURE 16

NUMBER OF LIVE MOBILE INSURANCE SERVICES (DECEMBER 2014)



AMONG THE FIVE SERVICES THAT HAVE ISSUED OVER 1 MILLION POLICIES, ONE WAS LAUNCHED IN 2012, 3 IN 2013 AND ONE IN 2014.

TEXT BOX 14

SPOTLIGHT ON BANGLADESH: DRIVING SCALE WITH FREE MONTHLY INSURANCE

Insurance penetration in Bangladesh is low, particularly amongst less affluent market segments. Two of the country's leading MNOs have launched mobile insurance services aimed at providing the mass population with insurance coverage. Their biggest challenges are to educate potential customers about the benefits of the service and to create mass market awareness.

In both cases, subscribers who spend more than BDT 250 (USD 3.23) in a month, receive free insurance for the following month. The level of life insurance cover is based on a certain level of monthly airtime usage - the higher the usage, the higher the level of life insurance cover.

NIVROY, BY GRAMEENPHONE	BIMA ISLAMIC LIFE INSURANCE, BY ROBI
Grameenphone, Bangladesh's largest telecom operator with over 50 million subscribers,[1] launched 'Nivroy' a free life insurance product in June 2013. The product is underwritten by Pragati Life Insurance and powered by MicroEnsure Bangladesh. In November 2014, Grameenphone had on-boarded 3.6 million customers. Since the start of the service, Nivroy has settled 110 life insurance claims and paid out over BDT 4.2 million (USD 54,000) to beneficiaries.[2] Ease of registration, convenience and quickly settled claims are the key benefits of the service. Alongside its free life insurance product, Nivroy will launch a paid product in early 2015.	Robi, Bangladesh's third largest telecom operator with over 25 million subscribers,[1] launched 'Bima Islamic Life Insurance' a free life insurance product in July 2012. The product is underwritten by Prime Islami Life Insurance and powered by BIMA. In November 2014, Robi had on-boarded over 5 million customers and have experienced churn reduction of 4–5% and an increase in customer revenue (ARPU) of 6–7%.[3] To help achieve this, Robi provide month-on-month accumulated insurance cover to discourage users from leaving their network. For each consecutive month that users qualify, the level of insurance cover increases up to BDT 50,000 (USD 645).

1. GSMA Intelligence
2. Information provided by Grameenphone, Bangladesh
3. Information provided by Robi, Bangladesh

Life cover is the most common mobile insurance product, accounting for three-quarters of products offered by mobile insurance service providers in the survey sample, and 88.1% of all mobile insurance policies issued to date. Other mobile insurance services include health insurance, accident coverage or agricultural insurance. Health insurance is starting to gain traction, with just under one million policies issued (as of June 2014), highlighting how the mobile insurance opportunity extends beyond life insurance.

TEXT BOX 15

SPOTLIGHT ON GHANA: OVER 1 MILLION POLICIES INITIATED

In partnership with MicroEnsure, Airtel provides '3 for free' life, accident and hospital insurance services in Ghana. These services were launched in January 2014, and over one million policies have been initiated. Airtel subscribers who top-up more than GHS 5 (USD 1.50) per month receive free life, accident and hospital cover for the following month. The more a person tops-up, the higher the level of cover.

From February 2015, subscribers will be able to pay an additional GHS 1 (USD 0.30) per month to double the insurance cover, reaching a maximum of GHS 5,000 (USD 1,500) for life and accident cover, and GHS 300 (USD 90) for hospital cover. An additional option for subscribers is to pay GHS 3 (USD 0.90) to extend the same level of cover to a family member.

One of the key learnings for Airtel Ghana was that multiple risk coverage is in higher demand than singular risk coverage and helped achieve scale. This resulted in sustained revenue from subscribers and reduced churn. Airtel marketed the services using mass-market above-the-line campaigns to ensure widespread awareness.

64%

OF RESPONDENTS WITH MOBILE INSURANCE SERVICES OPERATE THROUGH PARTNERSHIPS WITH SPECIALIST PROVIDERS

MOBILE INSURANCE STRATEGIES AND BUSINESS CASE

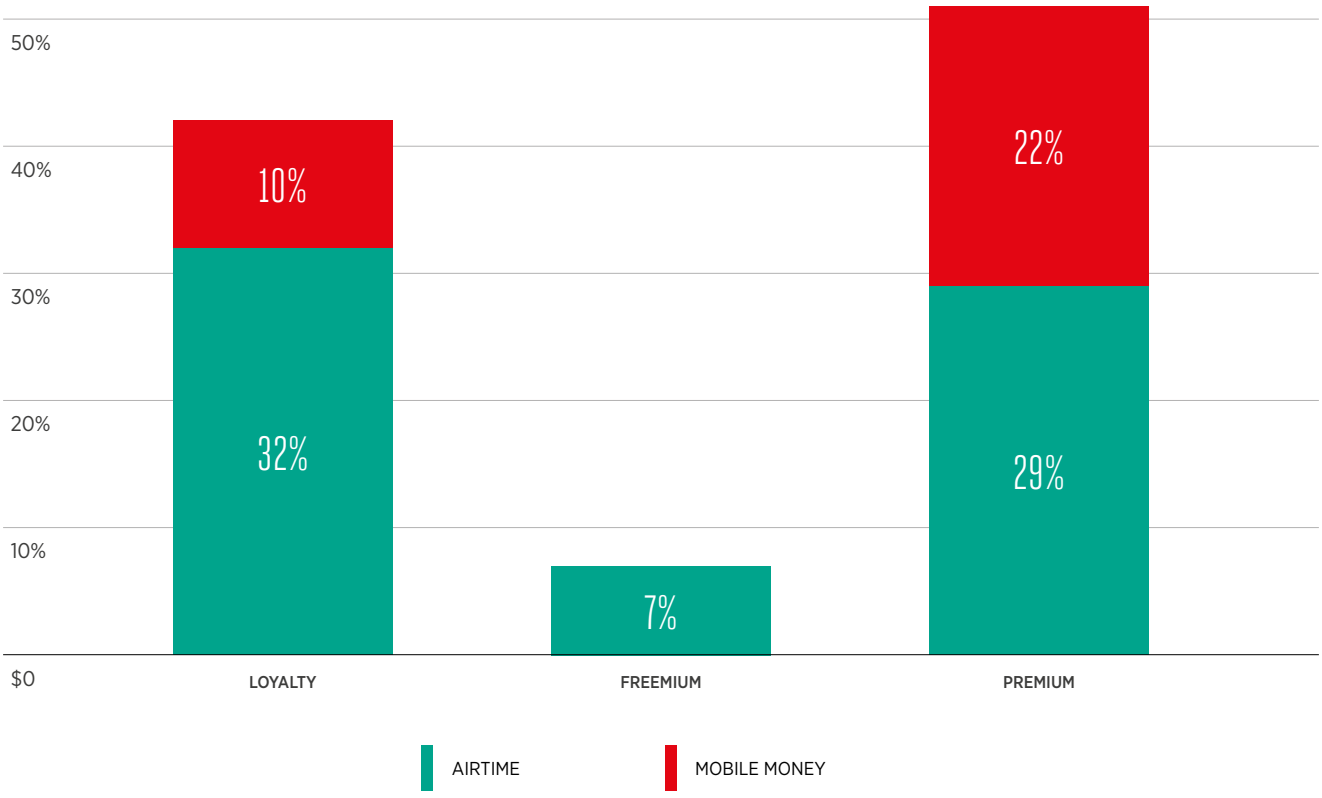
In the past few years, a number of mobile insurance providers have adopted new commercial models, which are changing the face of the industry. Rather than simply charging premiums for insurance, some service providers now provide insurance cover in return for loyalty, while others have adopted a "freemium" model, offering a basic level of cover for free to many customers in the hope that some customers will voluntarily upgrade and pay for more comprehensive cover. Figure 17 shows the split of mobile insurance services by commercial model and whether they are based on mobile money or airtime usage for loyalty, freemium and premium collection.

These new commercial models account for all five of the scaled services (over 1 million policies issued) and have been pioneered by specialist solutions providers who have expertise in microinsurance. In the 2014 Global Adoption Survey, 64% of mobile insurance services had been launched by MNOs in partnership with a specialist solution provider.[57] Now expanding rapidly, these specialists typically establish good working partnerships with MNOs, adapting to mobile operators' requirements, while providing plug and play solutions, which helps to avoid some of the technical challenges that others companies would face in integrating with MNOs' systems.

