



# Appendix

## 2017 State of the Industry Report on Mobile Money

### Appendix 1: Methodology

In 2013, GSMA Mobile Money Programme started developing a statistical model to estimate mobile money indicators at the global, regional and country level which would allow us to fill gaps in participation in the annual global adoption survey and generate aggregate numbers for the State of the Industry reports.

Since then, the digital payments landscape has changed significantly, with different shaping forces such as Fintech players introducing a new wave of disruption and new mega markets such as India joining the ranks of markets with enabling regulatory framework<sup>1</sup>. Mobile money is a rapidly transforming industry and to better capture the drivers of mobile money adoption and usage, Mobile Money Programme entered into a partnership with GSMA Intelligence team to review and adjust the methodology used for developing mobile money estimates. This partnership enabled us to create a new proprietary modelling approach, which combines both GSMA Intelligence's analytical and telecoms expertise as well as Mobile Money Programme's industry knowledge.

### Methodology

The new dataset covers 21 metrics across the three main categories of mobile money accounts, mobile money agents and mobile money transactions for all providers that offer or have offered mobile money services<sup>2</sup>. Our new methodology combines multiple approaches to market sizing, following the below five main steps:

1. **Consolidation of industry data.** This step involved creating a pool of industry data from publicly available data from operator and regulator reports and other sources, to complement the data that the GSMA has been collecting via the [Annual Global Adoption Surveys](#). We created a comprehensive set of historical data reflecting the growth of the mobile money industry after reconciling this pool of data with our definitions.
2. **Country-clustering.** Countries were clustered based on fundamental conditions of mobile and banking adoption in each country, as well as criteria for mobile money success identified through a joint study with Harvard Business School<sup>3</sup>. The clusters were further shaped based on the Mobile Money Programme's market knowledge.

As a result, we clustered countries into four clusters, based on how compelling mobile money proposition is for that group of countries.

3. **Formulation of guiding principles.** We developed guiding principles to determine how a given metric is expected to evolve.

<sup>1</sup> [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/12/GSMA\\_The-business-case-for-payments-banks-in-India\\_2016-1.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/12/GSMA_The-business-case-for-payments-banks-in-India_2016-1.pdf)

<sup>2</sup> Metrics covered by mobile money estimates are: mobile money accounts ( registered accounts, active 90 days, active 30 days), mobile money agents ( registered agents, active agents), mobile money transactions ( volume and value of mobile money transactions processed via the followings products: airtime top-ups, bill payments, bulk disbursements, cash-ins, cash-outs, international remittances, merchant payments and P2P transfers).

<sup>3</sup> [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/11/GSMA\\_Success-factors-for-mobile-money-services.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/11/GSMA_Success-factors-for-mobile-money-services.pdf)



4. **Modelling.** The fourth step is about producing the country estimates, which are built ‘bottom-up’ i.e. starting at the service-level. Each country has a model (in Microsoft Excel) prepared using compiled industry data (from step 1 of methodology) and for each service in the market (updated from the Mobile Money Deployment Tracker).  
Modelling assumptions to estimate missing historical data and to produce the forecast, are informed by the guiding principles, the latest desk research and GSMA Mobile Money Programme’s market knowledge.
5. **Validation.** Once the modelling is complete, we review the output at service, country and global level. At this step, we identify any outliers and check for further explanation. This validation process requires a close collaboration between GSMA Intelligence and Mobile Money Programme’s market experts.

