The Mobile Money Regulatory Index

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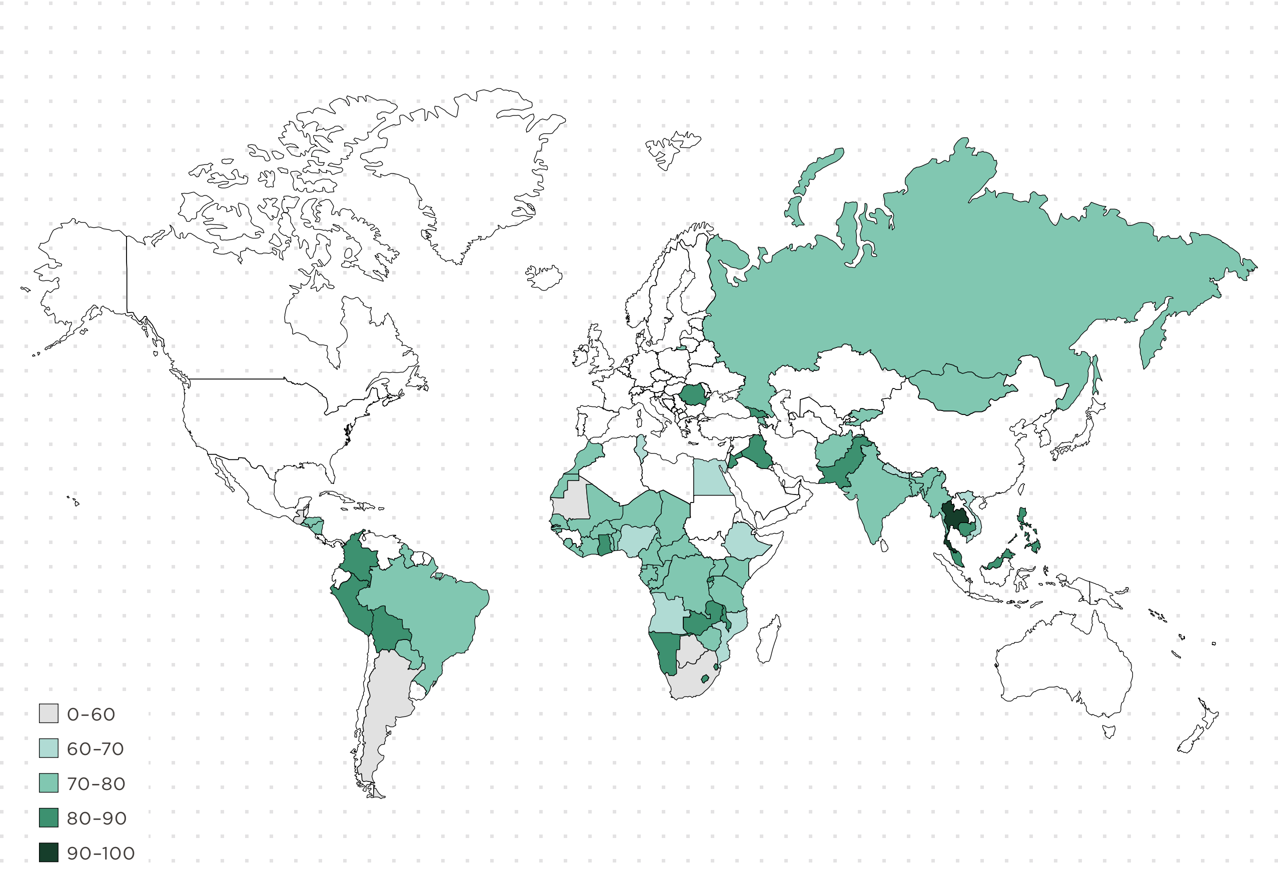
Introduction

The Mobile Money Regulatory Index is a new regulatory tool introduced by the GSMA to provide a quantitative assessment of the extent to which regulation has been effective in establishing enabling regulatory environments.

The analysis includes both qualitative and quantitative techniques to arrive at the scores for more than 80 countries under review. The assessment of each market includes analysis of the prevailing regulatory instruments in the focus countries,[1] supplemented by interviews with technical experts and regulators.

