



2017 State of the Industry Report on Mobile Money



The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with almost 300 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai, Mobile World Congress Americas and the Mobile 360 Series of conferences.

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CONTENTS

Foreword	5
Executive summary	6
Industry infographic: Mobile money in 2017	8
The big picture: Mobile money adoption, accessibility, usage and revenues	9
The methodology: Levers to scale	14
Regional infographics: Global and Sub-Saharan Africa	16
Lever 1 Increasing customer activity rates	18
Lever 2 Shifting from a cash economy to a digital ecosystem	22
Lever 3 Decreasing the net cost of the agent network	26
Lever 4 Supportive policy and regulation	28
Conclusion	30



FOREWORD

2017 was another record year for mobile money. Now processing over a billion dollars a day, the mobile money industry is having a demonstrable impact on the global effort to extend access to financial services and to provide a gateway to the digital economy.

While mobile money remains a leading payment platform in the developing world, the commercial landscape is shifting. Fintech players are bringing a new wave of disruption. In this evolving market, providing services is no longer enough. Last year, mobile network operator groups responded with strong investment and new efforts to marry operator scale with fintech innovation, as demonstrated by industry initiatives such as the GSMA Ecosystem Accelerator programme and harmonised industry APIs.

As the Sustainable Development Goals (SDGs) enter their third year, mobile technology is also proving to be an essential tool for delivering on this highly ambitious agenda. Better connectivity and new services are enabling healthier, more inclusive communities, and mobile money remains a central part of this story. It is contributing to 13 of the 17 SDGs, from enabling access to essential services like health and education, to empowering women with employment opportunities, to reducing poverty by offering life-enhancing financial services, often for the first time.

In an increasingly turbulent world, mobile money is also providing a lifeline. Digital humanitarian cash transfers and affordable international remittances are giving refugees safe and convenient ways to meet pressing needs. Smallholder farmers are using the service to access credit and maximise supply chain efficiencies. All of this will become more important as the effects of climate change intensify. The past year also saw commitments to address the gender gap in access to financial services, with 22 mobile operators signing up to our Connected Women commitment to measure and narrow the gender gap in mobile money.

In this context, we are delighted to share the 2017 State of the Industry Report on Mobile Money. The report is prepared by the GSMA's Mobile Money programme in collaboration with the mobile money industry, and produced with the generous support of the Bill & Melinda Gates Foundation, The Mastercard Foundation and Omidyar Network.



Mats Granryd
Director General

EXECUTIVE SUMMARY

2017 saw a number of new trends in mobile money – from the accelerated growth of bank-to-mobile interoperability, to the emergence of South Asia as the fastest growing region, and a raft of innovations designed to reach the most underserved.

The mobile money industry is now processing a billion dollars a day and generating direct revenues of over \$2.4 billion. With 690 million registered accounts worldwide, mobile money has evolved into the leading payment platform for the digital economy in many emerging markets.

Several factors underpin the success of a growing number of providers: a sustained focus on activity rates, the digitisation of platforms and measures to reduce the net cost of the agent network. On each of these fronts, the trends in 2017 were positive.

A growing number of mobile money services are achieving activity rates of over 50 per cent.

While average industry activity rates grew modestly to 36 per cent in December 2017, a closer look reveals significant variation among providers. Many successful providers are seeing a higher number of their customers using the service regularly. Our analysis shows that these providers all have a strong distribution network, enjoy enabling regulation, and rely more on an account-based business model.

More funds are entering and leaving the mobile money ecosystem in digital form.

Use cases such as bulk disbursements, bill payments and bank-to-mobile transactions have been the main drivers of this trend. As mobile money

becomes more digital, it is connecting the wider economy and, in turn, becoming more profitable for providers and more useful to consumers. Whereas nearly 12 per cent of incoming funds were digital in 2012, that figure rose to nearly 25 per cent in 2017.

Many successful providers are decreasing the net cost of the agent network. Agents remain a crucial and distinguishing asset of mobile money providers. In recent years, we have seen growth in the number of active agents and average values processed by agents. At the same time, the inflow of digital funds is reducing provider costs, by alleviating the need for subsidised cash-in agent commissions. The cost of managing an agent network can account for more than half of total revenues, so this trend can significantly affect investment incentives.

Of course, success will require more than just getting the basics right. As the context changes, so mobile money providers are working to adapt. Important trends include the spread of smartphones and fintech companies, the digitisation of new sectors of the economy, and renewed efforts by companies and governments alike to reach the most vulnerable. Mobile money providers serving as a payment platform for a broad range of entities appear to be best placed to thrive in this environment.

The most successful providers are integrated with a wide range of third parties. On average, providers with the highest activity rates are integrated with seven banks, 95 billers and 31 organisations for bulk disbursements, and 6,500 merchants - well above the industry average.

As a burgeoning fintech community seeks to marry start-up innovation with mobile money scale, these connections and the potential to serve as the gateway to the digital economy will become increasingly central to the story of mobile money.

Policy objectives will play an increasingly important role, as the scope of mobile money regulation broadens. The pace of core regulatory reform slowed in 2017, as the total number of markets with enabling regulatory frameworks rose from 52 to 54.

This, however, masked two important trends: the growth of new areas of digital financial services regulation and the spread of national financial inclusion policy frameworks. As regulators confront questions around data protection, regulatory sandboxes, and more, the policy end game of greater inclusion must remain at the fore.

Amidst this changing landscape, many traditional tools remain relevant. The persistence and scale of the cash economy in emerging markets means that complex distribution networks remain crucial for digital services to interface with physical lives.

In a business that relies deeply on trust, the role of longstanding brands and the understanding of local contexts is integral to the engagement of people outside of the formal system. And as governments and regulators take a broader approach to digital financial services, providers and national authorities must continue to work in concert to strike a balance that ensures sustainable and responsible market growth.

By leveraging these enduring assets and finding new ways to connect scale with innovation, mobile money providers can serve as a gateway to the widening array of digital services in emerging markets. In this report, we take a closer look at these and other trends shaping the mobile money industry around the world. The full findings of this year's State of the Industry Report on Mobile Money are based on the analysis of data collected through the GSMA's Annual Global Adoption Survey.

MOBILE MONEY IN 2017

276 

mobile money deployments are now live in 90 countries

There are

690m

registered mobile money accounts worldwide—a 25% increase from 2016

Deployments with more than one million 90-day active accounts

37 | 47

December 2016

December 2017

Overall mobile money industry direct revenues rose to over

 \$2.4bn

THE MOBILE MONEY INDUSTRY IS PROCESSING AN AVERAGE

\$1bn
PER DAY

OVER 20%

of deployments now offer a savings, pensions or investment product with another 37% intending to over the next year



66%

of the combined adult population of Kenya, Rwanda, Tanzania and Uganda use mobile money on an active basis

168 MILLION

mobile money accounts were active (30-day) in December 2017

A TYPICAL MOBILE MONEY CUSTOMER MOVES

\$188

PER MONTH

THE BIG PICTURE: ADOPTION, ACCESSIBILITY, USAGE AND REVENUES

Strong growth in customer registrations in 2017 led to the addition of over 136 million new registered accounts, bringing the global total to 690 million mobile money accounts, a 25 per cent increase from 2016.

With mobile money now available in 90 countries, including three quarters of low- and lower-middle-income countries, it has become the leading payment platform for a digital economy in emerging markets.

Sub-Saharan Africa has long been the epicentre of mobile money, and growth in this region shows no sign of slowing. Yet, as the mobile money industry has matured, it has taken hold in other parts of the world, too. In 2017, for the first time, most industry growth came from outside Africa. South Asia saw the highest year-on-year growth in accounts of any region (47 per cent) and now represents 34 per cent of registered accounts globally.

The spread of mobile money beyond traditional footholds is also happening within Sub-Saharan Africa. In 2017, Western and Middle Africa were the fastest growing areas of Sub-Saharan Africa, led by tremendous growth in registered accounts in countries like Ghana, Côte d'Ivoire and Cameroon (see Figure 1).

Accessibility: channel and distribution

Globally, the percentage of providers who offer mobile money through a smartphone app has increased from 56 per cent in 2015 to 73 per cent as of June 2017. While smartphones are the future of the industry, feature phones and

Unstructured Supplementary Service Data (USSD) transactions continue to be the choice for the vast majority of mobile money users. This is likely a reflection of the role the service has played in including those at the base of the economic pyramid.

In terms of service distribution, agents remain the backbone of the mobile money industry, as the primary mechanism for digitising and disbursing cash. In 2017, the number of registered agents grew by 17 per cent, reaching 5.3 million in December.¹ Of these, 55 per cent have facilitated at least one transaction in the last 30 days.

Mobile money usage

Globally, the industry continued to experience high growth in transactions. Total transaction values grew by 21 per cent from \$26 billion in December 2016 to over \$31.5 billion in December 2017. On average, an active customer moved \$188 per month, primarily cashing in and out and sending person-to-person (P2P) transfers. Increasingly, customers are also paying bills, topping up airtime and conducting other transactions through their mobile money accounts (see Figure 2).

2017 saw the beginning of a potentially significant shift for mobile money to serve as a tool for saving money and earning interest.

¹ Note that this is not the number of unique mobile money agent outlets, but rather the sum of the agent outlets providing cash-in and cash-out services for the mobile money services that are available globally. In many markets, individual outlets may serve several mobile money service providers.

Twenty-two per cent of mobile money providers taking part in our Global Adoption Survey currently offer a mobile money-enabled savings, pensions or investment product.² The survey results, however, suggest that this number is set to increase markedly, with an additional 39 per cent of deployments reporting that they are planning to roll out similar products within the next 12 months. For all of the above, partnerships with third parties, particularly banks, will be crucial.