57. Specialist service providers: companies that specialise in microinsurance operations (such as claims processing), and also act as an intermediary between MNOs and insurance companies.

FIGURE 17

COMMERCIAL MODEL FOR MOBILE INSURANCE EMPLOYED BY SURVEY RESPONDENTS (JUNE 2014)



RELATIONSHIP WITH MOBILE AND MOBILE MONEY

Whilst 73% of services use the mobile channel for enrolment, 96% of providers use the mobile channel to collect premiums (either through airtime deduction or payment via mobile money services). However, claims disbursements are often made by cheque, rather than through mobile money services due to transaction limits on mobile money platforms. Figure 18 shows the applicability of mobile services across the insurance customer journey.

Mobile money and mobile insurance services are treated differently by MNOs. In the survey sample, only one mobile insurance service provided by an MNO had not launched a mobile money service. Yet, only 41% of mobile insurance services rely on a mobile money service to collect premiums, with the rest using airtime deductions or using insurance as a reward for achieving a certain level of airtime usage. As mobile money continues to scale, this percentage is likely to increase, given that the cost of collecting premiums via mobile money is lower than airtime deductions, which carry value added tax (VAT) and distribution costs.

In a similar vein, 62% of the respondents said that mobile insurance services are run by their value added services (VAS) business unit, indicating that the service was developed to generate revenues on their own, while the remainder said it fell under their mobile financial services business unit. However, for providers who rely on mobile money services to collect premiums, 82% were run by the mobile financial services business unit.

FIGURE 18

APPLICABILITY OF MOBILE ACROSS THE INSURANCE CUSTOMER JOURNEY

Mobile used including airtime	73%	55%	N/A
Mobile Money used	N/A	41%	41%
Other	27%	4%	59%
		of paid/ freemium products	

MOBILE INSURANCE DISTRIBUTION MODELS

Two distinctly different models have emerged for distribution (customer engagement, awareness and sign-up) with both proving to be successful in achieving scale. One approach is a low-touch model, reliant on significant above-the-line marketing to create customer awareness. Customers can self-register or, in some cases, they are automatically enrolled and can opt-out (via SMS). This model is often used when insurance is offered as a reward for loyalty, to reduce churn and increase the average revenue earned from a customer.

The second approach is a high-touch model, where agents educate consumers about insurance, explaining the claims procedure, walking through the mobile interface and enrolling customers in person. Arguably, this model results in better-educated customers who are more likely to pay for additional cover or additional products.

TEXT BOX 16

SPOTLIGHT ON HONDURAS: A TURNAROUND STORY

Tigo Honduras launched an insurance product with a local partner in 2010. Three years after launch, the product had reached 6,000 policies, a penetration of 0.15%.

In July 2013, BIMA approached Tigo to launch a life insurance product. The new product would be driven by Tigo and would take advantage of BIMA's strengths and proven global track record on these endeavors. In March 2014, Tigo and BIMA launched "Seguro de Vida Tigo," a paid life cover product. With a strong focus on distribution, customer education and quality control, Tigo and BIMA managed to sell 150,000 policies within six months, demonstrating that starting with a paid model can be successful.

Mobile savings[58]

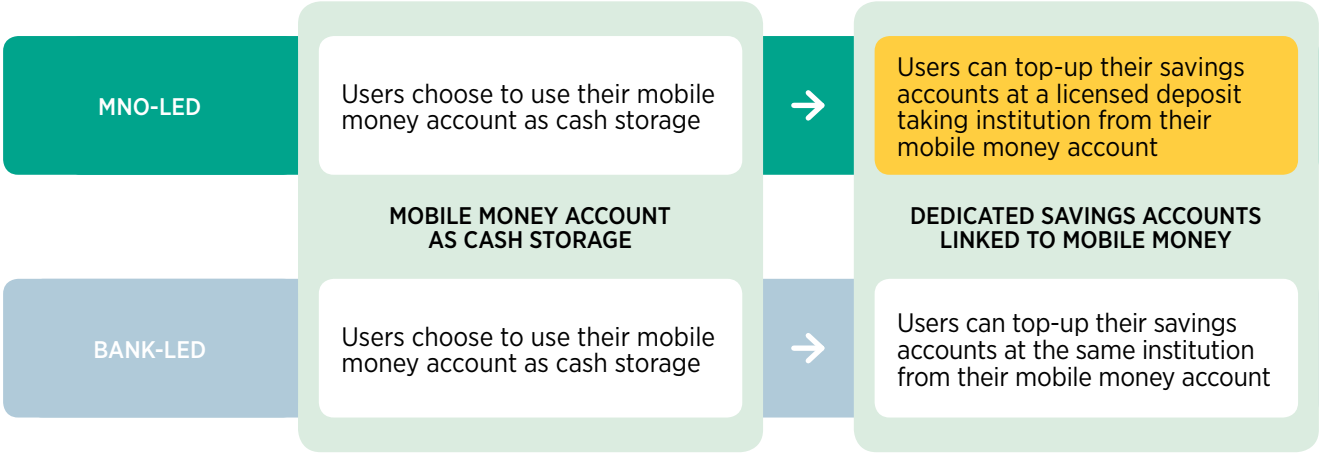
KEY FINDINGS

- Financial services companies and MNOs are increasingly making use of the mobile money infrastructure to offer savings facilities: 10 million dedicated mobile savings accounts have been opened worldwide.
- Conventional mobile money accounts are also increasingly being used for cash storage: 54.5% of mobile money accounts had a positive balance as of June 2014.
- In an unprecedented move, Tigo Tanzania has begun to pay out interest accrued on the trust or escrow account, thereby incentivising customers to use their mobile money account. Tigo reported a net increase in cash-ins of 11% as a result.

Mobile technology can help people on low incomes to store value in a secure and convenient way. There are two basic ways you can save using a mobile phone (see Figure 19), both of which are gaining traction. First, the mobile money account itself can be used for cash storage, regardless of whether it is issued by a bank or an MNO. Second, the mobile money account can act as a gateway to other dedicated mobile savings instruments.

FIGURE 19

MODELS FOR MOBILE SAVINGS SERVICES



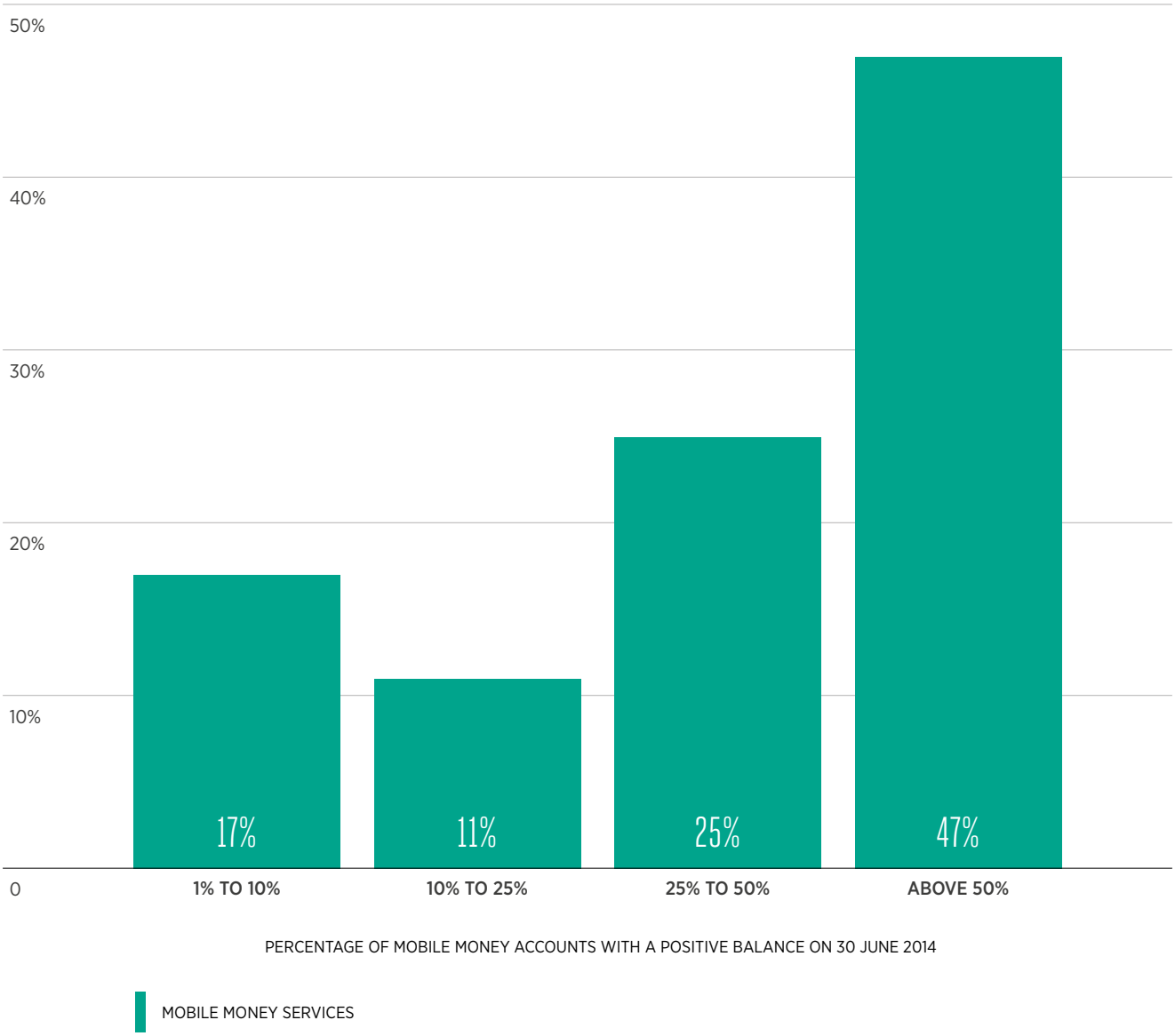
58. In this section, data on the number of mobile savings services is based on the MMU Deployment Tracker. As of December 2014 there were 26 live services across 22 markets globally. More specific information on mobile savings services is based on data from MMU 2014 Global Adoption Survey. Data on mobile money balance is based on the MMU 2014 Global Adoption Survey.