Figure 1

The Mobile Money Regulatory Index



Source: GSMA Intelligence

1 We studied regulatory instruments that were in force up to and including July 2018 and every effort has been made to ensure to ensure the accuracy of the data. The GSMA shall conduct periodic reviews of regulatory instruments to keep the index up-to-date.


Uttara Bank Limited
Ramna Branch, Dhaka.
বন্দুকের দোকান
massage

The importance of an enabling regulatory environment for mobile money

It is widely acknowledged that regulation has a material impact on mobile money adoption and usage. Regulation affects the ease with which new customers can enrol to a mobile money service and the range of services offered, from person-to-person transfer to bill payments, merchant payments, and international remittances, among others.

Evidence demonstrates that regulators can be catalysts for increased financial inclusion by adopting policies and regulations that enable greater and easier access to basic financial services.[2] Dialogue between regulators and industry stakeholders can also help unlock private sector investment and at the same time help achieve the financial inclusion targets of governments.

Poorly-crafted or overly restrictive regulation, however, can hinder access to financial services by disincentivising investors or restricting the breadth and scope of prospective financial services. Regulation also affects the commercial and operating environment. For instance, onerous enrolment requirements slow the pace of customer acquisition and may result in prohibitive cost barriers for operators. This regulation can be described as 'non-enabling'.

2 Naghavi N., Shulist J., Cole S., Kendall J. and Xiong W. (2016). Success Factors for Mobile Money Services GSMA and Harvard Business School; Evans D.S. and Pirchio A. (2015). An Empirical Examination of Why Mobile Money Schemes Ignite in Some Developing Countries But Flounder In Most University of Chicago Law School; Gutierrez E. and Singh S. (2013). What Regulatory Frameworks Are More Conducive to Mobile Banking The World Bank.

Regulatory reform in Ghana

In 2008, Ghana introduced a bank-led regulatory framework known as Guidelines for Branchless Banking in Ghana. The Bank of Ghana decreed that banks would lead the process, owning the customer relationship as well as the agent relationship. At the same time, the Bank of Ghana envisaged that the system would be more efficient if it was interoperable and interconnected from the outset. To achieve this, a many-to-many model was mandated, in which a group of banks would partner with a group of MNOs, sharing the agent network. The restrictive nature of this regulatory model led to a lacklustre response from the market. Investment was insufficient and mobile money adoption rates were low, as banks did not see the business case in extending services to the bottom of the pyramid.

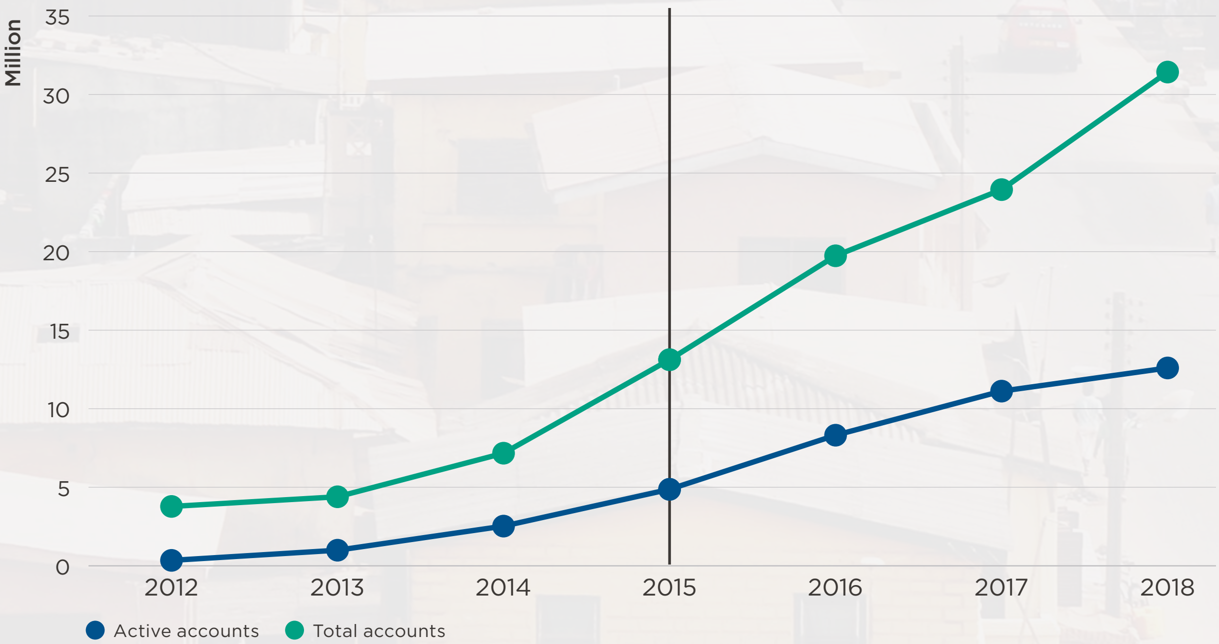
In July 2015, the Bank of Ghana published new and progressive Guidelines for E-Money Issuers in Ghana. The new regulatory framework dramatically changed the landscape for e-money issuance and mobile money business in Ghana, providing the much-needed impetus for mobile operators to invest in mobile money services.