2015 regulatory guidelines from the Bank of Ghana have allowed customers to accrue interest on mobile money deposits, resulting in exponential growth in total deposits in that market. Mobile money customers can also purchase treasury bills through their devices, thanks to a collaboration between Ecobank and MTN Ghana.³

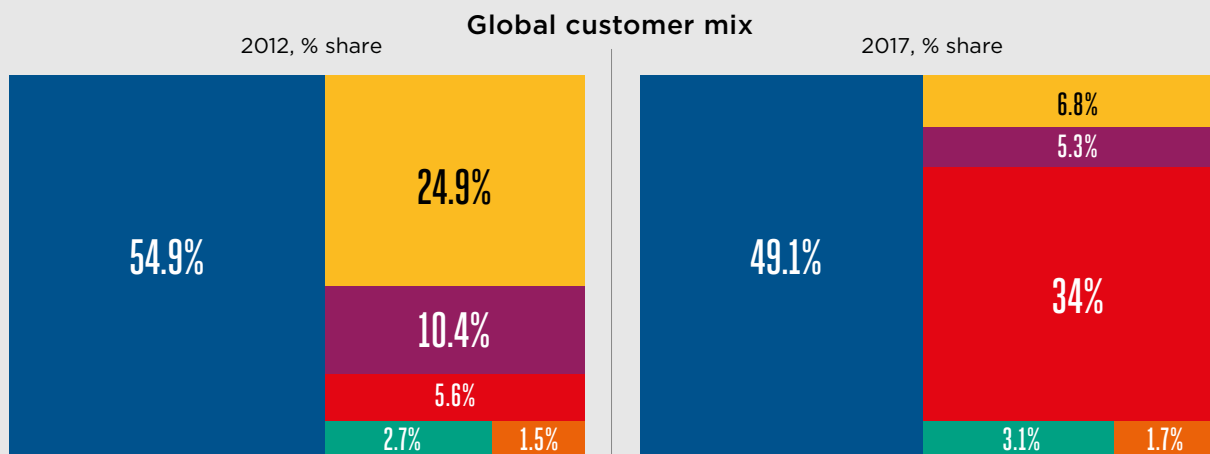
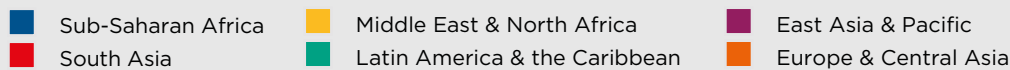
Solidifying a sustainable direct revenue model for mobile money

Just a few years ago, mobile money was valued by many mobile network operators (MNOs) for its indirect benefits, such as less churn and greater brand loyalty. Today, it is widely viewed as a source of direct revenue.

In 2017, the mobile money industry saw more than \$2.4 billion in direct revenues, driven by a reported revenue growth of 34 per cent year-on-year.

In line with this, the number of MNOs reporting that mobile money contributed more than 10 per cent of total MNO revenues grew in 2017. For example, M-Pesa contributed over 27.3 per cent of Vodacom’s revenue in Tanzania.⁴ In Zimbabwe, many people relied on mobile money to cope with persistent cash shortages. Mobile money revenues as a proportion of total operator revenues in Zimbabwe grew accordingly, from 13.1 per cent to 18 per cent between Q2 and Q3 2017.⁵

FIGURE 1A GLOBAL SPREAD OF REGISTERED MOBILE MONEY CUSTOMERS FROM DECEMBER 2012 - DECEMBER 2017



136m

Total accounts 2012/2017

690m

2 The GSMA Global Adoption Survey of Mobile Financial Services is an annual survey designed to capture quantitative information about the performance of mobile financial services around the world.
 3 See: ghanabusinessnews.com/2016/10/01/ecobank-launches-mobile-money-treasury-bill-product
 4 Vodacom integrated report for year ending 31 March 2017; p. 56
 5 Postal and Telecommunications Regulatory Authority of Zimbabwe (Potraz) - Abridged Postal & Telecommunications sector performance report - Third Quarter 2017; p.12

FIGURE 1B SUB-SAHARAN AFRICA CUSTOMER MIX FROM DECEMBER 2012 - DECEMBER 2017

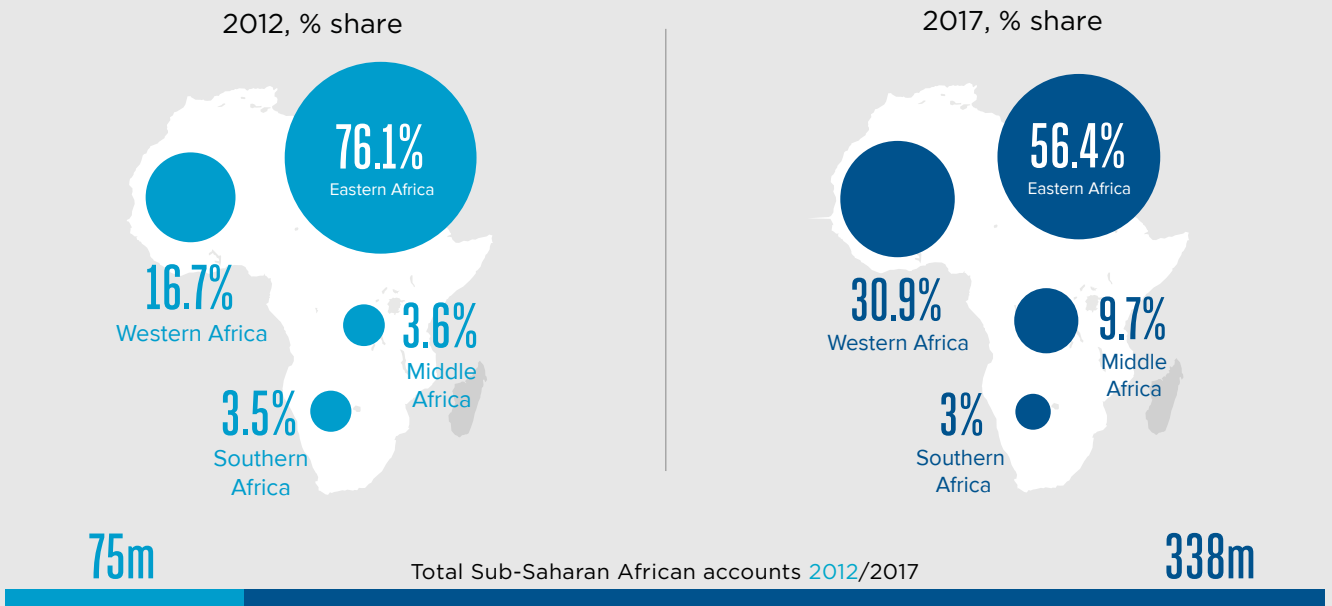
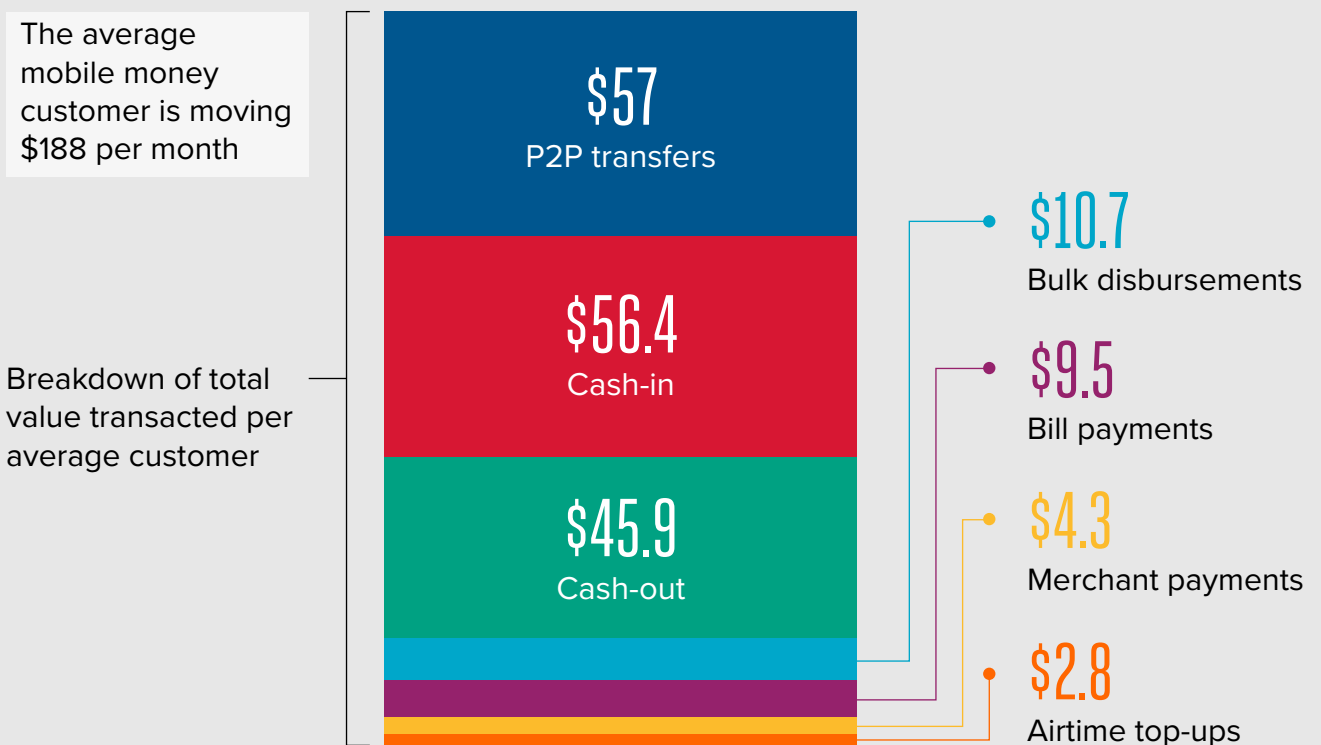


FIGURE 2 BREAKDOWN OF TOTAL VALUE TRANSACTED PER AVERAGE MOBILE MONEY CUSTOMER*



* Total US\$ value transacted per active customer per month. Calculation: Number of transactions per active customer per month x average value transacted per active customer per month.