## Appendix 3: Glossary

Certain definitions were taken from the Guideline Note on Mobile Financial Services: Basic Terminology, by the AFI Mobile Financial Services Working Group

<b>Agent outlet</b>	<p>In the case of mobile money, an agent outlet is a location where one or several provider-issued tills are used to conduct transactions for clients. 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. In some markets, an agent outlet can also operate tills issued by several providers; these are generally referred to as shared or non-exclusive outlets. 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.</p> <p>An active agent outlet is an agent outlet where any of the tills were used to facilitate at least one transaction within the last 30 days.</p> <p>Agent tills are provider-issued “lines”, which can be SIM cards or POS machines, authorised and used to facilitate mobile money transactions.</p>
<b>Airtime top-up</b>	Purchase of airtime via mobile money, funded from a mobile money account
<b>Anti-money laundering/ combating the financing of terrorism (AML/CFT)</b>	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).
<b>Application programming interface (API)</b>	For the mobile money industry, an application programming interface is the set of design principles, objects, and behaviours for software developers to enable interactions between mobile money platforms and vendors.
<b>Bank account-to-mobile money account transfer</b>	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 transfers.
<b>Bill payment</b>	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.
<b>Bulk disbursement</b>	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 an employee’s mobile money account or payments



	made by a government to a recipient's mobile money account, or payments made by development organisations to beneficiaries.
<b>Cash-in</b>	The process by which a customer credits their mobile money 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
<b>Cash-out</b>	The process by which a customer deducts cash from their 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.
<b>Country corridor</b>	For international remittances, a country corridor is a unique combination of a sending country and a receiving country. For example, Kenya-to-Tanzania and Tanzania-to-Kenya represents two distinct country corridors.
<b>Credit enabled by mobile money</b>	<p>Credit enabled by mobile money uses the mobile phone to provide microcredit to customers. The GSMA Mobile Money team tracks credit services enabled by mobile money which meet the following criteria:</p> <ul style="list-style-type: none"> <li>• To use the service, the customer must have a mobile money account.</li> <li>• The service allows subscribers to borrow a certain amount of money that they agree to repay within a specified period of time.</li> <li>• Customers can be mobile money agents, mobile money users, or merchants accepting mobile money.</li> <li>• The loan must be disbursed and repaid electronically directly to/from the mobile money account. Services which offer collateralised lease-to-own assets, such as solar home systems, are not included.</li> <li>• The credit service should be technically integrated with the mobile money account and rely heavily on mobile technology throughout the customer journey.</li> <li>• Services where the mobile phone is used as just another channel to access a traditional credit product should not be included.</li> <li>• The service must be available for customers on any types of mobile device (including smartphones apps).</li> </ul>
<b>E-money</b>	Short for "electronic money," e-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 per cent of the value stored in their accounts. That said, bank deposits can earn interest, while e-money traditionally cannot.
<b>Enabling regulation</b>	<p>An 'enabling regulatory approach' for mobile money is one in which the rules established by the regulator:</p> <ul style="list-style-type: none"> <li>• Permit non-banks to issue electronic money (or equivalent) by allowing them to: <ul style="list-style-type: none"> <li>- be licensed directly, OR</li> <li>- set up a subsidiary for this business, OR</li> <li>- apply for a payments bank (or equivalent) licence, OR</li> <li>- 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,</li> </ul> </li> <li>• AND imposes initial and ongoing capital requirements that are proportional to the risks of the e-money business,</li> <li>• AND permits them to use agents for cash-in and cash-out operations,</li> <li>• AND does not prescribe the implementation of specific interoperability models without allowing for a market-led approach..</li> </ul>
<b>Escrow (trust) account</b>	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.
<b>Float</b>	The balance of e-money, 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.
<b>Government-to-person (G2P) payment</b>	A payment by a government to a person's mobile money account.
<b>Informal financial services</b>	Financial services offered by unregulated entities. Examples of informal financial services are 'susu' collections in Ghana, 'loan shark' lending, savings groups, etc.