MOBILE MONEY ACCOUNTS USED FOR CASH STORAGE

For the first time this year, the MMU Global Adoption Survey explored how many mobile money customers have a positive balance in their mobile money account, as well as the average balance on those accounts. It is important to note that balances reported were a snapshot taken on 30 June 2014 and do not represent an aged balance. In the survey, 47 mobile money services reported this figure, showing 54.5% of mobile money accounts with a positive balance on 30 June 2014. In fact, 42% reported average balances above USD 10 (see Figure 21), which is the average balance held in Kenya's highly successful M-Shwari savings and credit service.[59] That suggests that many customers are using these services to store value, either for short-term money management, for pending transactions or savings (see Figure 20).

FIGURE 20

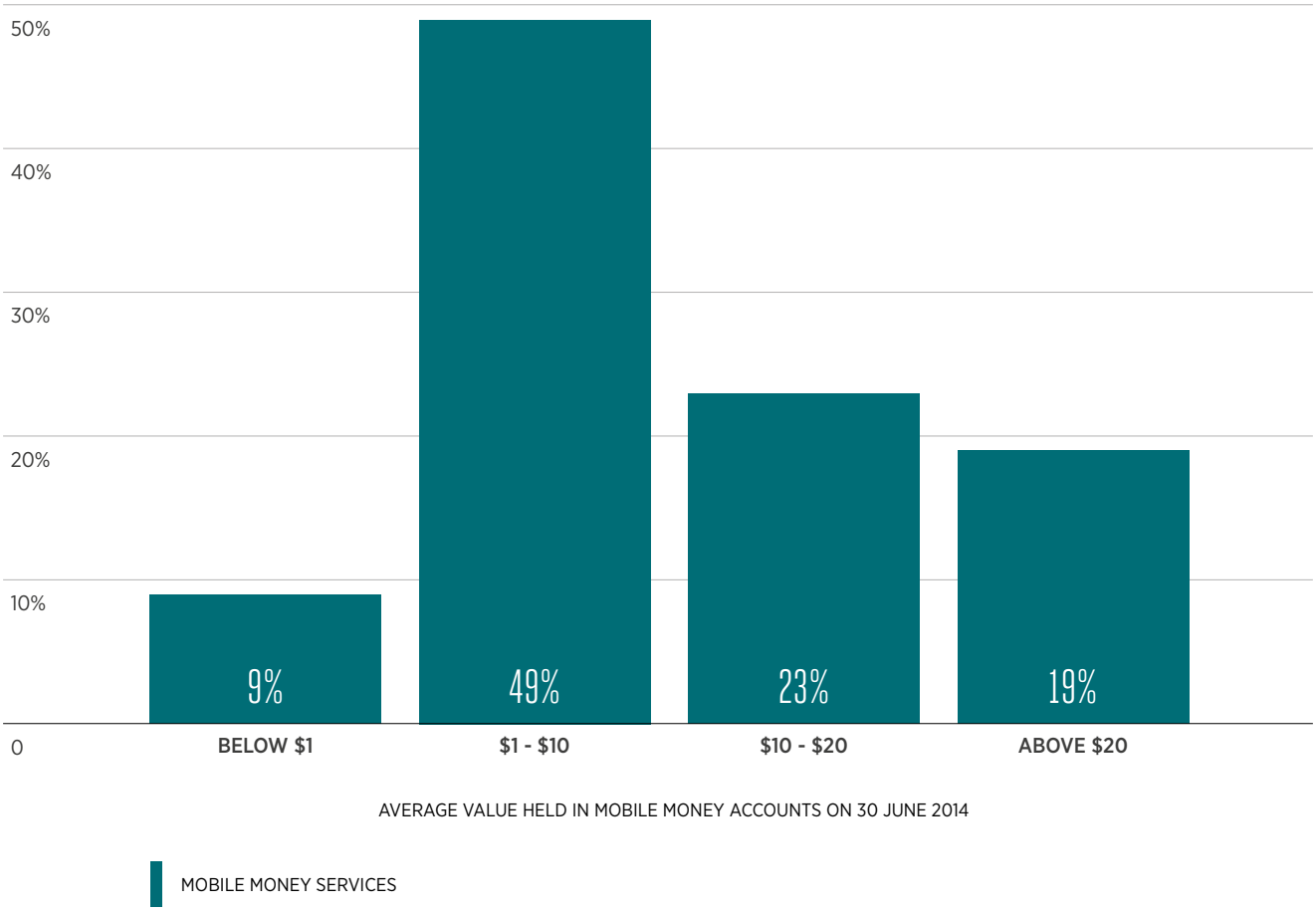
MOBILE MONEY SERVICES WITH POSITIVE CUSTOMER BALANCES
(ON 30 JUNE 2014)



59. Safaricom Limited HY14/15 presentation. Available at: http://www.safaricom.co.ke/images/Downloads/Resources_Downloads/Half_Year_2014-2015_Results_Presentation.pdf

FIGURE 21

AVERAGE CUSTOMER BALANCE ON MOBILE MONEY ACCOUNTS
(ON 30 JUNE 2014)



The following are two examples of mobile money accounts acting as cash storage accounts, where operators explicitly encourage their customers to save money on their mobile money account by having developed specific types of incentives and encouragements:

- **Airtel Uganda**, in conjunction with Grameen Foundation, has launched a service that allows savings groups to store their group's cash as mobile money. Airtel Weza is a group savings product which builds on the existing lock-box method common to savings groups; it requires three members of the group to enter three PINs to access the cash and it provides SMS notifications to selected members. Early feedback from Airtel Weza users shows that they value the increased security and transparency offered by the service. Some users have also indicated that they are now more inclined to use Airtel Money for other purposes.

- **Tigo Tanzania**, in September 2014, began to return interest generated on the trust account to users; Tigo disbursed USD 8.7 million to 3.5 million users, followed by a second disbursement of USD 1.8 million in November 2014 with plans to make payments quarterly. As a result, Tigo experienced a net inflow of cash of 11% and an increase in transaction volumes (see Text Box 17).

TEXT BOX 17

FINANCIAL INCLUSION IN TANZANIA: TIGO REWARDS ITS MOBILE MONEY CUSTOMERS*

In September 2014, Tigo Tanzania made a profit share distribution of 8.7 million US dollars out of returns generated on the capital held in the Tigo Pesa Trust Fund, to its 3.5 million Tigo Pesa customers. The pay-out for each customer is based on a proportional share calculated on their Tigo Pesa daily balance over the last three and a half years. Tigo also announced that it will continue these pay-outs every quarter, representing a unique long-term addition to the mobile money value proposition. Tigo sees this as the next logical step in financial inclusion, with important customer and agent benefits, and hopes to be able to replicate this in other markets.

What does this mean for customers?