INDUSTRY SPOTLIGHTS

REACHING THE HARDEST TO REACH

Rural and female customers remain two of the hardest to reach groups and thus two of the most untapped commercial opportunities for providers. Increasing amounts of investment and innovation are being directed toward addressing this.

Beyond the urban areas

Providers have invested in expanding their rural agent networks in recent years. Forty-eight per cent of deployments taking part in the 2017 Global Adoption Survey identified greater rural penetration as one of their top three strategic priorities. This has yielded some encouraging progress, particularly in predominantly rural markets, where mobile money providers captured 22 per cent of the addressable market in 2017, up from 17 per cent in 2015.⁶

Reaching women

Data collected through our Global Adoption Survey suggests that 36 per cent of mobile money users are women. However, this figure varies significantly

by deployment, from 15 per cent to nearly 50 per cent. A major challenge for providers remains segmenting customer bases by gender. The number of providers tracking this is growing, alongside consumer insights research into how to increase uptake and use by women. Nevertheless, the barriers to getting the data right remain significant, as many accounts used by women are registered under a man's name because of, for example, the gender gap in identity ownership, gendered cultural norms, or shared family accounts. In this context, government policy interventions to introduce foundational identities and promote digital literacy amongst women can play a crucial role in helping providers to reach more women.

Research by the GSMA, conducted in Côte d'Ivoire and Mali, found that a perceived lack of need and lack of money, as well as low literacy rates and lack of trust, also limit women's ability or willingness to use mobile money. The study set out an approach for analysing customer data with a gender lens, which can help providers overcome these challenges.^{7&8}

MOBILE MONEY AND HUMANITARIAN CASH TRANSFERS

With humanitarian budgets stretched to their limits, mobile money transfers offer a cheaper, faster, more secure and transparent alternative to cash. As a result, the humanitarian sector is increasingly relying on bulk payment offerings to deliver humanitarian cash transfers digitally.

Case study: Uganda Bidi Bidi

In Bidi Bidi, one of the world's largest refugee settlements in northern Uganda, MNOs are partnering with NGOs to use mobile money bulk

payment offerings to deliver humanitarian cash transfers for the first time. They report challenges such as keeping up with fast-changing local regulations, reaching the most vulnerable camp residents who are often least likely to own a mobile device, and managing agent liquidity in a way that ensures agents have the right cash denominations to facilitate withdrawals.

At the same time, a number of steps are being taken to support the success of mobile money-based humanitarian transfers to Bidi Bidi. These include significant investment from both MNOs

6 Gilman, L., Shulist, J., de Dinechin, E. and de Lisle, M. (2015). Spotlight on Rural Supply: Critical factors to create successful mobile money agents. "Spotlight on Rural Supply: Critical factors to create successful mobile money agents". GSMA.

7 Minischetti, E. (2017). "Mapping the mobile money gender gap: Insights from Côte d'Ivoire and Mali".

8 Barrie, G., Minischetti, E. and Rowntree, O. (2016). "Using your data to drive growth in women's use of mobile money services: The mobile money customer journey with a gender lens".

and humanitarian organisations in (a) training and sensitisation on how to use mobile money; and (b) connectivity infrastructure, an agent network and liquidity management to ensure beneficiaries

have a positive and smooth experience. The project has also benefitted from strong organisational capacity, trusted relationships, and the agility to make projects succeed in a difficult context.⁹

Operator and NGO partnership snapshots

Airtel & Mercy Corps beneficiaries

4,750

Between March and August 2017

Beneficiaries received a monthly transfer of

\$10

MTN & International Rescue Committee beneficiaries

1,225

Between May and July 2017

Beneficiaries received a monthly transfer of

\$11

INTERNATIONAL REMITTANCES

In 2017, mobile money international remittances featured prominently in the global dialogue about how to achieve SDG 10c, which targets a reduction in the cost of remittances.

Groundbreaking research^{10.1} by the GSMA in 2016 showed that it was, on average, 50 per cent cheaper to send remittances using mobile money than using global money transfer operators (MTOs). New data^{10.2} on the cost of remittances collected in August 2017 indicates that the cost of sending \$200 via mobile money has continued to decline, to 1.7%, on average, where customers opt to keep their funds in digital form.

There is growing evidence of the many benefits of mobile money international remittances:

- Mobile money can serve as a gateway to financial inclusion, enhancing the impact of international remittances on development. For example, in Kenya, people receiving remittances on their mobile money account can buy government bonds through M-Akiba, enabling the investment of remittances in the local economy.

- The characteristics of mobile money — convenience, privacy and reach — make it a particularly attractive remittance channel for women and rural households. WorldRemit^{10.3} data shows that mobile money is the preferred way for their customers to send money to rural areas.
- Mobile money can play a critical role in formalising international remittances. While formal remittance flows to developing countries have reached \$450 billion in 2017,^{10.4} the true size of remittances is believed to be significantly higher, with large flows going through unregulated informal channels.

Leading mobile money providers and international remittance hubs have joined forces to define a set of guidelines on the provision of international remittances through mobile money. Published in September 2017, these guidelines illustrate how the mobile money industry, banks, regulators, and the international community are working together to ensure international transfers conducted through mobile money are facilitated in a safe and secure manner. Dialogue on the guidelines and their oversight and supervision will continue in 2018.

9 Casswell, J. and Frydrych, J. (2017). "Humanitarian Payment Digitisation: Focus on Uganda's Bidi Bidi Refugee Settlement". GSMA.

10.1 Farooq, S., Naghavi, N. and Scharwatt, C. (2016), "Driving a price revolution: Mobile money in international remittances". GSMA.

10.2 GSMA data. Publication forthcoming.

10.3 Scharwatt, C., (2017). "Key takeaways from our IMT workshop at Mobile 360 Africa". GSMA.

10.4 KNOMAD (2017). "Migration and remittances: Recent developments and outlook. Special topic: Return migration".

THE METHODOLOGY: LEVERS TO SCALE



A steady uptick in active customers, transactions and direct revenue are all signs that mobile money is an important driver of economic growth in developing markets.

While profitability remains a challenge for many providers, a growing number are enjoying healthy margins. More than one in four mobile money deployments reported healthy EBITDA¹¹ margins of 25 per cent or more.

A 2014 study by GSMA¹² identified scale as a critical factor for mobile money providers to achieve profitability. Scale implies on-boarding a large proportion of a provider’s customer base, increasing the number of transactions per customer and decreasing reliance on cash-based transactions (such as cash-ins and cash-outs).

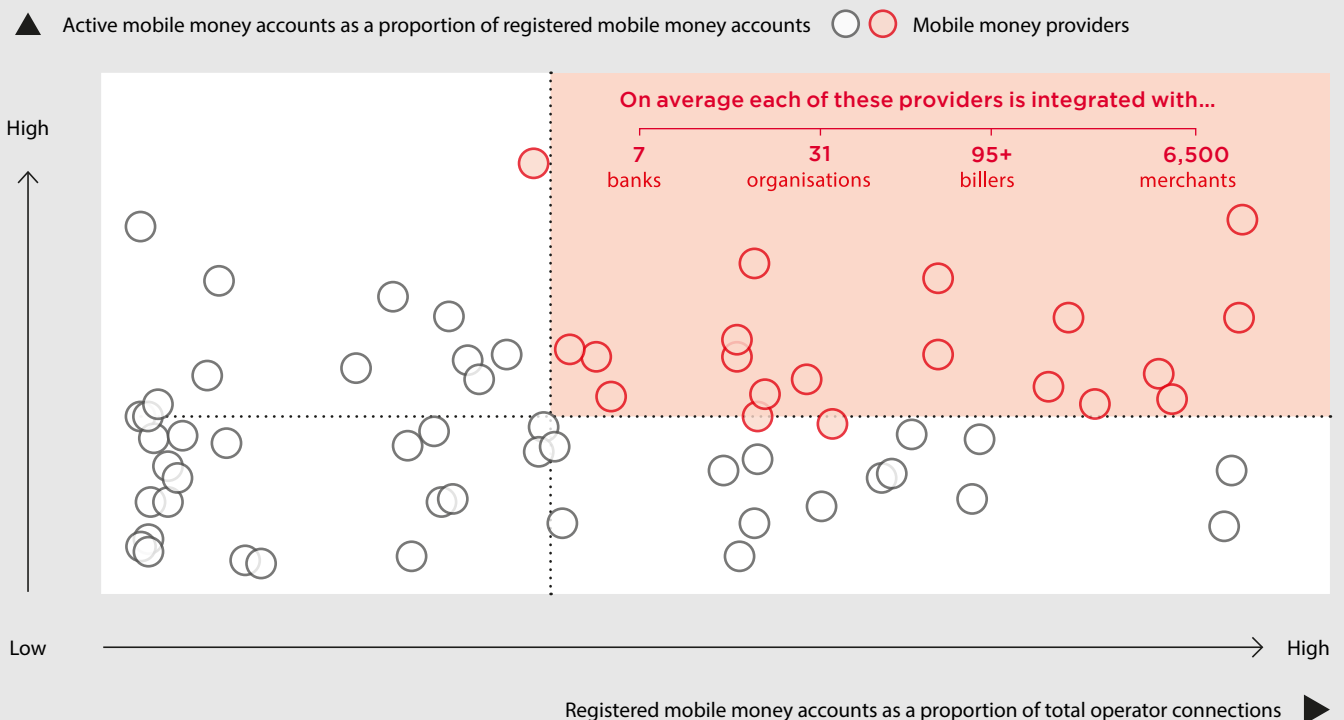
The figure below displays the percentage of an MNO customer base registered for a mobile money account (i.e. the addressable market in the case of a

USSD-based service and/or an app locked to a single network) against the percentage of mobile money customers actively using the service (see Figure 3). It is clear that some deployments—those in the top right corner — have cracked the recipe for mobile money and managed to grow their activity rates and customer base to achieve scale.