The new framework abolished the many-to-many requirement, freeing operators from restrictive relationships and allowing MNOs to establish subsidiaries to facilitate e-money issuance supervised directly by the Bank of Ghana. A risk-based approach to Know Your Customers (KYC) with a three-tiered account structure was also introduced, allowing individuals with little or no ID to be included in the formal financial sector for the first time.

These provisions allowed MNOs to innovate and drive the mobile money business, and to introduce market-led solutions to interoperability. The new framework also created renewed impetus for investment and resulted in a dramatic rise in mobile money adoption and usage (see Figure 2).

Figure 2

Mobile money account adoption in Ghana, 2012–2018



Source: Bank of Ghana

Objectives of the Regulatory Index

In 2013, the GSMA identified six principles that define enabling regulatory frameworks.[3] An enabling regulatory framework can be understood as a set of regulations which allow for the development of scalable and responsible mobile money businesses that can sustainably reach the underserved and foster digital financial inclusion.

The categorisation of regulation as either enabling or non-enabling has its limitations, however, as it is binary. Such an approach does not lend itself to examining how the various indicators influence the efficacy of a regulatory framework. The industry and regulatory context has evolved and so has the need for a more nuanced evaluation of regulation. The Mobile Money Regulatory Index builds on these principles by identifying the indicators that have the greatest impact on establishing enabling regulatory environments. By allowing for a deeper analysis of regulatory enablers, the Index provides policy makers and regulators with specific insights into policy areas where targeted interventions may be employed to help enable growth in mobile money adoption and usage.

3 di Castri, S (2013). Mobile Money: Enabling regulatory solutions, GSMA.

Structure of the Regulatory Index

Many existing regulatory indices often use 'soft' indicators that are based on a degree of judgement, and rely on a subjective assessment of technical experts to evaluate the quality and effectiveness of regulation.

The Mobile Money Regulatory Index seeks to develop objective indicators that are comparable across countries and verifiable against written mobile money regulation. The reasons are twofold:

1. To avoid duplication with other indices and financial inclusion initiatives; and
2. To provide policy makers and regulators with specific actions to develop more enabling regulation.

By focusing on objective indicators, the Index may not capture some aspects of regulation. For example, the efficacy of regulators in implementing regulation and enforcing compliance is not assessed. However, given the fast-evolving nature of the mobile money industry and regulatory frameworks, the Index will be dynamic, with reviews and timely updates, including the addition of new indicators where appropriate in keeping with wider industry and regulatory developments.