For many customers, the pay-out represents a substantial sum relative to their monthly income. According to Tigo, for the past three and a half years the Tigo Pesa Trust Fund has been able to achieve a return of between 5 – 12% and aims to achieve a competitive rate in future. Tigo plans to return all of this money back to its customers. With inflation in Tanzania running just over 6%,[1] this represents a significant return on customers' investment in mobile money.

Tigo expects this strategy to result in a substantial increase in money held in customers' accounts, since the effective rate of return is very attractive relative to market rates. However, Tigo is not targeting customers' deposits in formal investment accounts, but "under the mattress" cash savings, which otherwise would remain in informal and insecure holdings. Due to KYC restrictions, all Tigo Pesa accounts have a deposit limit of just over USD 3,000. The greatest appeal therefore will be for individuals with smaller deposits, whose funds can make a return as well as being useful for payments. Indeed, Tigo believes this model will benefit its deposit-holding partner banks, who will hold an increased pool of "sticky" customer deposits with a low-risk profile.

What are the benefits for Tigo?

This model, which has the approval of Tanzania's central bank, the Bank of Tanzania, allows Tigo and other Tanzanian operators to create powerful new loyalty incentives for customers. Increased e-money deposits could also encourage an uplift in other mobile money transactions over time. Furthermore, this could provide a substantial boost to agent liquidity across the service.

Could this be replicated in other markets?

As we discussed in our mobile savings section, it is common for customers in some markets to store value on their mobile money account. However, in most mobile money markets, central banks wouldn't yet allow operators to offer what could be construed as a savings product directly to its customers. The GSMA is aware that other regulators have been considering this for some time and are also updating their regulations to permit float interest sharing.

The benefits of this innovative new model could be very meaningful for mobile money customers – and could potentially influence other markets. This brings some investment / savings-like qualities to mobile money, with the potential to enhance financial inclusion at the base of the pyramid.

1. Source: Tanzanian National Bureau of Statistics, (available at: http://www.nbs.go.tz/nbs/index.php?option=com_content&view=article&id=523:annual-headline-inflation-rates-for-some-neighbouring-countries-january-2014-july-2014)

*This text box was adapted from blog post by Chris Williamson, published on the MMU website on September 11, 2014.

DEDICATED SAVINGS ACCOUNTS LINKED TO MOBILE MONEY

Deposit-taking institutions are designing savings accounts specifically for the underserved to be accessed via mobile (such as M-Shwari), and these are becoming available around the world, building on the deployments of mobile money services. According to the MMU Deployment Tracker, 26 dedicated mobile savings services were live in 22 countries globally in December 2014, with two new services launched in 2014.

Several banks and MNOs have formed partnerships to launch individual savings products tailored to the needs of mobile money users. Examples include Commercial Bank of Africa's and Safaricom's M-Shwari service in Kenya, and Steward Bank's and Econet's EcoSave service in Zimbabwe. There are also several financial institution/bank-led dedicated mobile saving services, which are paired to the provider's mobile money services. These include Nationwide Microbank's MiCash in Papua New Guinea, Housing Finance Bank's mcash in Uganda and Bank Sinar's Sinar Sip in Indonesia.

Almost 10 million dedicated mobile savings accounts have been opened worldwide, of which 60% hold a positive balance. As of June 2014, funds worth USD 70 million were held in the mobile savings accounts for services that participated in the survey. This indicates that mobile money is able to mobilise a fairly large amount of money that was not in the formal financial system.

TEXT BOX 18

THE APPEAL OF MOBILE SAVINGS

For many people in developing countries, access to savings services at formal financial institutions is very limited, resulting in low-income individuals having to find other ways to save. Therefore, mobile savings propositions can be attractive to the unbanked because their existing savings options tend to be risky. One study, for example, found that among 1,232 Ugandans who saved in-kind (by investing in animals, commodities or other goods), 75% had lost some of their savings in the previous year.[1] Moreover, people on low incomes can find it hard to save cash, in part because the money is always readily accessible, meaning they have to continually exercise self-control. By comparison, mobile money services can be a safe and convenient place for people to store money.

All mobile savings services make use of basic mobile money infrastructure to allow customers to open a savings account in a licensed deposit taking institution (DTI) using their mobile phone, giving the previously underserved easier access to a savings account. It is not economically viable for DTIs to collect a large number of small deposits, or for customers to walk to a bank branch to make small deposits on a regular basis. Thus, by reducing the cost of deposit taking for banks, MNOs can mobilise large amounts of money that were not in the formal financial system. For that reason, new mobile savings services offered by DTIs are not competing directly with banks' conventional savings products.

As a result, mobile savings services, which can often act as an enabler for mobile credit services, can provide banks in developing countries with additional business opportunities.

1. Wright and Mutesasira (2001), "The Relative Risks of Informal Savings," MicroSave Research Paper.

For a mobile money service provider, credit and savings can be two sides of the same coin. The two services can be aimed at the same customers, while involving the same financial partner, the same interface and the same pool of money, generating economies of scale and scope. Mobile savings services can also act as an enabler for mobile credit.

Mobile credit[60]

KEY FINDINGS

- 2014 saw a 50% increase in the number of mobile credit services. This was fuelled in part by new partnerships between MNOs and banks to provide mass-market short-term loans, and by microfinance institutions and start-ups targeting specific segments within the underserved.
- New credit scoring models using MNO data are starting to result in lower numbers of non-performing loans compared to traditional lending. These models are helping to provide access to credit for many first time formal borrowers.

Formal credit services, such as the ones provided by microfinance institutions (MFIs) and banks, have made strong inroads into addressing the needs of low-income individuals, but often due to physical constraints and high operating costs, can have limited reach and flexibility. On the other hand, informal credit tends to be expensive, sometimes cripplingly so. For all these reasons, borrowing money via a mobile credit service can be very appealing to people at the bottom of the pyramid.

In many jurisdictions, non-bank mobile money providers are not permitted to lend their own funds or do not have lending expertise, so they need to enter into partnerships with credit providers. Successful partnerships between MNOs and financial services companies, mainly large banks, are now beginning to emerge in the mobile credit sector.

AVAILABILITY OF MOBILE CREDIT SERVICES

Mobile credit services are becoming more widely available as more providers enter the field. Of the 37 live services to date, 12 launched in 2014. The MMU Deployment Tracker shows that five of the 12 new launches were by partnerships between a financial services institution and a mobile operator. The remaining seven were led by banks and financial institutions using the mobile channel to extend their reach. Mobile credit services are now available in 20 countries globally.

INCREASING THE ACCESSIBILITY OF MOBILE CREDIT WITH INNOVATIVE CREDIT SCORING SOLUTIONS

Historically, banks' and microfinance institutions' biggest challenge has been knowing if a customer would repay or default. As financial services providers lack the necessary data to gauge creditworthiness, they tend to pool low-risk and high-risk customers together, limiting the viability of affordable products. MNOs can help address this challenge by combining MNO data, and in some cases mobile money transactional data, with credit-scoring algorithms.

60. The data for this section of the report is based on the MMU Deployment Tracker. As of December 2014 there were 37 live services across 20 markets globally. More specific information on mobile credit models is based on data from MMU 2014 Global Adoption Survey.