Two things distinguish the providers in the top right-hand quadrant from the rest. First, they are serving as platforms for a wider payments ecosystem. On average, these providers are each integrated with seven banks, over 95 billers and 31 organisations for bulk disbursements, and 6,500 merchants. This, in turn, means higher average revenue per user: \$1.7 per active customer, versus \$1.2 on average across all providers. Second, providers in the top right overwhelmingly enjoy enabling regulation.




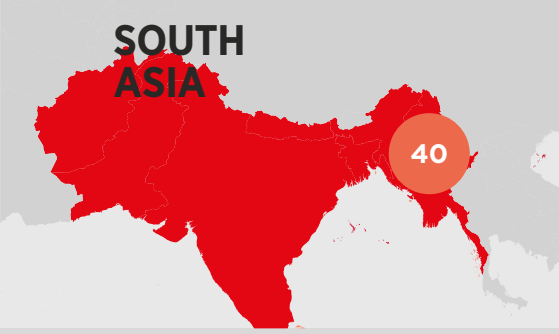

Beyond this, we’ve identified four levers of growth that providers can take hold of as they aspire to move into the top right-hand quadrant and, with the rollout of smartphone apps for use by customers on any network, far beyond.

FIGURE 3 REACHING SCALE IN MOBILE MONEY¹³



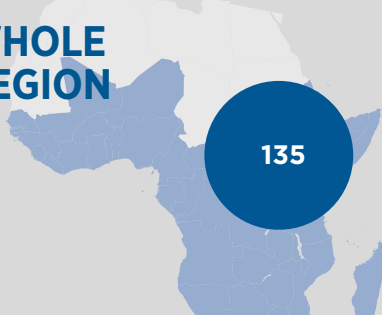



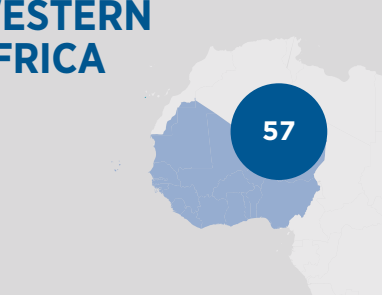
11 EBITDA stands for earnings before interest, taxes, depreciation and amortization, and is an indicator of a company’s financial performance.
 12 Almazan, M. and Vonthron, N. (2014). “Mobile money profitability: A digital ecosystem to drive healthy margins”. GSMA.
 13 GSMA Mobile Money, GSMA Intelligence.

REGIONAL GROWTH IN 2017

	Number of deployments	As of December	Registered accounts	Active 90-day accounts	Transaction volume	Value USD
GLOBAL 	276*	2016	553.7m	191m	1.5bn	26bn
		Year-on-year growth, %	24.6	29.3	24.8	21.3
		2017	690m	247m	1.8bn	31.5bn
EAST ASIA AND PACIFIC 	41	2016	33.3m	5.5m	28m	1.8bn
		Year-on-year growth, %	9.3	29.7	5.1	6.5
		2017	36.5m	7.2m	29.5m	1.9bn
LATIN AMERICA AND THE CARIBBEAN 	34	2016	19.7m	10.1m	59.3m	0.8bn
		Year-on-year growth, %	9.3	14.3	11.3	6.4
		2017	21.5m	11.5m	66.1m	0.8bn
SOUTH ASIA 	40	2016	159.9m	55.5m	347.8m	5.7bn
		Year-on-year growth, %	46.9	55.7	49	48.9
		2017	234.8m	86.3m	518.1m	8.4bn
MIDDLE EAST AND NORTH AFRICA 	18	2016	44.7mn	15.3mn	31.8mn	0.3bn
		Year-on-year growth, %	5.7	20	19.8	21.5
		2017	47.2m	18.3m	38.1m	0.4bn

* Europe and Central Asia is not reflected. These regions counted 11.5M; 1.7M; 4.4M and \$66.7M for the respective metrics as of December 2017.

SUB-SAHARAN AFRICA SNAPSHOT

	Number of deployments	As of December	Registered accounts	Active 90-day accounts	Transaction volume	Value USD
WHOLE REGION 		2016	285.9m	103.1m	981.3m	17.4bn
	Year-on-year growth, %		18.4	18.2	17.9	14.4
	2017	338.4m	121.9m	1.2bn	19.9bn	
EASTERN AFRICA 		2016	168.2m	65.6m	773.9m	11.9bn
	Year-on-year growth, %		13.6	11.6	12.5	10.5
	2017	191.0m	73.2m	870.8m	13.2bn	
CENTRAL AFRICA 		2016	23.6m	5.9m	33.5m	742.1m
	Year-on-year growth, %		39.8	64.1	88.3	72.6
	2017	32.9m	9.8m	63.2m	1.3bn	
SOUTHERN AFRICA 		2016	7.7m	2.2m	8.7m	104.7m
	Year-on-year growth, %		29.4	20.1	20.9	17.9
	2017	10.0m	2.7m	10.5m	123.4m	
WESTERN AFRICA 		2016	86.4m	29.4m	165.2m	4.6bn
	Year-on-year growth, %		20.9	23.5	28.3	15.2
	2017	104.5m	36.2m	211.9m	5.3bn	

LEVER 1 INCREASING CUSTOMER ACTIVITY RATES

Account activity remains a challenge, but the industry average can mislead. A growing number of providers are enjoying activity rates above 50 per cent.

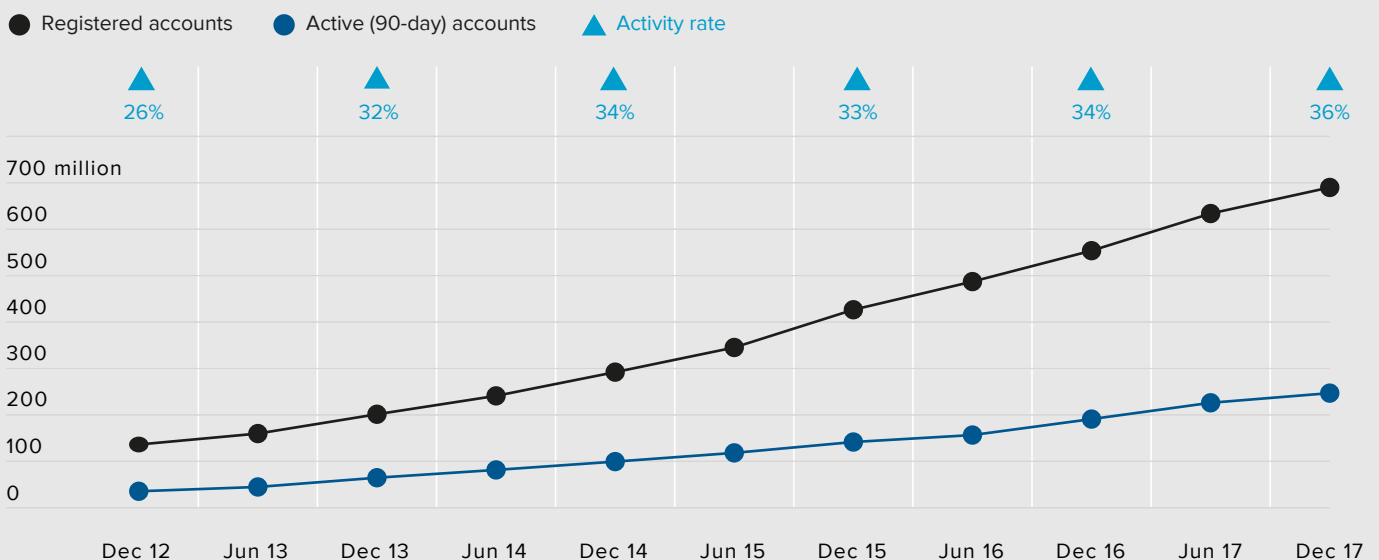
Our analysis shows that deployments with the highest activity rates have significantly higher than average ARPU.¹⁴ Globally, activity rates have flattened over the last three years (see **Figure 4**) with three out of 10 mobile money customers transacting in the last 90 days. Have customer activity rates plateaued? Is 36 per cent activity the best a mobile money provider can expect?

A closer look at the data reveals a more nuanced story: there is significant variation among providers, and a growing number of mobile money services are achieving activity rates of well over 50 per cent (see **Figure 5**). Twenty per cent of providers saw more than half of their customer base transacting regularly in 2017. Interestingly, several mobile money providers

have managed to reach customer activity levels comparable to banks in developed countries and to digital wallets in China,¹⁵ suggesting that mobile money can fully serve the needs of previously unbanked or underserved customers in developing economies.

Providers saw their activity rates move in the right direction. Although **Figure 5** appears to show a small drop in the percentage of deployments in the 70+ per cent activity range, this is because only providers operational in both 2012 and 2017 were considered for our analysis. In absolute terms, the number of providers enjoying account activity rates above 70 per cent has actually increased, thanks to the success of several providers that launched after 2012.