The Index analyses six broad enabling dimensions:

1. **Authorisation:** This dimension examines the eligibility criteria to provide mobile money services; the relevant authorisation instruments such as legislation, regulation, guidelines and circulars; and the proportionality of capital requirements;
2. **Consumer protection:** This dimension examines the general consumer redress and disclosure mechanisms; and the provisions for the safeguarding of customer funds, including deposit insurance measures;
3. **Transaction limits:** This dimension examines the proportionality of account balance and transaction limits (entry-level and ceiling);
4. **Know Your Customer (KYC):** This dimension examines the permitted identification requirements; the proportionality of Know Your Customer (KYC) requirements; Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT) reporting obligations; and the guidance provided by regulators on ID requirements;
5. **Agent networks:** This dimension examines the eligibility criteria for agents; their authorisation requirements; their permitted activities; and the agent network condition, e.g. whether formal notification or authorisation is required for the appointment of individual agents; and
6. **Investment and infrastructure environment:** This dimension examines the external factors which are likely to affect the regulatory environment such as sector-specific taxation; ID verification infrastructure, interoperability infrastructure, provisions on the utilisation or distribution of interest income and national financial inclusion policies.

These six dimensions comprise 27 indicators, each weighted according to its importance in contributing to an enabling regulatory environment.[4]

4 Appendix 1: Mobile Money Regulatory Index Methodology (GSMA Intelligence).

Results and findings

Figure 3 presents the Regulatory Index scores for each of the 81 countries examined. The Index generates a numerical score, however, many of the differences are incremental and therefore country rankings and exact scores should not be weighted too heavily. Instead, the greatest value of the Index is the assessment of the dimensions and detailed indicators in order to understand how specific regulations can be enhanced to support further financial inclusion.

Figure 3

Mobile Money Regulatory Index Scores

Country	Index	Country	Index	Country	Index
Thailand	93.15	Guinea-Bissau	79.74	Uganda	72.50
Malaysia	89.70	Nicaragua	79.50	Cameroon	72.20
Rwanda	88.93	Brazil	79.28	Chad	71.80
Jordan	86.96	Kenya	79.24	Congo	71.48
Bolivia	86.77	Paraguay	79.13	Equatorial Guinea	71.39
Cambodia	86.05	Madagascar	78.94	Gabon	71.24
Ghana	85.81	Liberia	78.83	Jamaica	71.04
Gambia	85.29	Afghanistan	78.81	Central African Republic	70.72
Namibia	85.08	Tanzania	78.17	Bangladesh	70.70
Zambia	84.69	Morocco	78.15	Swaziland	70.50
Lesotho	83.62	Mongolia	78.03	Timor-Leste	70.08
Philippines	82.18	Sierra Leone	77.94	Vietnam	69.96
Solomon Islands	82.02	Seychelles	77.26	Angola	68.25
Malawi	81.99	Sri Lanka	76.98	Egypt	67.21
Colombia	81.52	Samoa	76.75	Nepal	66.57
Iraq	80.81	Russian Federation	76.10	Ethiopia	65.83
Georgia	80.66	Honduras	75.86	Nigeria	65.67
Pakistan	80.65	Burundi	75.03	Tunisia	63.91
Peru	80.55	India	74.85	Mozambique	62.25
Romania	80.53	Zimbabwe	74.78	Haiti	60.20
Burkina Faso	79.98	Kyrgyzstan	74.61	Botswana	59.57
Mali	79.98	El Salvador	74.29	South Africa	57.92
Niger	79.96	Congo, D.R.	73.70	Argentina	54.25
Benin	79.93	Myanmar	73.63	Qatar	51.31
Togo	79.83	Maldives	73.38	Guatemala	46.75
Côte d'Ivoire	79.82	Guyana	73.13	Dominican Republic	35.25
Senegal	79.82	Armenia	72.93	Mauritania	33.25