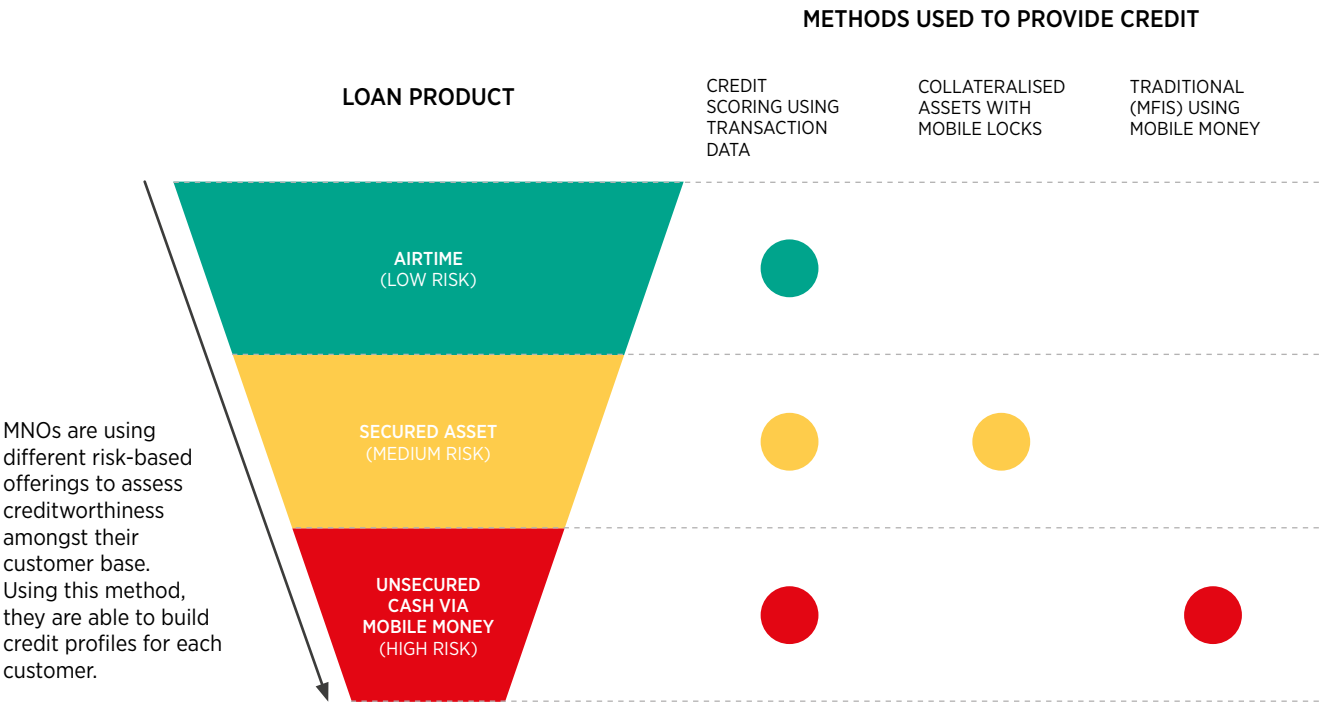
Credit scoring models using MNO data have resulted in lower numbers of non-performing loans (loans that have defaulted or are close to default). For example, Safaricom says that non-performing loans make up just 2.2%[61] of the total loans made by its M-Shwari service, compared to an average figure for Kenya in 2013 of 4.9%.[62]

Many customers are receiving access to formal credit for the first time – their motivation to repay is driven by not wanting to be blacklisted and lose access. Rewarding good repayment behaviour by then reducing the interest rate could help to further fuel the development of this market. However, although all mobile credit service providers in the MMU Global Adoption Survey credit score their customers to provide unsecured loans, none of them yet reduce their interest rates for customers who successfully repay their loans.

The mobile channel also provides another innovative method to gauge customer spending and payment behaviour. Airtime credit, whilst not a pure lending product and outside the MMU definition of a mobile credit service, has become quite popular: the majority of MNOs in developing markets have launched such services. Given that airtime credit is a low-risk product, some operators are using it to test customers' creditworthiness before offering them higher-risk propositions, such as asset-locked smartphones on finance, and ultimately unsecured loans (see Figure 22).

FIGURE 22

METHODS USED TO PROVIDE MOBILE CREDIT USING CREDIT SCORING



61. Safaricom Limited HY14/15 Presentation. Available at: http://www.safaricom.co.ke/images/Downloads/Resources_Downloads/Half_Year_2014-2015_Results_Presentation.pdf
62. The World Bank, available at: http://data.worldbank.org/indicator/FB.AST.NPER.ZS

TEXT BOX 19

CREDIT SCORING: HOW MNOs CAN TURN THEIR DATA INTO CREDIT INSIGHTS

MNOs have the opportunity to use data from a variety of sources to develop credit-scoring models. MNOs can leverage their in-house analytics teams, who already crunch core GSM data to build models for churn prediction, targeted marketing models and fraud prediction. MNOs may also work in partnership with credit-scoring companies to generate great insights from airtime top-up patterns, timing and frequency of voice call and text messages, usage of value added services, mobility data, SIM switching, post-paid payment history, handset device, and social network effects. Here are a few examples of how an MNO can turn their data into relevant credit information:

- **Airtime top-up patterns:** the frequency and amount of a customer's top-ups give indications of their financial stability. For instance, a customer who tops-up one large amount at the same time each month could indicate a salaried job, whereas a customer who tops-up very small amounts frequently could indicate a more informal employment status.

- **Mobility data – base station connections:** if a customer repeatedly moves from one specific place to another specific place on weekdays, this could indicate movement from home to work, which could indicate having a stable job. If a customer travels long distances or abroad on the weekends, this could indicate a high and steady income level, allowing leisure travel. In addition, slightly more surprisingly, mobility data is a good predictor of gender in some areas of the world.

- **Social network effects:** by looking at the calling patterns in the network of the customer, the operator can identify whether or not this customer is an influencer in the social network.

In addition, attributes derived from standard MNO variables can add predictive power:

- **Deltas** can be used to measure changes in calling behaviour, service or product usage.

- **Indices** is the proportions and relations between attributes. They can be good descriptors and have predictive power. Voice calls vs. text message usage, proportions of missed calls calls, etc., can all be used to build indices for predicting creditworthiness.

- **Patterns** like calling patterns, prepaid charging, usage patterns, can be used to observe change in behaviour and might have predictive power.

MNO data can help predict future customer behaviour, however the most relevant attributes may be different from product to product. It is not a single data point that determines how to predict behaviour, but a combination of different attributes that have most predictive power. The more data an MNO has to play with, the better the scoring models can be.

DIFFERENT APPROACHES TO MOBILE CREDIT

In the nascent mobile credit market, one size doesn't fit all. Different kinds of players are taking different approaches that are gaining traction in different market segments (see Figure 23). Each model uses mobile phones to make it easier for individuals to borrow small amounts of money that they agree to repay within a specified period of time.

Firstly, there is the mass-market short-term loans approach, which involves a financial institution, often in partnership with an MNO, providing a loan via a mobile money service. This is a low-touch approach allowing customers to access credit from their mobile phones. M-Shwari, launched in 2012 by Safaricom and Commercial Bank of Africa, is the most famous mobile credit and savings service, riding on the rails laid down

by Safaricom's M-PESA. In May 2014, Vodacom Tanzania and Commercial Bank of Africa launched M-PAWA, a replica of M-Shwari, which in December 2014 reached 1 million customers.[63]

An alternative approach is to use mobile devices to enable agents to accept loan applications on behalf of a bank or traditional MFI. In this case, the MFI may partner with a mobile money service to help disburse loans and collect repayments.

Another approach is to create services designed for specific segments. For example, Kiva Zip, launched in 2011, is a peer-to-peer lending initiative through which over 40,000 individuals globally have contributed to make microloans to entrepreneurs in Kenya with 0% interest and no fees. Kiva Zip has given out more than 5,000 loans using Safaricom's M-PESA mobile money service. In May 2014, payments specialist Kopo Kopo launched GROW in Kenya, a merchant cash advance service that scores businesses based on a credit history generated by their transactions. Repayments are deducted from future mobile money merchant payments. To date, Kopo Kopo has facilitated USD 2 million in cash advances to 500-600 merchants.

Asset-locked lending is the last model where utility service providers leverage mobile money payments for their products and services in order to build a credit history on their unbanked customers. In the solar pay-as-you-go model, an energy service company (ESCo) provides end-user financing for its systems (e.g. a Home Solar System), enabling their customers to repay their debt by small daily instalments during a fixed term (e.g. 1 year) using their mobile money account. If a customer fails to pay, their energy system can be remotely shut down. Based on the established customer repayment history, ESCos now have the opportunity to offer further microloans and asset financing solutions for aspirational products and services. Under this innovative model, mortgages on new products are transferred back to the owned energy system and customers pay their new debt in the same way they paid for their energy asset (by small daily increments).