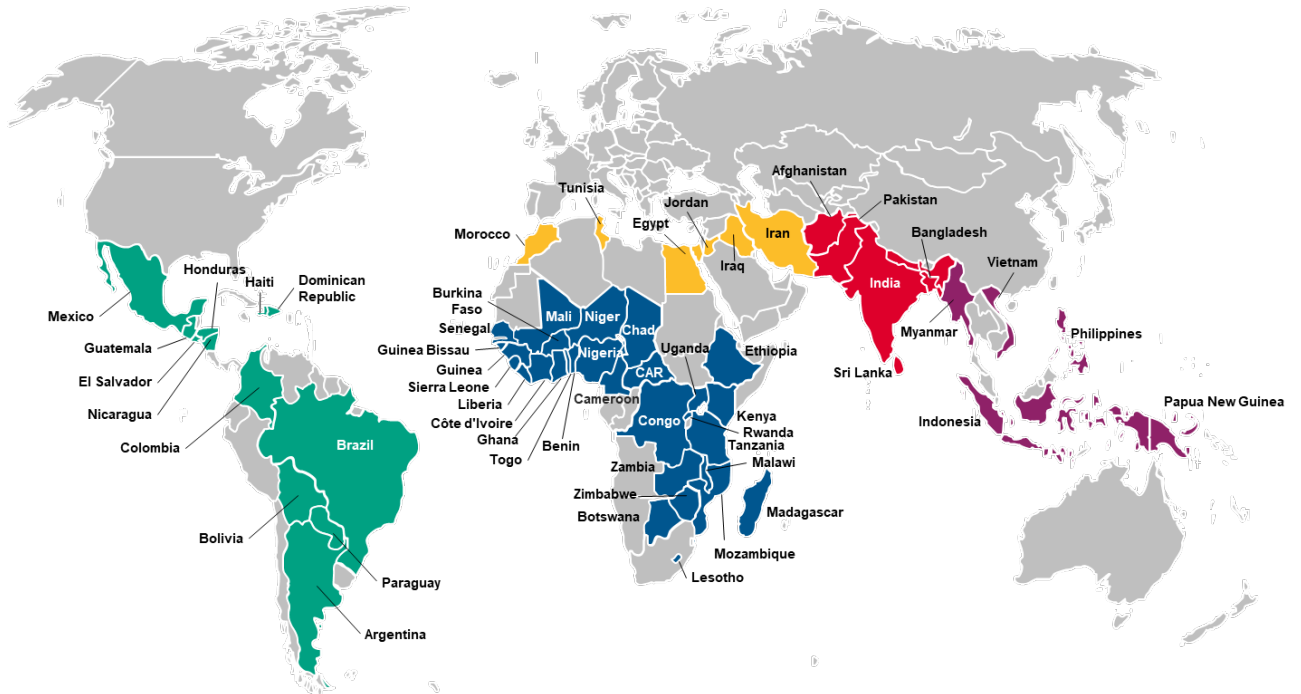


<b>International remittance enabled by mobile money</b>	Cross-border fund transfer from one person to another person. This transaction can be a direct mobile money remittance, or can be completed through the use of an intermediary organisation such as Western Union.
<b>Interoperability</b>	The ability 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, mobile operators in 15 markets have interoperated their mobile money schemes.
<b>Insurance enabled by mobile money</b>	Insurance enabled by mobile money uses the mobile phone to provide microinsurance services. GSMA Mobile Money tracks insurance products enabled by mobile money which meet the following criteria: <ul style="list-style-type: none"> <li>• To use the service, the customer must have a mobile money account.</li> <li>• The service must allow customers to manage risks by providing a guarantee of compensation for specified loss, damage, illness or death.</li> <li>• The customers should be able to pay the premium using the mobile account, and receive the claim using the mobile account (unless the beneficiary mobile money account has exceeded the limit, or the beneficiary does not have a mobile money account).</li> <li>• The insurance product should be technically integrated with the mobile money account, and rely heavily on mobile technology throughout the customer journey.</li> <li>• Services where the mobile phone is just another channel for the clients of an insurance company to access a traditional insurance product should not be included.</li> <li>• The service must offer customers an interface for managing the insurance product for customers that is available on mobile devices (SMS, USSD, call centre, smartphone app).</li> </ul>
<b>Know-Your-Customer (KYC)</b>	Financial institutions and regulated financial services providers are obligated by regulation to perform due diligence 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.
<b>Liquidity management</b>	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).
<b>Merchant payment</b>	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.
<b>Mobile financial services (MFS)</b>	The use of a mobile phone to access financial services and execute financial transactions. Mobile money, in addition to insurance, credit, and savings enabled by mobile money are mobile financial services
<b>Mobile insurance</b>	Insurance enabled by mobile, broadly speaking. This includes insurance enabled by mobile money, as well as insurance that leverages airtime channels for premium payments.
<b>Mobile Money</b>	In 2016, we revised our definition of mobile money. Now, a service is considered a mobile money service if it meets the following criteria: <ul style="list-style-type: none"> <li>• A mobile money service includes transferring money and making payments using the mobile phone.</li> <li>• The service must be available to the unbanked, e.g. people who do not have access to a formal account at a financial institution.</li> <li>• The services must offer at least one of the following products: <ul style="list-style-type: none"> <li>• Domestic or international transfer;</li> <li>• Mobile payment, including bill payment, bulk disbursement, and merchant payment; or</li> <li>• Storage of value.</li> </ul> </li> <li>• The service must offer an interface for initiating transactions for agents and/or customers that is available on mobile devices.</li> <li>• The service must offer a network of physical transactional points outside bank branches and ATMs that make the service widely accessible to everyone.</li> <li>• Mobile banking services that offer the mobile phone as just another channel to access a traditional banking product are not included.</li> <li>• Payment services linked to a traditional banking product or credit card, such as Apple Pay and Google Wallet, are not included.</li> </ul>