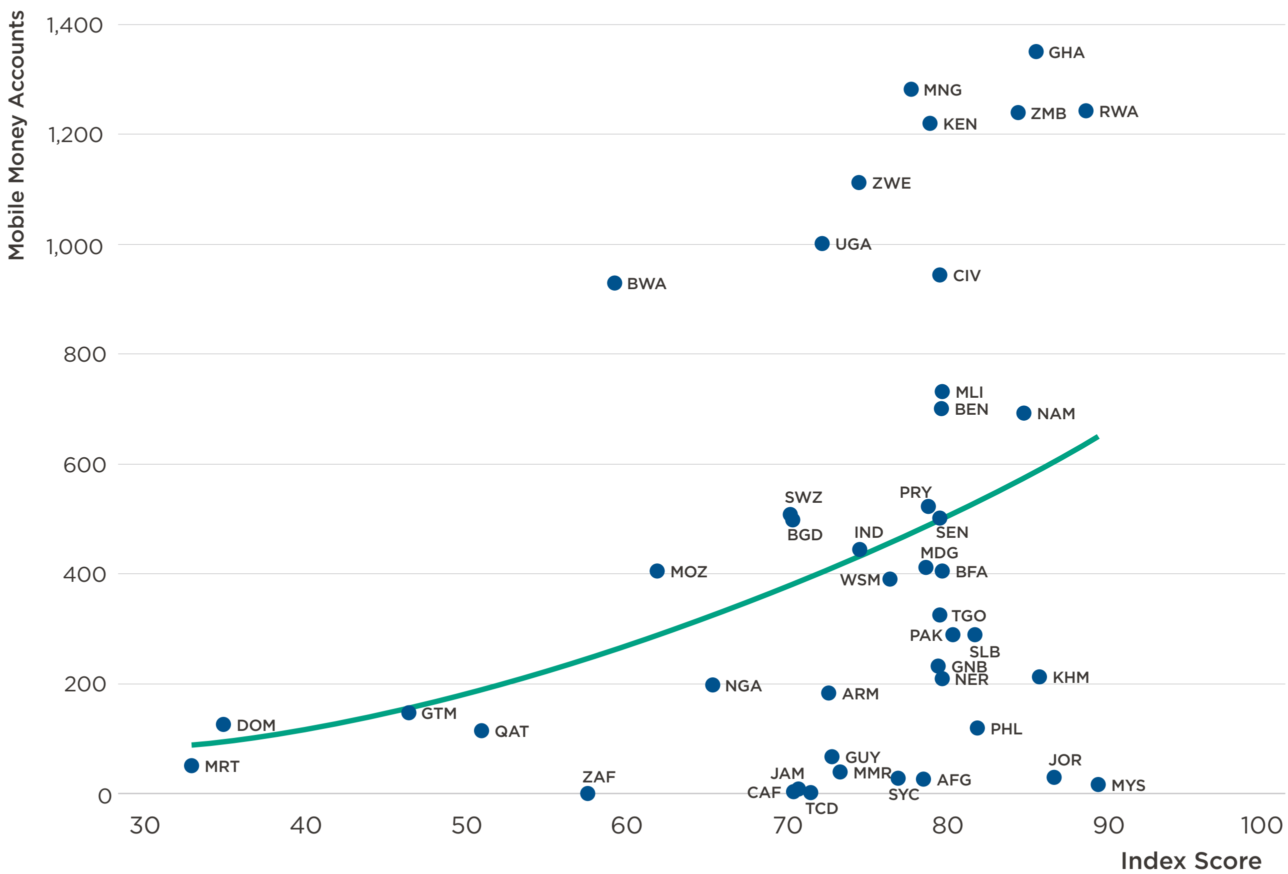
Source: GSMA Intelligence

As mobile money providers adapt to new technologies, consumer demands and business models, regulation must also adjust to these changing dynamics. Our analysis found that countries which have undergone frequent regulatory reforms achieve higher scores than countries whose first iterations of regulations are still in place. Such countries have a more flexible approach to addressing regulatory challenges. Rwanda, for example, has issued at least four regulatory instruments in the last 10 years governing the oversight and regulation of payment service providers and the National Bank of Rwanda has been swift in its response to the evolving nature of the mobile money business.[5]

When evaluating Regulatory Index scores and mobile money adoption rates, there is a clear, positive correlation (Figure 4). On average, countries with more enabling regulatory environments are more likely to have higher rates of mobile money adoption. This positive relationship is corroborated by several data sources on mobile adoption[6] and when we control for other country-level factors that influence mobile money adoption, such as GDP per capita, formal account ownership and population density.[7]

Figure 4

Regulatory Index scores and mobile money adoption



Source: IMF Financial Access Survey, GSMA Mobile Money and GSMA Intelligence

A high score alone does not necessarily translate to high levels of adoption due to other demand- and supply-factors that impact the take-up and use of mobile money.[8] Nevertheless, analysis shows that the majority of countries with high mobile money adoption rates have high index scores, suggesting the progressiveness of the regulator in establishing a favourable environment for mobile money.