FIGURE 23

APPROACHES TO MOBILE CREDIT

APPROACHES:	MASS-MARKET SHORT TERM LOANS	TRADITIONAL MICROFINANCE INSTITUTIONS	SPECIFIC SEGMENTS	COLLATERALISED ASSETS WITH MOBILE LOCKS
Benefits	Credit scoring enabled by MNO data provides ability to target mass market cost effectively Possible downstream transaction benefits	MFIs provide a strong channel to increase their reach to new borrowers and digitise their transactions	Incentivise mobile money adoption by agents, merchants and entrepreneurs	Digitise regular spending patterns (e.g. kerosene spending equal to or greater than energy micropayments)
Challenges	Requires strong bank partnership(s)	Mobile money is just a channel, low control of overall customer experience	Niche, direct profitability may be low; important to identify indirect benefits	Developer APIs needed; mobile money is just a channel
Examples	M-Shwari (Kenya), EcoLoans (Zimbabwe)	Musoni (Kenya), Airtel / CEFOR (Madagascar)	Kopo Kopo Grow (Kenya), Kiva Zip (Kenya), Zoona Growth (Zambia)	M-KOPA Solar (East Africa), Buffalo Grid (Sub-Saharan Africa, South Asia)

63. Available at: http://www.corporate-digest.com/index.php/vodacoms-m-pawa-reaches-one-million-customers

TEXT BOX 20

USING MOBILE TO DIGITISE TRADITIONAL SOCIAL FUNDRAISING PLATFORMS

For many low-income individuals, informal social fundraising through extended family, friends and neighbours is easier, and sometimes preferable, to borrowing money through formal or informal channels. Funds are collected by individuals through their social network, and do not have to be repaid. This kind of fundraising is a long-standing custom in parts of the developing world, such as in Sub-Saharan Africa, where people collect funds to pay for everything from weddings to school fees to funerals.

Increasing levels of urbanisation and migration, compounded by rising transportation costs, have made traditional informal social fundraising more difficult as family and friends become increasingly geographically dispersed.

Recently, the practice of informal social fundraising, called 'Harambee' or 'Changa' in East Africa, has been digitised by M-Changa in Kenya. M-Changa's proprietary technology enables anyone to quickly and inexpensively manage a fundraiser, allowing the power of communal fundraising to be regained regardless of geographical distance between friends and family members. M-Changa's 10,000 customers have raised $180,000 through 65,000 customer interactions via Safaricom's M-PESA, Airtel Money, and PayPal.

Today, it is fair to say that many of the person-to-person transactions being made over mobile money platforms could well be de-facto participation in purpose-oriented savings, group initiatives or traditional Harambee. M-Changa, in partnership with Financial Services Deepening Kenya and the Bill & Melinda Gates Foundation, are cross-comparing a multitude of data sources[1] to better understand patterns and motivations of giving between related and non-related individuals.

1. Financial Diaries, Financial Access, m-Changa transactional history data.

Conclusion

Now well established in the majority of emerging economies, mobile financial services are entering a new phase in their development. Mobile money, in particular, has become a core offering for many mobile network operators in developing countries, deepening investments in mobile infrastructure and further contributing to financial inclusion and economic development.

As the industry continues to mature, MMU predicts further progress in the following areas:

- Providers will continue to strengthen the customer experience and improve the quality of agent networks, in turn attracting more customers and encouraging greater usage of mobile money. The sharp increase in the number of active mobile money accounts in 2014 will drive greater network effects, as seen in East Africa, where one in two connections is now linked to a mobile money account. In this region alone, we forecast that an additional 16 million new accounts will be opened in 2015.

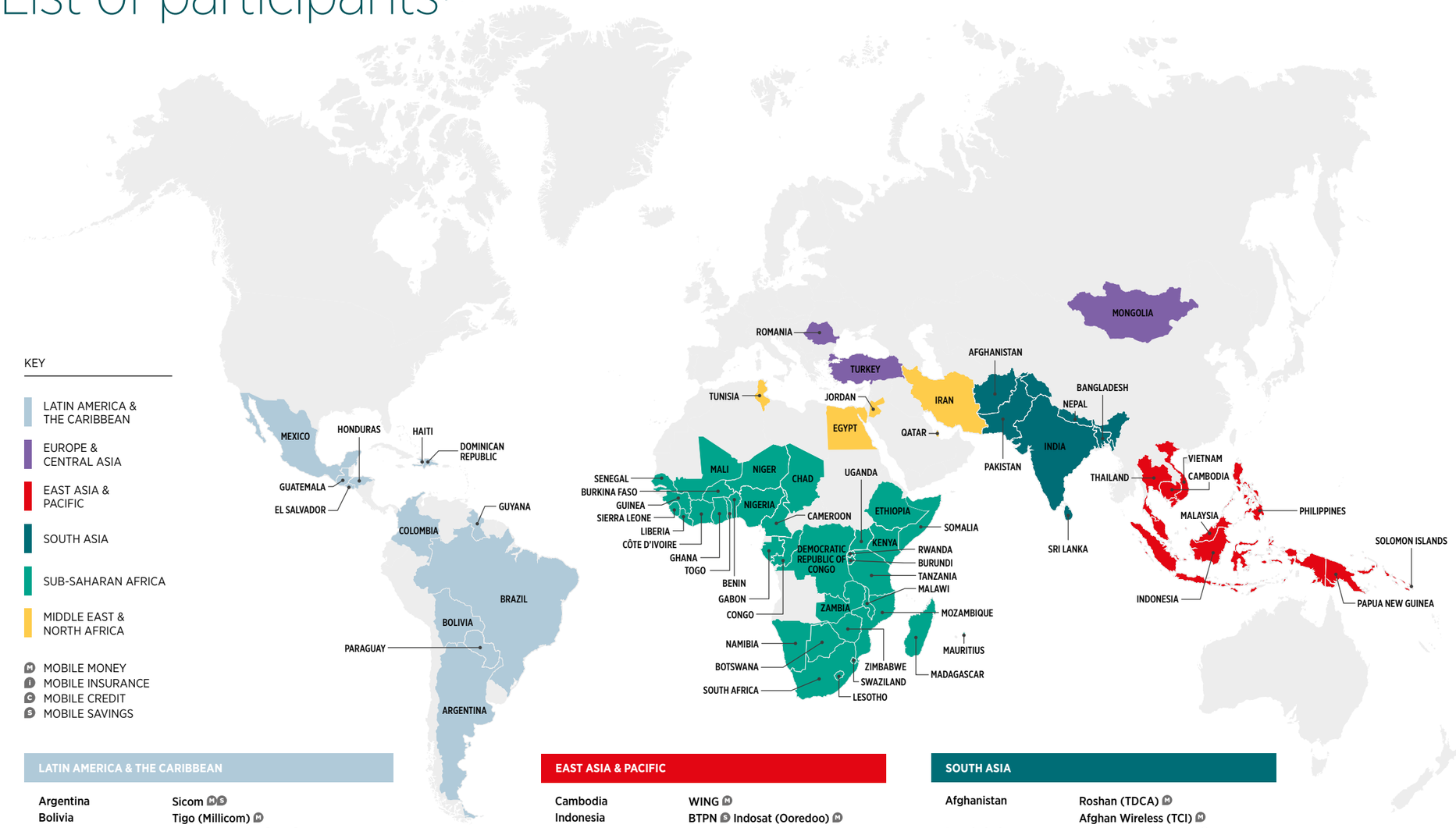
- As providers continue to develop the ecosystem and bring more businesses and third party users of mobile money on board, we expect to see ecosystem products represent a greater share of the product mix. In 2014, there was a marked rise in the value processed by businesses using mobile money services, both to pay employees and to interact with customers. As providers work to support greater merchant activity, these services are more likely to become entrenched in consumers' daily lives, increasing the volume of transactions and the amount of money flowing through the system.

- The graduation to domestic interoperability between mobile money services will accelerate transaction growth as MNOs in more markets choose to interconnect their services in 2015. Interoperability will help to enhance the customer experience by making it easier for consumers and businesses to send money across networks, thus deepening the traction of mobile money services across the local economy. Likewise, further partnerships will increase the volumes of international remittances being conducted via mobile money in 2015, while driving down the cost for senders.

- Beyond transfers and payments, mobile technologies will increasingly be used to bring access to insurance, credit products and savings facilities to the underserved. In 2015, mobile insurance, credit and savings services will reach scale in a number of markets, increasing the impact of MFS on financial inclusion. We also expect to see more proof points of mobile money being used to serve ancillary industries, including agriculture, health, and education, and to improve access to basic utility services such as water and electricity, thus deepening the social and economic impact of mobile in the lives of the underserved.

The mobile money industry continues to evolve, yet obstacles remain in many markets which need to be overcome in order for mobile financial services to reach more people and achieve the scale to which it aspires. The industry will need to continue strengthening the foundations for mobile money services in order to serve a broader ecosystem of users, and it will need to instill best practices in order to continually improve quality of service. Providers of mobile financial services will need to engage with regulators and standard setting bodies to create more enabling regulatory environments to allow these services to flourish, fostering sustainable investment in the services that underpin a strong digital financial ecosystem.