FIGURE 4 GROWTH OF REGISTERED AND ACTIVE MOBILE MONEY ACCOUNTS

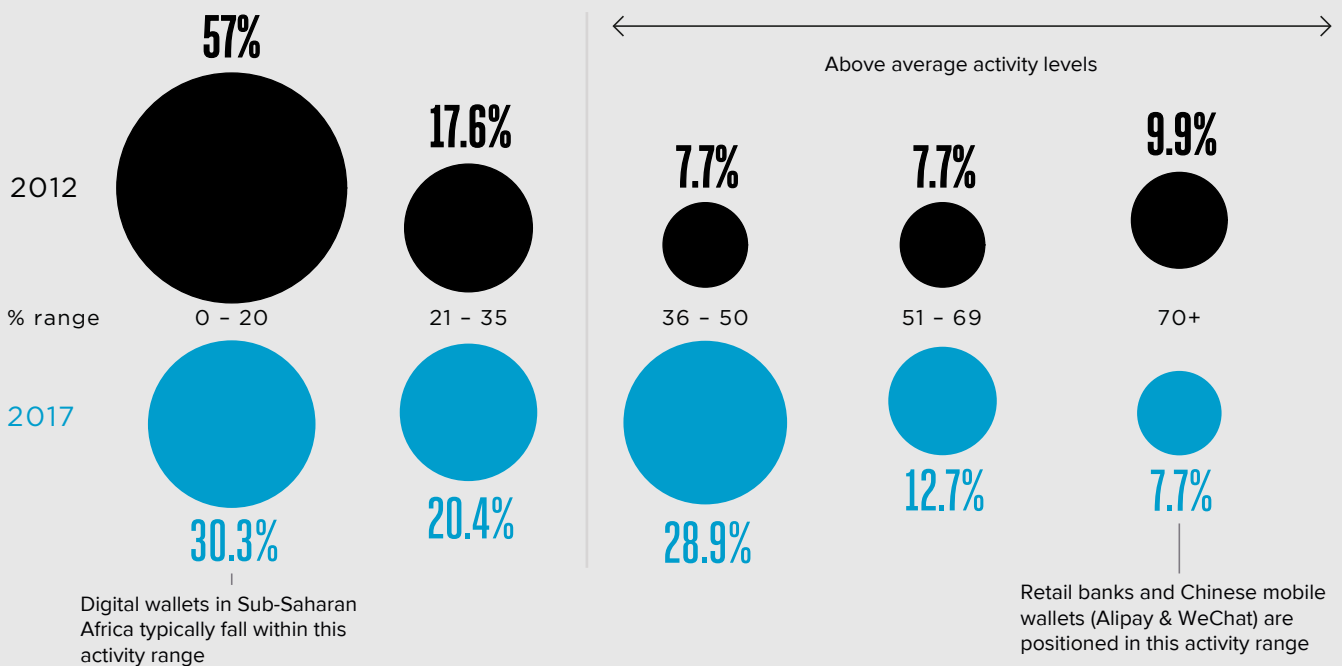


While there is no strict formula for success, deployments with activity rates of 70 per cent or more share a few things in common:

- A strong distribution network.** Mobile money services with the highest activity rates have, on average, 1.3 active agents per 1,000 adults compared to 0.9 active agents for deployments with average activity rates, and 0.4 active agents for deployments with less than 15 per cent activity rates. The distribution networks of these providers are spread out, allowing them to reach more rural customers.
- Enabling mobile money regulation.**¹⁶ Mobile money services without enabling regulation have activity rates 30 per cent lower on average than those with an enabling regulatory¹⁷ environment. Non-enabling regulation can stifle investment, limit the rollout of new services, and raise costs for consumers, all of which can negatively affect activity rates.
- An account-based business model versus an over-the-counter (OTC) model.**¹⁸ Deployments that primarily offer OTC services have activity rates of around 23 per cent. While OTC services may address the immediate needs of customers, they do not encourage more transactions or drive customer stickiness.

FIGURE 5 A DETAILED LOOK AT CUSTOMER ACTIVITY EVOLUTION

Percentage of mobile money providers falling in each activity rate bracket



14 ARPU stands for average revenue per user.

15 Source: Expert interviews

16 GSMA (2016). "Success factors for mobile money services: A quantitative assessment of success factors".

17 For a full definition of an enabling regulatory approach for mobile money, please consult gsma.com/sotir-appendix

18 A transaction is considered OTC when it is conducted through an agent's account on behalf of a customer

INDUSTRY SPOTLIGHTS

DRIVING GROWTH IN WESTERN AFRICA – MTN GHANA

In just four years, MTN Ghana has experienced exponential growth in mobile money account activity; growth that was accelerated by the introduction of the E-Money Issuers Guidelines by the Bank of Ghana in July 2015.

From the end of June 2012 to the end of June 2017, registered accounts increased five-fold from two million to 10 million accounts. Active 90-day¹⁹ accounts increased 11-fold as a result of activity rates growing from seven per cent to over 70 per cent.

Behind this growth was an understanding that an increase in registered customers does not necessarily translate into more customer activity. With this in mind, MTN Ghana used five key strategies while maintaining high registration levels:

Education An early and continued focus on ensuring every customer was shown how to conduct a transaction when registering and then conducted one on their own in the presence of an agent.

Customer and agent incentives Customers were monitored and incentivised to continue transacting via mobile money with frequent public holiday promotions (e.g. over Independence Day). For agents, incentives tied to customer activity enticed

them to encourage customer transactions. For example, agents received remuneration for the second and third transaction a new customer made within their first month of registering.

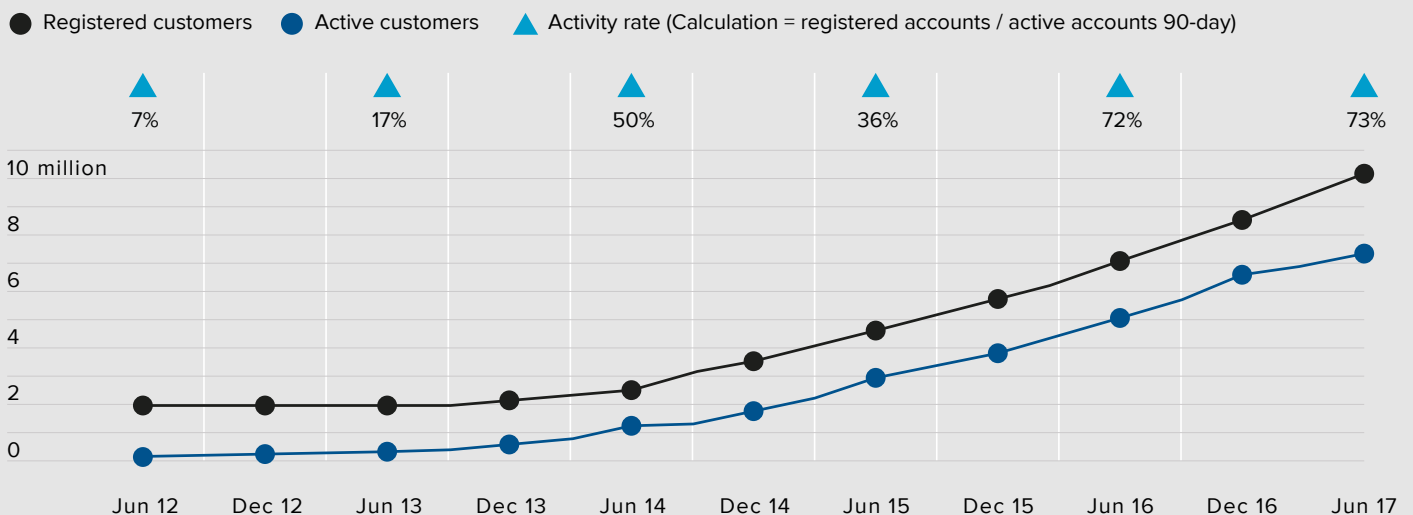
Increased engagement Door-to-door information sharing and use of community activators who spread awareness of the potential benefits of mobile money.

Immediate mobile money registration When a customer registers as an MTN Ghana customer, they are instantaneously registered as an MTN Ghana mobile money customer.

Increased investment For example, proactive investment in agent visibility, training and increasing the number of agents in the field.

Building partnerships with banks, merchants (e.g. satellite TV and utility providers), small and medium-sized enterprises (SMEs) and microfinance institutions (MFIs) was also critical to MTN Ghana's success, and would not have been possible without CEO and senior-level buy-in and support. Additionally, customers are responding to the opportunity to earn interest by keeping more funds in their mobile money accounts and performing more digital transactions.

FIGURE 6 MTN GHANA CUSTOMER GROWTH



DIGICEL HAITI MONCASH – A TURNAROUND STORY

In 2015, four years after its initial launch, Digicel Haiti relaunched and rebranded its mobile money service, changing the name from TchoTcho to MonCash.

By focusing on P2P as a core product, offering targeted customer education, promoting agents as partners, and building stronger mobile money teams, Digicel has seen tremendous growth.