<b>Mobile money account</b>	An e-money account which is primarily accessed using a mobile phone and which 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 used to facilitate transactional services). An active mobile money account is a mobile money account which has been used to conduct at least one transaction during a certain period of time (usually 90 days or 30 days).
<b>Mobile money account-to -bank account transfer</b>	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 transfers.
<b>Mobile money ecosystem</b>	The mobile money ecosystem includes mobile money providers and all third-party organisations which can benefit from mobile money, either by using it as a payment mechanism or leveraging mobile money accounts. The mobile money ecosystem facilitates transactions from different sectors such as retail, utilities, healthcare, education, agriculture and transport, as well as insurance, savings, and credit.
<b>Money transfer operator (MTO)</b>	A company which has a government-issued licence to provide telecommunications services through mobile devices
<b>Mobile network operator (MNO)</b>	A company which has a government-issued licence to provide money transfer services.
<b>Off-net transfer</b>	Transfers which 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".
<b>Over-the-counter (OTC) services</b>	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.
<b>Person-to-person (P2P) transfer</b>	A mobile money transfer made from one person to another person.
<b>Platform</b>	The hardware and software that enables the provision of a mobile money service.
<b>Point of sale (POS)</b>	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, for example, a card reader.
<b>Regulator</b>	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.
<b>Savings enabled by mobile money</b>	Savings enabled by mobile money uses the mobile phone to provide dedicated savings facilities. GSMA Mobile Money tracks savings services enabled by mobile money which meet the following criteria: <ul style="list-style-type: none"> <li>• To use the service, the customer must have a mobile money account.</li> <li>• The savings service allows subscribers to save money in a dedicated account that provides principal security and in some cases, an interest rate.</li> <li>• Also included in this definition are: <ul style="list-style-type: none"> <li>• Mobile investment uses the mobile phone to provide investment facilities (e.g. in government bonds).</li> <li>• Mobile pension uses the mobile phone to provide pension savings facilities.</li> </ul> </li> <li>• The customer should be able to store value electronically in the savings account, and be able to transfer funds to/from a mobile money account.</li> <li>• The savings or investment product should be integrated technically with the mobile money account, and rely heavily on mobile technology throughout the customer journey.</li> <li>• Services where the mobile phone is just another channel to access a traditional savings accounts are not be included.</li> <li>• The service must be available for customers on any types of mobile device (including smartphones).</li> </ul>
<b>Unbanked</b>	Customers who do not have a bank account or transaction account at a formal financial institution.
<b>Underbanked</b>	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.
<b>Unregistered users</b>	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.
<b>Voucher</b>	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.