Appendix A - List of participants[64]



SUB-SAHARAN AFRICA

Benin	Moov (Etisalat) M I MTN M
Botswana	FNB M Orange M
Burkina Faso	Airtel (Bharti Airtel) M I
Burundi	U-Com (Orascom) M
Cameroon	Afrikpay M MTN M Orange M
Chad	Airtel (Bharti Airtel) M Tigo (Millicom) M
Congo	MTN M Airtel (Bharti Airtel) M
Democratic Republic of the Congo	Tigo (Millicom) M Airtel (Bharti Airtel) M Vodacom M
Côte d'Ivoire	Qash Services M Orange M Moov (Etisalat) M
Ethiopia	MOSS ICT Consultancy M
Gabon	Airtel (Bharti Airtel) M
Ghana	Tigo (Millicom) M I Airtel (Bharti Airtel) M I MTN M Afric Xpress M
Guinea	MTN M Orange (Sonatel) M
Kenya	Changamka I Airtel (Bharti Airtel) M I Commercial Bank of Africa C S M-Changa C Safaricom M Century Microfinance Bank S
Lesotho	FNB M
Liberia	Lonestar (MTN) M
Madagascar	Airtel (Bharti Airtel) M Orange M
Malawi	TNM M I Airtel (Bharti Airtel) M
Mali	Orange (Sonatel) M
Mauritius	Emtel (Millicom) I
Mozambique	Vodacom M
Namibia	FNB M
Niger	Airtel (Bharti Airtel) M
Nigeria	MTN I Teasy Mobile M
Rwanda	MTN M Tigo (Millicom) M Airtel (Bharti Airtel) M
Senegal	Tigo (Millicom) I Orange (Sonatel) M Société Générale M
Sierra Leone	Airtel (Bharti Airtel) M
Somalia	Telesom, Somaliland M
South Africa	FNB M Vodacom M I
Swaziland	FNB M MTN M I
Tanzania	Tigo (Millicom) M I Vodacom M I C S Airtel (Bharti Airtel) M
Togo	Moov (Etisalat) M
Uganda	EzeeMoney M MTN M I Airtel (Bharti Airtel) M
Zambia	Zoona M C FNB M Airtel (Bharti Airtel) M I
Zimbabwe	Telecel (Global Telecom) M Econet Wireless M C S

LATIN AMERICA & THE CARIBBEAN

Argentina	Sicom M S
Bolivia	Tigo (Millicom) M
Brazil	Vivo (Telefónica) M Oi M
Colombia	DaviPlata M BanColombia S
Dominican Republic	Orange M
El Salvador	Tigo (Millicom) M
Guatemala	Tigo (Millicom) M
Guyana	Guyana Telephone and Telegraph Company M
Haiti	Digicel M Haitipay M
Honduras	Tigo (Millicom) M I
Mexico	eZuza M Telcel (América Móvil) M
Paraguay	Tigo (Millicom) M I C

EAST ASIA & PACIFIC

Cambodia	WING M
Indonesia	BTPN S Indosat (Ooredoo) M XL (Axiata) I
Malaysia	Maxis I
Papua New Guinea	Nationwide Microbank M I S
Philippines	Smart (PLDT) M
Solomon Islands	ANZ Bank M S
Thailand	AIS M True Move (True Corporation) M
Vietnam	M_Service M

SOUTH ASIA

Afghanistan	Roshan (TDCA) M Afghan Wireless (TCI) M
Bangladesh	Robi (Axiata) I bKash M Trust Bank M Bank Asia M Grameenphone (Telenor) M I Dutch-Bangla Bank M
India	Aircel (Maxis) M Oxigen M My Mobile Payments M Vodafone M Eko M S
Nepal	FonePay M
Pakistan	Ufone (PTCL) M Habib Bank Limited M UBL Bank M I S Telenor M I S Mobilink (Global Telecom) M I
Sri Lanka	Mobitel (Sri Lanka Telecom) M Dialog (Axiata) M I

MIDDLE EAST & NORTH AFRICA

Egypt	Vodafone M
Iran	MCI (TCI) M
Jordan	Zain M
Qatar	Ooredoo M
Tunisia	Ooredoo M Viamobile M

EUROPE & CENTRAL ASIA

Mongolia	MobiCom M
Romania	Vodafone M
Turkey	Turkcell M

64. For further details on each service, please visit MMU Deployment Tracker http://www.gsma.com/mobilefordevelopment/programmes/mobile-money-for-the-unbanked/insights/tracker

Appendix B - Glossary[65]

Agent outlet

In the case of mobile money, an agent outlet is a location where one or several mobile money agents are contracted to facilitate transactions for users. The most important of these are cash-in and cash-out (i.e. loading value into the mobile money system, and then converting it back out again); in many instances, agents register new customers too. Agents usually earn commissions for performing these services. As they are the human touch point for the mobile money service, they also often provide front-line customer service such as teaching new users how to initiate transactions on their phone. Typically, agents will conduct other kinds of business in addition to mobile money. The kinds of individuals or businesses that can serve as agents will sometimes be limited by regulation, but small-scale traders, microfinance institutions, chain stores, and bank branches serve as agents in some markets. Some industry participants prefer the terms "merchant" or "retailer" to describe this person or business to avoid certain legal connotations of the term "agent" as it is used in other industries.

An active agent outlet is an agent outlet that facilitated at least one transaction within the past 30 days.

Airtime top-up

Purchase of airtime via mobile money, funded from a mobile money account.

Anti-money laundering/combating the financing of terrorism (AML/CFT)

A set of rules, typically issued by central banks, that attempt to prevent and detect the use of financial services for money laundering or to finance terrorism. The global standard-setter for AML/CFT rules is the Financial Action Task Force (FATF).

Bank account-to-mobile money account transfer

A direct transfer of funds made from a customer bank account to a mobile money account. This transaction typically requires a commercial agreement and technical integration between the bank and the mobile money provider to allow direct account-to-account (A2A) transfers.

Bill payment

A payment made by a person from either their mobile money account or over-the-counter to a biller or a billing organisation via a mobile money platform in exchange for services provided.

Bulk disbursement

A payment made by an organisation via a mobile money platform to a person's mobile money account. For example: salary payments made by an organisation to their employees' mobile money account (B2P: business-to-person), payments made by a government to a recipient's mobile money account (G2P), or payments made by development organisations to beneficiaries (D2P).

Cash-in

The process by which a customer credits his account with cash. This is usually via an agent who takes the cash and credits the customer's mobile money account with the same amount of e-money.

65. Certain definitions were taken from Guideline Note Mobile Financial Services: Basic Terminology, by Mobile Financial Services Working Group, AFI. Available at: http://www.afi-global.org/sites/default/files/publications/MFSWG%20Guideline%20Note%20on%20Terminology.pdf

Cash-out

The process by which a customer deducts cash from his mobile money account. This is usually via an agent who gives the customer cash in exchange for a transfer of e-money from the customer's mobile money account.

E-money

Short for "electronic money," is stored value held in the accounts of users, agents, and the provider of the mobile money service. Typically, the total value of e-money is mirrored in (a) bank account(s), such that even if the provider of the mobile money service were to fail, users could recover 100% of the value stored in their accounts. That said, bank deposits can earn interest, while e-money traditionally cannot.

Enabling regulation

An 'enabling regulatory approach' for mobile money is one in which the rules established by the regulator:[66]

- Permits non-banks to issue electronic money (or equivalent)[67] by allowing them to:
  - be licensed directly, OR
  - set up a subsidiary for this business, OR
  - apply for a payments bank (or equivalent) license, OR
  - provide the mobile money service under a letter of no-objection to the non-bank or its partner bank, pending the approval of a specific regulation.
- AND imposes initial and ongoing capital requirements that are proportional to the risks of the e-money business
- AND permits them to use agents for cash-in and cash-out operations
- AND does not prescribe the implementation of specific interoperability models without allowing for a market-led approach.

Escrow (Trust) Account

To ensure that a customer's money is available when the customer wants to redeem it, regulators typically require that the non-bank mobile money provider maintain liquid assets equal in value to the amount of money issued electronically. These funds are usually pooled and held by one or more banks in the name of the issuer (or in the name of a trustee appointed by the issuer). The account in which the funds are pooled is known as an escrow account (or a trust account where the issuer has appointed a trustee). In countries with a common law legal tradition, the funds typically are held in trust for the benefit of the mobile money users. In countries where the common law concept of trust does not exist, mobile money users typically have a right to claim these funds under the law of contract.

Float

The balance of e-money, or physical cash, or money in a bank account that an agent can immediately access to meet customer demands to purchase (cash in) or sell (cash out) electronic money.

Government-to-person (G2P) payment

A payment by a government to a person's mobile money account.