Between July 2015 and July 2017, the service grew significantly:

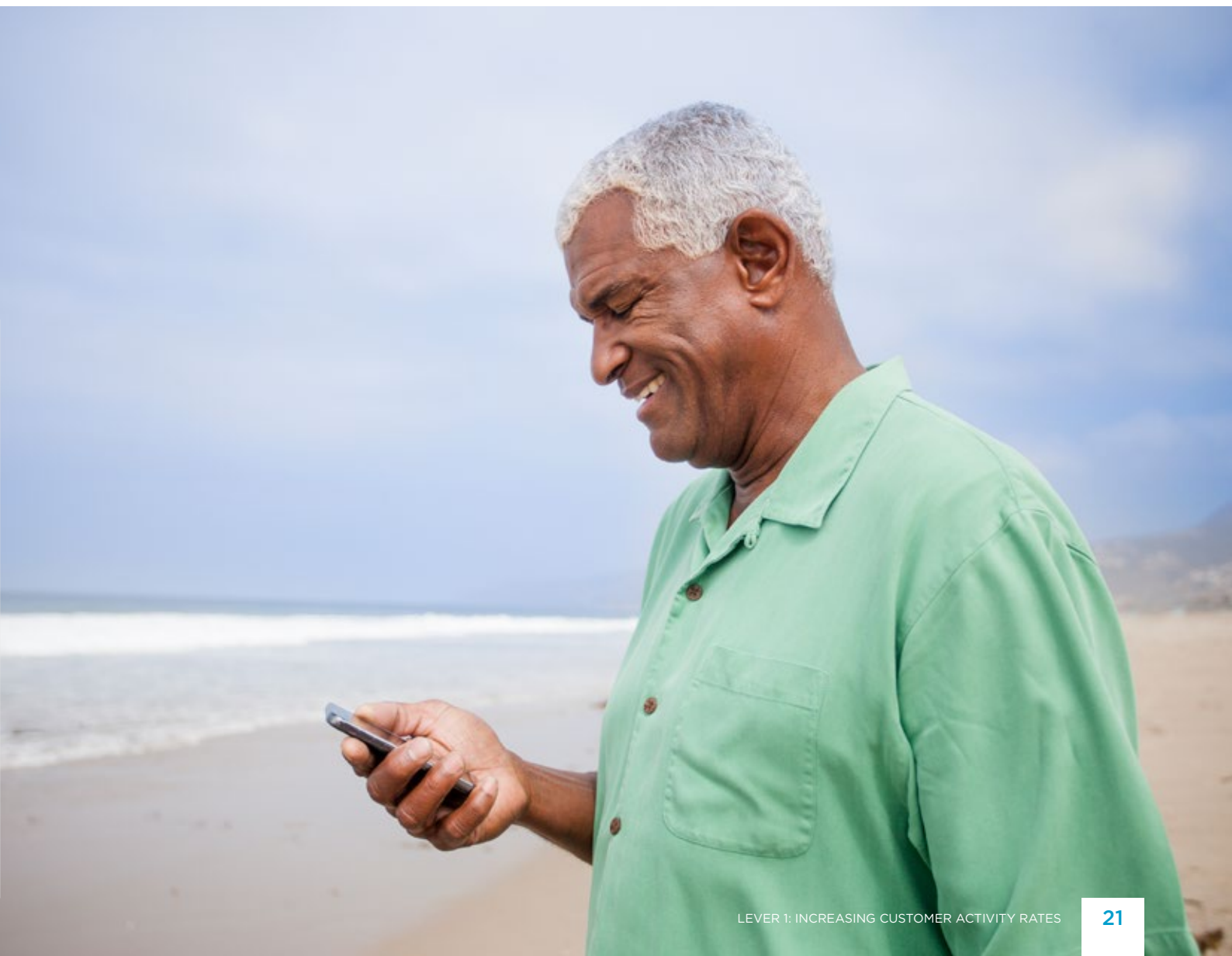
- The active 90-day mobile money account base rose from 83,000 to 795,000, an increase of 860 per cent.

- Agent activity rate rose from 29 per cent, and 93 per cent.
- The value of mobile money transactions increased by 950 per cent and volumes increased by over 2,000 per cent.

The Digicel Haiti MonCash turnaround story shows that mobile money can succeed in Latin America and the Caribbean, when a targeted and coordinated approach to fundamentals is applied.²⁰

19 The number of customer accounts that have been used to perform at least one P2P payment, bill payment, bulk payment, cash-in to account or cash-out from account within 90 days.

20 Novais, T. (2017). "Digicel Haiti MonCash: A turnaround story". GSMA.



LEVER 2 SHIFTING FROM A CASH ECONOMY TO A DIGITAL ECOSYSTEM

Since 2012, the mobile money industry has seen a high level of digitisation. This means that a larger proportion of money entering and leaving the ecosystem is doing so in digital form, rather than through a cash conversion.

Use cases such as bulk disbursements, bill payments and bank-to-mobile transactions have driven this change. In the month of December 2017, \$12.6 billion entered the global mobile money ecosystem, 75.4 per cent of which was through agent cash-ins. This marked a drop from approximately 88 per cent in 2012 (see **Figure 7**), as higher numbers of bank-to-mobile transactions and bulk disbursements have played an especially important role in reducing the proportion of cash-ins. It has also improved provider revenue, as the fees agents receive for cashing in a customer are typically subsidised by the provider, whereas there is no such commission for transactions that originate in digital form.

Customers are making more digital transactions – around 74 per cent of outgoing transactions in 2017 were cash-outs compared to more than 81 per cent in 2012. Consistent with this, the value of digital funds circulating within the mobile money ecosystem has increased by 22 per cent or \$1.5 billion in the last 12 months. There is still some way to go in reducing the number of cash-outs customers perform, but the latest results suggest this trend is moving steadily in the right direction.

The shift from cash to digital delivers widespread benefits up and down the value chain. For customers, mobile money provides a safer, more efficient and more convenient payment option than cash, saving travel time and costs and reducing the risk of theft. A recent study in Uganda by Digital Impact Awards Africa²¹ revealed that over a three-month period, each of

the five million regular users of mobile financial services saved at least 12 productive hours that would otherwise have been spent travelling to a financial institution and dealing with traditional transaction and payment methods.

Mobile money also makes good business sense. Shifting to digital salary payments saves time and costs for both employers and employees. For similar reasons, governments are switching from cash to digital. In Kenya, more than 250 government services are now available digitally through the country's e-government platform, e-Citizen.²² Over 90 per cent of all digital payments on e-Citizen are made through mobile money.

This has significantly streamlined the collection process: **it now takes just one financial day to complete collections, settlement and reporting, down from six months before 2014.**

The shift from cash to digital payments has also led to an upsurge in revenue collection and improved operations for government ministries, departments and agencies. After digitising all its services through the e-Citizen platform, Kenya's National Transportation Safety Authority doubled revenue collection between July 2015 and October 2016, from an average of \$1.1 million to \$2 million per month. This has translated into additional cost savings of approximately \$18.2 million between 2014 and May 2016 thanks to the growth of voluntary applications by citizens to services like public driving tests and licenses.

The role of merchant payments and SMEs in digitising the ecosystem

Merchant payment transactions, one of the most complex use cases in mobile money, reached \$722 million per month in December 2017, up 14 per cent year-on-year. The spread of merchant payment solutions represents an opportunity for providers, small and medium-sized enterprises (SMEs), banks and customers alike, because it is a daily use case. Forty-nine per cent of mobile money providers participating in our global adoption survey cited enterprise solutions as one of their top three strategic priorities for 2018, and merchant payments were rated the highest product priority for 2018 by 60 per cent of respondents.

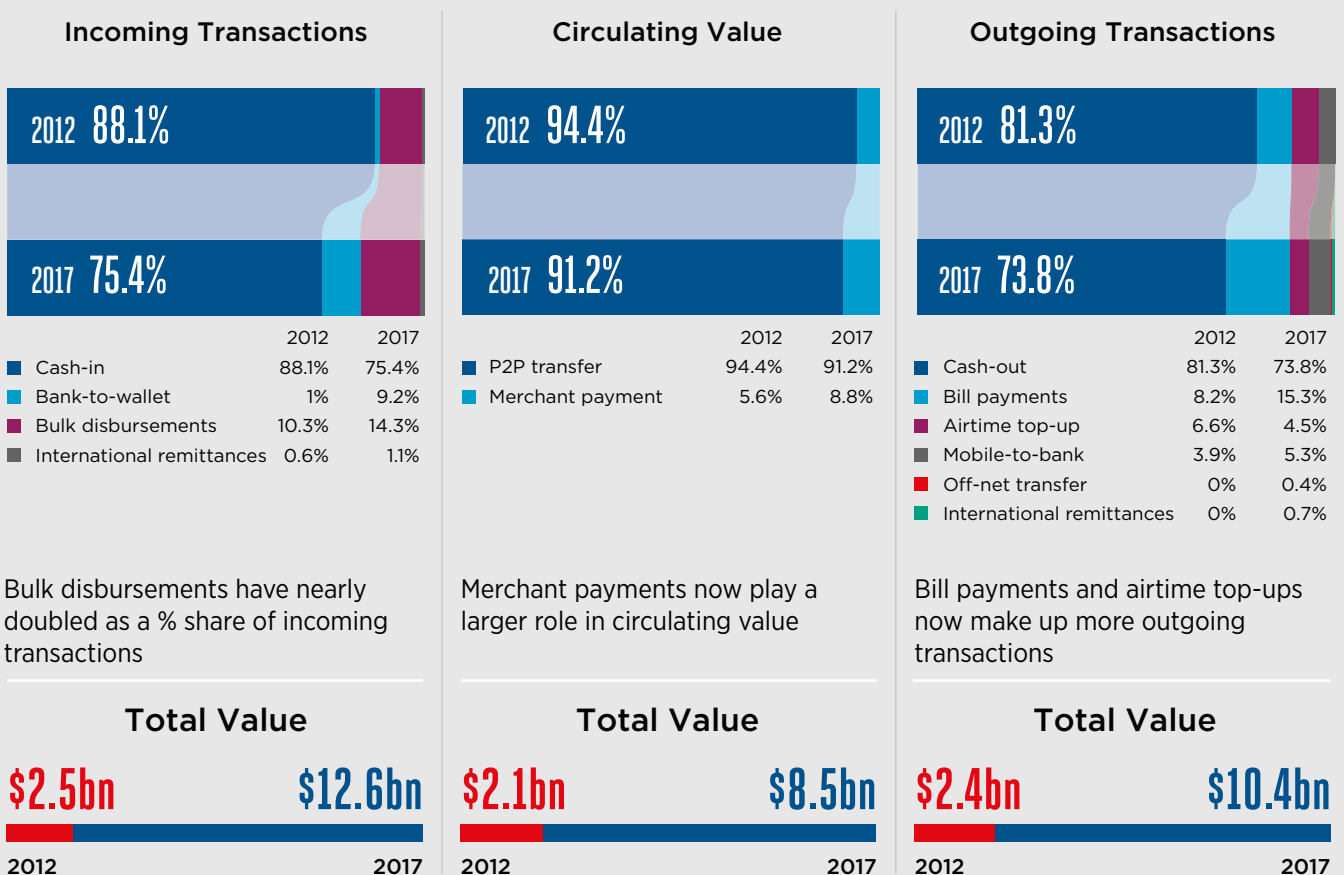
The number of merchants and enterprises that mobile money providers are connected to continues to rise, from 549,000 in September 2016 to over 618,000 in June 2017. However, the low activity rates of these merchants underscores the need for an enhanced value proposition. A set of functionalities for collections, salary payments