5 Regulation N° 05/2018 OF 27/03/2018 Governing Payment Services Providers; Regulation N° 08/2015 OF 13/11/2015 of the National Bank of Rwanda relating to the Licensing Criteria of Operating Payment and Securities Settlement Systems; Regulation N°06/2010 OF 27/12/2010 of the National Bank of Rwanda relating to the Oversight of Payment Systems and the Activities of Payment Service Providers; and Regulation N°07/2010 of 27/12/2010 of the National Bank of Rwanda on Electronic Fund Transfers and Electronic Money Transactions.

6 Including the IMF Financial Access Survey, World Bank Findex and GSMA Mobile Money survey data.

7 This finding is based on regression analysis where mobile money adoption at the country-level is regressed on the Regulatory Index scores as well as country-specific factors that have been found to impact take-up of mobile money. Naghavi N., Shulist J., Cole S., Kendall J. and Xiong W. (2016). Success Factors for Mobile Money Services GSMA and Harvard Business School.

8 For example, income, mobile phone adoption, financial literacy, access to traditional banking etc.

Analysis

Authorisation

The authorisation dimension is highest weighted at 30 per cent due to its importance in the determination of the eligibility criteria for non-bank mobile money providers. The top 10 countries under this dimension are Malawi, Jordan, Cambodia, Rwanda, Zimbabwe, Romania, Seychelles, Vietnam, Malaysia and Kenya. These countries shared a common process leading to the development of the regulations involving broad consultation with industry stakeholders. Their authorisation requirements are favourable for non-banks and MNOs seeking licensing as mobile money providers while the capital requirements are non-prohibitive.

We found five broad models for authorisation of mobile money business:

1. Direct authorisation or licensing of banks and non-banks, including MNOs (e.g. Nepal, Kenya and Rwanda). Also in category are countries that permit non-banks to offer mobile money services in partnership with a prudentially regulated institution whose role extends beyond mere custody of funds (e.g. Uganda and Egypt);
2. Authorisation or licensing of special purpose vehicles established solely for mobile money business or electronic money issuance (e.g. Jordan, Morocco, West African Economic and Monetary Union (WAEMU) countries,[9] Ghana and Colombia);
3. Authorisation or licensing of differentiated or narrow banks authorised to take deposits from the public and to carry on payments services but prohibited from offering loans or advances. For example, India's Payment Banks and, since October 2018, Nigeria's Payment Service Banks are licensed under extant banking laws and have relatively high capital requirements. They are permitted to invest deposits collected in secure government treasury instruments;
4. Authorisation or licensing of banks and non-banks except MNOs. This model was observed in Nigeria at time of analysis and was found to be the most restrictive for mobile network operators seeking to enter the mobile money space;[10] and
5. Authorisation of prudentially regulated financial institutions only to carry out payment services or electronic money issuance. This was the least favourable model for non-banks owing to its restrictive nature (e.g. Bangladesh and Pakistan).