66. These rules may be codified or may be outlined in individual "letters of no-objection."
67. In some cases, regulators authorise providers to offer such services under a different name, such as "mobile money", "mobile payment", or "electronic deposit."

Informal financial services

Financial services offered by unregulated entities. Examples of informal financial services are susu collections in Ghana, loan-shark lending, savings groups, etc.

International remittance

Cross-border fund transfer from one person to another person. This transaction can be a direct mobile money remittance, or can be completed through the use of an intermediary organisation such as Western Union.

Interoperability

The ability for customers to undertake money transfers between two accounts at different mobile money schemes, or to transfer money between accounts at mobile money schemes and accounts at banks. To date, MNOs in four markets have interoperated their mobile money schemes.

Know-Your-Customer (KYC)

Financial institutions and regulated financial services providers are obligated by regulation to perform due diligence in order to identify their customers. The term is also used to refer to the regulation which governs these activities. The FATF (Financial Action Task Force) recommends a risk-based approach to due diligence for AML/CFT (anti-money laundering and counter-financing of terrorism) controls. Due to the lack of formal identity documents in some markets, solutions such as tiered KYC and adjusting acceptable KYC documentation can help mobile money providers facilitate customer adoption and increase financial inclusion, especially in rural areas.

Liquidity management

The management of the balance of cash and e-money held by a mobile money agent in order to meet customers' demands to purchase (cash in) or sell (cash out) e-money. The key metric used to measure the liquidity of an agent is the sum of their e-money and cash balances (also known as their float balance).

Merchant payment

A payment made from a mobile money account via a mobile money platform to a retail or online merchant in exchange for goods or services.

Mobile credit

Mobile credit uses the mobile phone to provide credit services to the underserved. MMU tracks mobile credit services which meet the following criteria:

- The service allows subscribers to borrow a certain amount of money that they agree to repay within a specified period of time.
- The service must allow underserved people to apply for credit and repay it more easily using a mobile device. Airtime credit products or services that offer the mobile phone as just another channel to access a traditional credit product are not included.
- The service must offer an interface for initiating transactions for agents and/or customers that is available on basic mobile devices.

Mobile financial services (MFS)

The use of a mobile phone to access financial services and execute financial transactions. Mobile money, mobile insurance, mobile credit and mobile savings are mobile financial services.

Mobile insurance

Mobile insurance uses the mobile phone to provide microinsurance services to the underserved.

MMU tracks mobile insurance products which meet the following criteria:

- The service must allow subscribers to manage risks by providing a guarantee of compensation for specified loss, damage, illness, or death.
- The service must allow underserved people to access insurance services easily using a mobile device. Services that offer the mobile phone as just another channel for the clients of an insurance company to access a traditional insurance product are not included.
- The service must offer an interface for initiating transactions for agents and/or customers that is available on basic mobile devices.

Mobile money

Mobile money is a service which the underserved can use to make and receive payments using a mobile phone.

MMU tracks mobile money services which meet the following criteria:

- The service must offer at least one of the following services: P2P transfer, bill payment, bulk disbursement, merchant payment, and international remittance.
- The service must rely heavily on a network of transactional points outside bank branches that make the service accessible to unbanked and underbanked people. Customers must be able to use the service without having been previously banked. Mobile banking services that offer the mobile phone as just another channel to access a traditional banking product, and payment services linked to a current bank account or credit card such as Apple Pay and Google Wallet are not included.
- The service must offer an interface for initiating transactions for agents and/or customers that is available on basic mobile devices.

Mobile money account

An e-money account that is primarily accessed using a mobile phone and that is held with the e-money issuer. In some jurisdictions, e-money accounts may resemble conventional bank accounts, but are treated differently under the regulatory framework because they are used for different purposes (for example, as a surrogate for cash or a stored value that is used to facilitate transactional services).

An active mobile money account is a mobile money account that has been used to conduct at least one transaction during a certain period of time (usually 90 days or 30 days).

Mobile network operator (MNO)

A company that has a government-issued license to provide telecommunications services through mobile devices.

Mobile savings

Mobile savings uses the mobile phone to provide savings services to the underserved.

MMU tracks mobile savings services that meet the following criteria:

- The service allows subscribers to save money in an account that provides principal security, and in some cases an interest rate.
- The service must allow underserved people to save money using a mobile device. Services that offer the mobile phone as just another channel to access a traditional savings account are not included.
- The service must offer an interface for initiating transactions for agents and/or customers that is available on basic mobile devices.

Money Transfer Operator (MTO)

A company that has a government-issued license to provide money transfer services.

Off-net transfer

Transfers that are initiated by registered mobile money users to unregistered users are typically referred to as off-net (off-network) transfers. Some deployments may refer to an off-net transfer as a voucher, coupon or token. In this case, the e-money will need to be cashed out at an agent of the sender's agent network. Transfers between two accounts of different but interconnected mobile money schemes are also sometimes referred to as "off-net transfers", although in this report they are distinguished with the term "A2A cross-net transfers".

Over-the-counter (OTC) services

Some mobile money services are being offered primarily over-the-counter (OTC). In such cases, a mobile money agent performs the transactions on behalf of the customer, who does not need to have a mobile money account to use the service.

Person-to-person (P2P) transfer

A transfer made from one person to another person.

Platform

The hardware and software that enables the provision of a mobile money service.

Point of Sale (POS)

A retail location where payments are made for goods or services. A "POS device" denotes a specialised device which is used to accept the payment, e.g. a card reader.

Regulator

In the context of mobile money, this typically refers to the regulator who has supervisory authority over financial institutions within a particular country—usually the central bank or other financial authority.

Unbanked

Customers who do not have a bank account or a transaction account at a formal financial institution.

Underbanked

Customers who may have access to a basic transaction account offered by a formal financial institution, but still have financial needs that are unmet or not appropriately met.

Unregistered users	Unregistered users include both people transacting over-the-counter in the case of OTC services, and unregistered recipients of off-net P2P transfers in the case of account-based services.
Voucher	Money sent as an off-net transfer from a mobile money account holder to an unregistered recipient, along with a code for the recipient to withdraw the funds at an agent outlet. Also known as a coupon or token.
Mobile money account-to-bank account transfer	A direct transfer of funds made from a mobile money account to a customer bank account. This transaction typically requires a commercial agreement and technical integration between the bank and the mobile money provider to allow direct account-to-account (A2A) transfers.

Appendix C - Methodology for mobile money estimates and forecasts

Scope

The ability for mobile money managers, industry partners, CFOs, CEOs, regulators and policymakers to make clear, informed decisions in this business depends on accurate and impartial data. With this in mind, in addition to the MMU Deployment Tracker, GSMA has created a new online mobile money database,[69] which publishes historic data as well as forecasts on a number of indicators for the period from 2000 to 2020. More details about the methodology used in these estimates and forecasts can be found on: https://gsmaintelligence.com/topics/3363/dashboard/

The forecasts will be updated on a regular basis to reflect the evolution of the industry, in particular the launch of new mobile money services, changes in mobile money regulatory environments as well as the evolution of market dynamics.

Data modelling

The methodology used to model mobile money accounts is based on a mixed bottom-up (service-level) and top-down (country-level) approach.

Our modelling is based on a number of data sources including MMU's annual Global Adoption Survey of Mobile Financial Services and MMU Deployment Tracker.

BOTTOM-UP (SERVICE-LEVEL) APPROACH

For the bottom-up approach, we are considering all the mobile money services that are live at any point in time. The number of mobile money accounts is then forecasted for each service individually. The numbers are then aggregated at the country and regional levels.

For mobile money services where historic data is available, we have extrapolated the growth in number of registered mobile money accounts based on historic data, trend analysis and analyst judgement.

For mobile money services where historic data is not available, we have modelled the growth in their number of mobile money accounts based on operator, country and regional benchmarks, GSMA internal market expertise as well as tailored assumptions about future growth. More specifically:

- In the case of services led by mobile network operators (MNOs), we have modelled the number of mobile money accounts in each quarter as the portion of total connections of the same quarter.

- In the case of services that are led by other types of companies including banks, MFIs and third party providers, we have modelled the number of mobile money accounts in each quarter as the portion of total unique subscribers in the market of the same quarter.

TOP-DOWN (COUNTRY-LEVEL) APPROACH

We complemented this bottom-up approach by top-down country level analysis where market-level data was available. In particular, we used Central Bank reports as well as data from the International Monetary Fund's (IMF) annual Financial Access Survey (FAS).

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