and bank-to-mobile payments, all of which are growing exponentially, could boost merchant activity by directly serving the financial needs of small businesses. Given the significant role SMEs play in the overall economic growth of emerging markets, increasing adoption of mobile financial services and digital payments among this segment could deliver broad societal benefits. According to McKinsey, SMEs are an important market segment because of their high payment volumes and ability to stimulate mobile money adoption by both customer and supplier networks.²³

Here, the digital circulation ratio is instructive. It measures how many times a single unit of currency is transacted before being cashed-out. This includes digital transactions a customer can perform once money has entered the mobile money ecosystem, including P2P transfers, bill payments, international remittances and more. The mobile money industry's digital circulation in 2017 was approximately 1.6x. In comparison, deployments that have successfully scaled merchant payments have a ratio close to four.

FIGURE 7 AN OVERVIEW OF THE MOBILE MONEY ECOSYSTEM

December 2012 vs. December 2017. Breakdown of transactions per average customer



INDUSTRY SPOTLIGHTS

LOW PRICING AND A SEAMLESS EXPERIENCE ARE KEY TO THE GROWTH OF MERCHANT PAYMENTS

As mobile money providers target merchant payments, the industry is moving to lower pricing and to increase the number of channels to facilitate a seamless payment experience. Providers have been lowering fees paid by merchants and those paid by customers transacting with a merchant.

Even Safaricom in Kenya reduced its merchant discount rate from one per cent to 0.5 per cent. In 2017, Safaricom also launched M-Pesa 1Tap, which enables customers to pay via NFC technology using a card, phone sticker or wristband device connected to their M-Pesa account.²⁴

MOBILE MONEY AS A PAYMENT PLATFORM

The GSMA Ecosystem Accelerator

The GSMA Ecosystem Accelerator programme aims to build synergies between start-ups and mobile operators, with the goal of scaling innovative and sustainable mobile services in emerging markets. In the second round of its Innovation Fund, the Ecosystem Accelerator is funding several start-ups that recognise the advantages of working with mobile money providers, including:

EdgePoint (Jamii Africa), Tanzania Jamii is a mobile management platform for health insurance policies that performs the administrative functions of an insurer, while providing access to low-cost micro health insurance policies for micro, small and medium enterprises (MSMEs), in partnership with Vodacom Tanzania. Payments to and from the insurance subscribers are done via mobile money.

Ensibuuko, Uganda Ensibuuko uses mobile money and the cloud to help Savings and Credit Cooperatives (SACCOs) in Uganda mobilise and manage savings to offer credit efficiently. Its customised software, MOBIS, enables SACCOs to gain better insights from their data, manage transactions and credit efficiently, and make data-driven decisions.

MaTontine, Senegal MaTontine offers a mobile-based automated platform for informal rotating savings circles called “tontines” allowing users to build credit scores over time. This facilitates access to other financial services, such as small loans and insurance where members can make and receive payments to and from the platform using mobile money

LipaMobile, Uganda LipaMobile’s mSomesa service

is an integrated cashless platform for parents, school administrators and school canteen vendors and suppliers to pay for school fees, supplies and services. These payments can be made using mobile money.

SUDPAY, Senegal TTS TOWN is a solution developed by Sudpay to allow municipalities to automate, and later digitise, through mobile money, the collection of local taxes from MSMEs to reduce fraud and improve collection rates.

Mobile Money Hackathon

The proliferation of the GSMA’s Mobile Money API is demonstrating how streamlined technical integrations have the power to support the growth of new digital services that leverage mobile money payments. At the GSMA’s Mobile Money Hackathon, held in Karachi, Pakistan in October 2017, 14 teams with over 70 participants built solutions using the GSMA Mobile Money APIs. These APIs were developed by the GSMA in consultation with a range of stakeholders to support the spread of modern APIs across the mobile money sector, accelerating connections between providers and third parties.

The array of innovative solutions presented at the October hackathon included on-demand video doctor services, digitised parking fine payments, doorstep cash deposits via app-requested agents and flight payments through mobile money instalments. The hackathon winners connected to Telenor and JazzCash via the GSMA APIs to facilitate the payment of extracurricular and lunch fees via mobile money.²⁵

21 See: “Mobile money users save 19,329,887 million hours a month: Digital Impact Awards Africa study.”

22 Wasunna, N. and Frydrych, J. (2017). *Person-to-government (P2G) payment digitization: Lessons from Kenya*. GSMA.

23 McKinsey Global Institute. (2014). “Sub-Saharan Africa: A major potential revenue opportunity for digital payments.”

24 See: kenyanwallstreet.com/safaricom-lowers-merchants-fee-0-5-m-pesa-one-tap-platform

25 Ryan, M. (2017). “The Mobile Money Hackathon is coming to Karachi”. GSMA.



LEVER 3 DECREASING THE NET COST OF THE AGENT NETWORK

The agent network remains a distinguishing asset of mobile operators. It is also the largest operating cost for the business. Digitisation is slowly helping to address this.

Although digital inflows and outflows are increasing, they have not cannibalised cash-in and cash-out transactions, which are also still on the rise. In fact, the combined values of cash-in and cash-out transactions increased from USD 4.2 billion in December 2012 to over 17.2 billion per month in December 2017, supported by an agent distribution network that expanded from 538,000 active agents in December 2012 to nearly 2.9 million in December 2017 (see Figure 8).

With agents still serving as the backbone of mobile money, the cost structure of providers continues to be driven by operational expenditures (OPEX) like agent commissions, marketing and personnel. In 2016, mobile money providers reported that, on average, 68 per cent of their costs were OPEX. As the industry shifts to a more digital ecosystem model, mobile money providers have the opportunity to reduce the net cost of their distribution networks.

A large number of deployments saw high volumes of over the counter transactions last year, especially in Asia. OTC transactions, which involve an agent performing a transaction on behalf of a customer, may see faster uptake and usage in the early days, making them a valuable proposition for reaching poor customers at the periphery. However, our data shows that an average active mobile money account drives 2.3 times more revenues than an average over-the-counter (OTC) user. This illustrates how pure

OTC players risk missing out on the profitability of mobile money.

ACTIVE MOBILE
MONEY ACCOUNT
CUSTOMERS
GENERATE

2.3x

MORE REVENUE
THAN OVER-
THE-COUNTER
CUSTOMERS

In the last few years, a large number of mobile money providers have made the transition from OTC to digital a priority, supported by biometric SIM registration. Favourable regulation and government initiatives have been instrumental in removing barriers to account opening by allowing for the adoption of streamlined, technology-enabled know-your-customer (KYC) processes.

This has produced positive results. In South Asia, migration away from OTC transactions and a strong increase in account registrations have been driving mobile money usage. For example, in one South Asian country, 58 per cent of mobile money transactions were conducted through a mobile money account in June 2017, up from just 39 per cent one year earlier.

INDUSTRY SPOTLIGHT

LEVERAGING THE AGENT NETWORK TO PROMOTE DIGITAL PAYMENTS AND E-COMMERCE

In emerging markets, smartphone adoption and internet penetration are fuelling the expansion of e-commerce. However, over 70 per cent of e-commerce payments in these markets still involve cash-on-delivery payment processes, which are expensive, inefficient and time-consuming for both merchants and buyers. By leveraging their agent networks, mobile money providers can address two primary challenges of e-commerce providers: payment and delivery.