## Appendix 4: 2017 Survey participants



### Key

East Asia & Pacific	Middle East & North Africa
Latin America & the Caribbean	South Asia
	Sub-Saharan Africa

### EAST ASIA & PACIFIC

**Indonesia**  
XL (Axiata)  
**Myanmar**  
Telenor

**Papua New Guinea**  
NationWide MicroBank  
**Philippines**  
Globe Telecom

**Vietnam**  
Viettel Telecom

### LATIN AMERICA AND THE CARIBBEAN

**Argentina**  
Grupo Sicom  
**Bolivia**  
Bilateral Movil  
Tigo (Millicom)  
**Brazil**  
Vivo (Telefónica)  
**Colombia**  
DaviPlata  
**Dominican Republic**  
Claro

**El Salvador**  
Tigo (Millicom)  
**Guatemala**  
Tigo (Millicom)  
**Haiti**  
Digicel  
**Honduras**  
Tigo (Millicom)  
**Mexico**  
Telcel (América Móvil)

**Nicaragua**  
Banpro Grupo Promerica  
**Paraguay**  
Claro (América Móvil)  
Personal (Telecom Argentina)  
Tigo (Millicom)



## MIDDLE EAST AND NORTH AFRICA

<b>Egypt</b> Mobinil (ECMS)	<b>Jordan</b> Umniah Zain	<b>Tunisia</b> Ooredoo (NMTC) Orange
<b>Iran</b> Jiring Co.	<b>Morocco</b> Al Barid Bank	Tunisie Télécom
<b>Iraq</b> Zain		

## SOUTH ASIA

<b>Afghanistan</b> Afghan Wireless (AWCC) Roshan (TDCA)	<b>India</b> Eko <b>Nepal</b> FonePay	<b>Sri Lanka</b> Dialog (Axiata) Mobitel (Sri Lanka Telecom)
<b>Bangladesh</b> bKash Grameenphone (Telenor) Robi (Axiata)	<b>Pakistan</b> Jazz (Global Telecom) Telenor UBL Bank	

## SUB-SAHARAN AFRICA

<b>Benin</b> MTN	<b>Guinea-Bissau</b> Orange (Sonatel)	<b>Rwanda</b> MobiCash
<b>Botswana</b> Orange	<b>Kenya</b> Airtel (Bharti Airtel) Safaricom	MTN Tigo (Millicom)
<b>Burkina Faso</b> Orange	<b>Lesotho</b> Vodacom (Vodafone)	<b>Senegal</b> Orange (Sonatel) Tigo (Millicom)
<b>Cameroon</b> MTN	<b>Liberia</b> Lonestar (MTN) Orange	<b>Sierra Leone</b> Airtel (Bharti Airtel)
<b>Central African Republic</b> Orange	<b>Madagascar</b> Orange	<b>Tanzania</b> Tigo (Millicom) Viettel (Halotel) Vodacom (Vodafone)
<b>Chad</b> Tigo (Millicom)	<b>Malawi</b> Airtel (Bharti Airtel) TNM	<b>Togo</b> Moov (Etisalat)
<b>Congo, DR</b> Airtel (Bharti Airtel) Orange	<b>Mali</b> Orange (Sonatel)	<b>Uganda</b> EzeeMoney
<b>Côte d'Ivoire</b> MTN	<b>Mozambique</b> Vodacom (Vodafone) Zoona	MTN <b>Zambia</b> MTN
<b>Ethiopia</b> M-BIRR	<b>Niger</b> Orange	Zoona <b>Zimbabwe</b> NetOne
<b>Ghana</b> MTN Tigo (Millicom)	<b>Nigeria</b> Cellulant Ltd Diamond Bank Teasy Mobile	
<b>Guinea</b> Orange (Sonatel)		