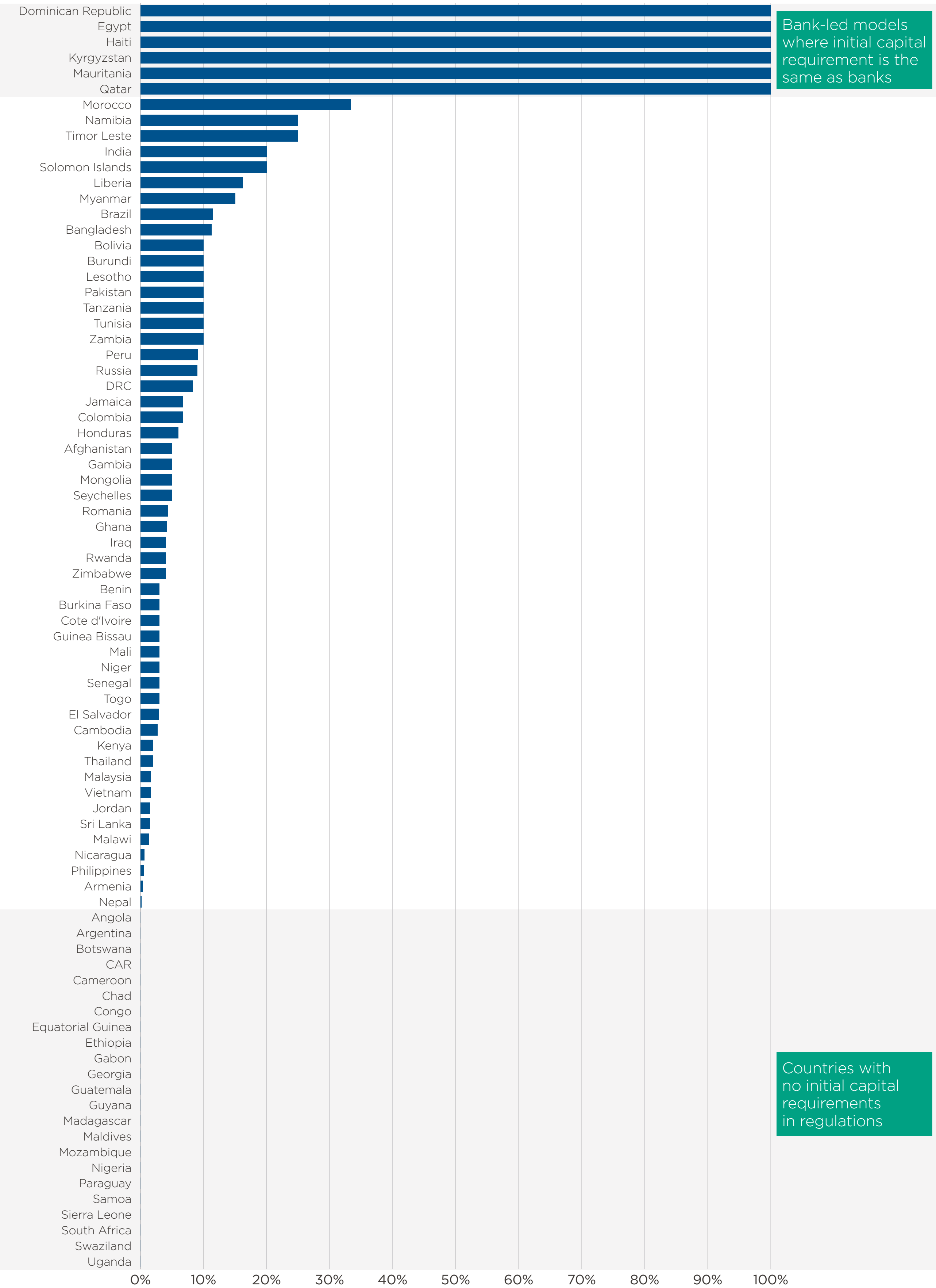
Many countries under this dimension are weighed down by disproportionately high minimum capital requirements relative to the minimum capital requirements for commercial banks, which have a higher risk profile than mobile money providers. A vast majority of countries have set the minimum initial capital requirements for mobile money providers at 10 per cent or less, relative to the level set for commercial banks. However, the level at which the initial capital is set depends on the regulatory model adopted. For instance, India has adopted the payments bank model and has set their initial capital requirements at 20 per cent of the minimum capital requirements for banks.[11]

We also found that a number of countries have not imposed any initial capital requirements (or set them at a very low level). While this reduces the burden on providers, requiring some initial capital ensures that entrants can cover their operational costs and that they have sufficient assets to cover customer claims in the event of insolvency. It is therefore important to impose a capital requirement that is proportionate, given the low-value and low-risk nature of mobile money.