GSMA research in Southeast Asia and Western Africa shows that delivery is at the core of the online purchasing experience, but it is typically slow and inefficient. A poor address system in cities and lack of widespread, reliable delivery services are

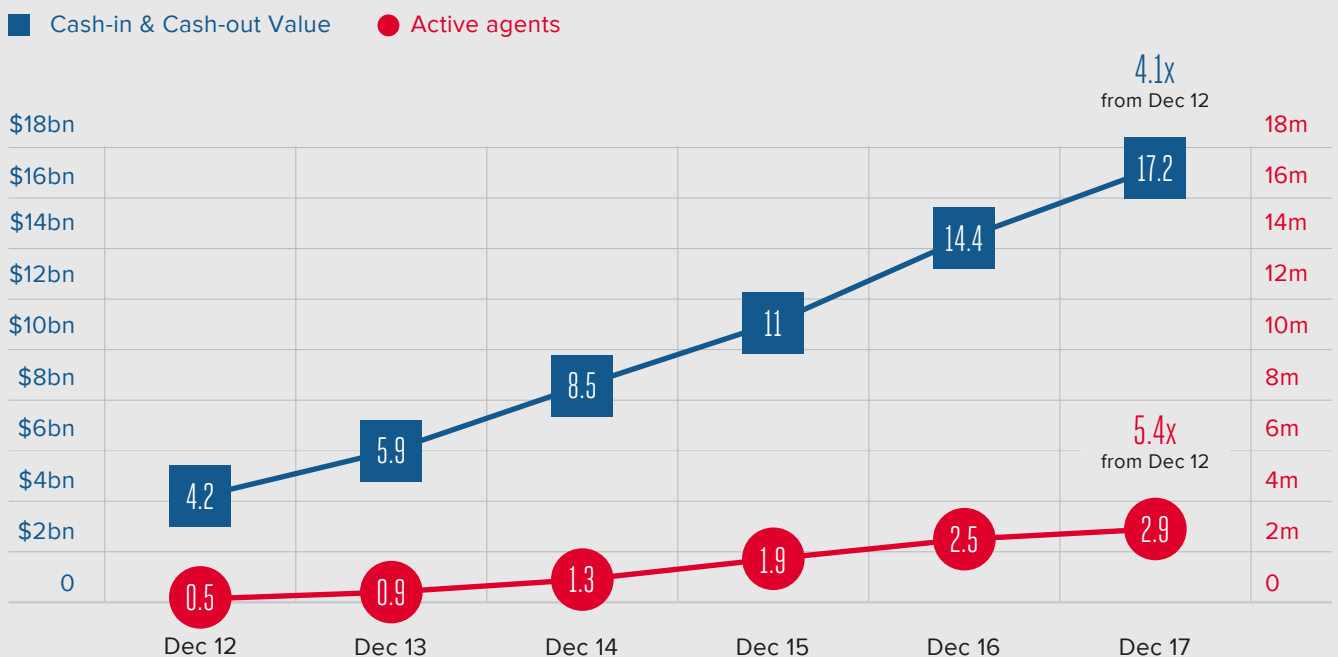
affecting customer satisfaction, as customers often have long waits for purchases to arrive and incur the burden of following up with sellers.

This becomes even more of a pain-point in rural areas where logistics for last-mile delivery are even less developed. Meanwhile, e-commerce providers receive most of their payments at pick-up points, which delays payment for suppliers and can leave sellers vulnerable when customers refuse to pay.

There is a clear opportunity here for mobile money providers to grow their digital payments businesses through partnerships with e-commerce providers that also leverage the mobile money agent network to address persistent logistics challenges.²⁶

26 Hasnain, S. and Pasti, F. (2017). Mobile money and e-commerce: Three areas of partnerships in Southeast Asia. GSMA.

FIGURE 8 GLOBAL GROWTH OF CASH-IN AND CASH-OUT VALUES AND ACTIVE AGENTS



LEVER 4 SUPPORTIVE POLICY AND REGULATION

Regulation calibrated to enable low-cost services for the financially excluded has been essential to the success of mobile money. As regulation becomes more complex, new policy frameworks must play a guiding role.

A 2016 study co-authored by the GSMA found that enabling regulation has a material influence on market outcomes, helping to drive mobile money adoption and to increase the volume of mobile money transactions being made.²⁷ Our analysis for this report has also shown that the most successful providers today overwhelmingly reside in markets in which regulation is enabling.

In 2017, 54 markets had enabling regulatory frameworks pertaining to mobile money, up from 52 in 2016. While the pace of core regulatory reform is slowing, this masks two important emerging trends: the extension of new areas of regulation to mobile money and the rapid spread of financial inclusion policies.

Core regulatory reforms have slowed, yet the emergence of new regulatory questions means that the notion of enabling regulation may need to be revisited. Supervisory instruments are evolving, as new types of providers and technology solutions are driving interest in regtech and regulatory sandboxes.²⁸

Dialogue between mobile money providers and regulators remains essential to ensure that these new tools are effective, accurate, and strike the right balance between cost and service provision.

New mobile money use cases have also prompted a re-examination of regulatory areas not traditionally considered part of

mobile money. For example, recognising the potential of mobile money in this area, Rwanda has broadened the scope of its domestic money transfer services regulation to include international transfers. A number of countries, such as Kenya, have also permitted non-banks to be directly regulated as stand-alone international remittance providers.

Some concerning trends have also emerged, most notably the spread of the taxation in Sub-Saharan Africa. As governments seek to shore up public revenues, the instinct to tax mobile money has sometimes reflected confusion about the difference between the value of transactions flowing through the mobile money platform and the fees earned by the provider. The two can differ by a factor of one hundred. GSMA research published in 2017 showed that mobile money in one country is now taxed at a higher excise duty rate than alcohol and cigarettes—a worrying sign for investors and those who would like to see the continued spread of low-cost financial services.

Going forward, a stronger focus on data regulation is likely. As providers integrate their platforms with a broad range of institutions, regulators are contemplating how to manage issues pertaining to data sharing between organisations, cross-border flows, security, analytics, privacy, and more. Moving money seamlessly from a mobile wallet to a bank account, or borrowing for emergency needs

27 GSMA (2016). Success factors for mobile money services: A quantitative assessment of success factors.

28 Regtech refers to solutions created to address regulatory challenges through technology. Regulatory sandboxes allow businesses to test innovative services, business models, and more, based on specially tailored rules designed by the regulator to facilitate such testing.

in a matter of seconds, have, for example, both required the exchange of customer data between companies. The results of this important debate will shape future business models, consumer protection, and the cost of financial services in many emerging markets.

Against this backdrop, the spread of national financial inclusion policies is encouraging. In 2017, five countries (Argentina, Belarus, Samoa, Uganda and Zambia) launched national financial inclusion strategies or financial sector strategies addressing financial inclusion.²⁹

Overall, 33 countries have national financial inclusion strategies or financial sector strategies addressing financial inclusion and many others are considering them. In part, this reflects the role played by organisations such as the Alliance for Financial Inclusion to encourage and support the development of policy frameworks and public commitments to policy objectives.

If properly resourced and implemented, policy goals can make an important difference

for the spread of mobile money. Importantly, as more regulators become involved in financial services, policy can help to ensure a coordinated approach, so that, for example, the trade-offs between taxation and investment are considered. Objectives relating to the financial inclusion of women, the promotion of digital literacy, and introduction of digital identity solutions, can also mobilise political will to address fundamentals that have slowed the spread of financial services in the past. For example, spurred by wider policy objectives, Nigeria (BVN) have both adopted biometric identification systems that allow citizens to easily register for formal financial services.

In short, as the growing community of financial inclusion stakeholders works to address new regulatory questions, achieving the policy end-game of vibrant, sustainable markets that advance inclusion must remain at the fore of every debate.

29 World Bank. (2017). Resource Center: Financial Inclusion Strategies.



CONCLUSION – WHAT'S NEXT?

The mobile money industry is growing like never before, reaching record numbers of customers with innovative services that are having a profound commercial and social impact in emerging markets.

But the future is complicated: industry players once celebrated as innovators are now seen as incumbents, as fintech and tech giants bring a new wave of disruption. The digital ecosystem is evolving, and providing services is no longer enough.

What's the next stage? Payments are the gateway to the digital economy for the underserved, and mobile money providers have the opportunity to provide a platform that opens access to key services. Tech giants in Asia have been particularly successful in creating platforms that improve customer experience by providing seamless access to a variety of use cases across different industry segments. Players like Alibaba, Tencent and Grab have grown their customer base exponentially by developing a strong core use case and expanding to a broader suite of services. Alibaba is not just an enormous e-commerce company; it is also a large asset manager, lender, payments company, B2B service and ride-hailing provider. Tencent made

similar advances, from a chat-service base to an integrated e-commerce, gaming and payment platform.³⁰

While mobile money providers may not currently have all of the in-house assets or enabling regulation required to provide customers with use cases beyond transactions, they can create a platform to facilitate this. Safaricom's M-Pesa exemplifies the innovative approach that mobile money providers are taking to developing payment platforms. In August 2017, Safaricom announced it would open an API portal,³¹ Daraja, for businesses to integrate their services with M-Pesa. The portal hosts a number of APIs, including business-to-business (B2B), business-to-consumer (B2C) and reversals, allowing a fast and simplified on-boarding process. Easy API integrations allow third parties to plug in, expanding the value of mobile money for new and existing customers. More use cases, in turn, support the broader process of cash digitisation.

30 Dietz, M, Lamerle, M, Mehta, A, Sengupta, J, Zhou, N. (2017). Remaking the bank for an ecosystem world. McKinsey & Company.

31 See: www.developer.safaricom.co.ke

Amidst this changing landscape, many traditional mobile money assets remain relevant. The persistence and scale of the cash economy in emerging markets means that complex distribution networks remain crucial for digital services to interface with physical lives. In a business that relies deeply on trust, the role of longstanding brands and the understanding of local contexts is integral to the engagement of people outside of the formal system. And as governments and regulators take a broader approach to digital financial services, providers and national authorities must continue to work in concert to strike a balance that ensures sustainable and responsible market growth.

Mobile money providers will need to leverage these assets as they adapt to a changing competitive environment and position themselves as the gateway to the digital economy.

The modernisation of integration technologies and concerted efforts to improve risk management practices are signs that this is already underway. Providers will increasingly also need to move at two speeds. Simultaneously serving feature phone and smartphone customers will require deft judgements about when to align and when to tailor an approach according to the device. Strong data analytics will be part of the solution, as insights are combined from different business lines and partnerships to understand how best to serve an individual customer or segment. A willingness to experiment with new innovations to reach large underserved populations is also likely to set certain providers apart from the pack.

These and many other trends explored above are underway today and set to intensify in the coming years, with defining implications for mobile money providers and for the digital lives of the millions they serve.

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