9 Benin, Burkina Faso, Guinea-Bissau, Ivory Coast, Mali, Niger, Senegal and Togo.
10 Nigeria has since reformed its regulatory environment by releasing Guidelines for Licensing and Regulation of Payment Service Banks. This new regulatory framework recognises the failure of the earlier regulatory framework driving financial inclusion and opens the door to MNOs, through subsidiaries licensed as Payment Service Banks.
11 Nigeria has followed a similar approach following the recent reforms under the Central Bank of Nigeria Guidelines for Licensing and Regulation of Payment Service Banks, 2018.

Figure 5

Initial capital requirements proportionate to initial capital requirement for banks



Source: GSMA Intelligence

A number of countries provide differentiated licensing for the authorisation of International Money transfer (IMT) business. There are at least three scenarios for IMT authorisation:

1. An omnibus regulatory framework under which mobile money providers are permitted to undertake IMT business as part of their core mobile money business without authorisation. In Morocco and Rwanda, for example, the regulatory framework specifically permits IMT business without the need for a separate licensing regime;
2. A gap in regulation in which no specific provision is made for IMT business. The mobile money provider is required to seek and obtain approval for their IMT business, as found in Uganda, Tanzania and South Africa; and
3. Stand-alone authorisation where the mobile money provider is required to hive off their IMT business under a separate legal entity. For example, licensing of IMT business in Kenya is under a separate regulatory instrument[12] requiring the establishment of money remittance companies bearing in its name the words 'money remittance' or 'money transfer'. While this model establishes regulatory certainty on IMT business, it creates additional layers of regulation that may be onerous on mobile money providers. Inward IMT remittances are generally encouraged while some regulators are less inclined to authorise outward remittances, particularly in countries belonging to common monetary areas. For example, in the Central African Economic and Monetary Community (CEMAC) and WAEMU regions, remittances outside these regions are prohibited.

Consumer protection

This dimension measures the extent to which guidance on consumer protection rules is provided under regulation. This includes rules on transparency, consumer redress mechanisms and procedures for the safeguarding of customer funds. Rwanda, Kenya, Ghana, Gambia, Colombia and Nigeria score highest under this dimension.

The vast majority of countries have clear rules requiring mobile money providers to make public disclosures on price and terms of service as well as providing customers with access to recourse and complaint procedures to resolve disputes. Most countries also have requirements to keep 100 per cent of their e-money liabilities in liquid assets.[13]

However, only seven countries have regulatory provisions on extending deposit insurance to mobile money accounts: Rwanda, Kenya, Ghana, Gambia, Colombia, Nigeria and India. Additionally, some of these countries have not fully implemented pass-through[14] deposit insurance schemes.

Transaction limits

Under the risk-based approach to KYC, entry-level accounts have lower transaction and balance limits to mitigate the risks of money laundering and terrorist financing. These accounts may be subject to less stringent due diligence requirements and may have restrictions on the number of transactions that can be performed. Top tier accounts, however, require the account holder to submit additional KYC documentation. The risk profile of mobile money account holders is lowered when additional verifiable KYC documentation is produced.[15] Regulators allow mobile money providers to increase the transaction and account balance limits of top tier account holders, enabling users to conduct larger single transactions and cumulatively over a given period. However, these top tier accounts are not substitutes for traditional bank accounts as they are still payment accounts. In many countries, the holders of top tier accounts are also banked and use their mobile money accounts to make digital payments.

Regulators generally adopt one of four approaches to managing transaction limits:

1. Limits on individual transactions and/or the number of transactions in a specific time period (e.g. per day);
2. Limits on the total transaction value over a given period (usually per month, but in some instances per day or year);
3. Limits on mobile money balances; and
4. Limits are determined or authorised for each

12 The Money Remittance Regulations (2013).
13 In countries where only banks are allowed to provide mobile money services or e-money issuance, the rule on safeguarding of customer funds was inferred as banks are subject to prudential requirements on the protection of customer deposits, including deposit insurance.
14 Pass through deposit insurance is a scheme where the beneficial holders of accounts held in a pooled account benefit from deposit insurance as if each beneficial owner were an account holder at the custodial institution holding the pooled funds.
15 FATF (2013–2017), Anti-money laundering and terrorist financing measures and financial inclusion – With a supplement on customer due diligence, FATF, Paris.

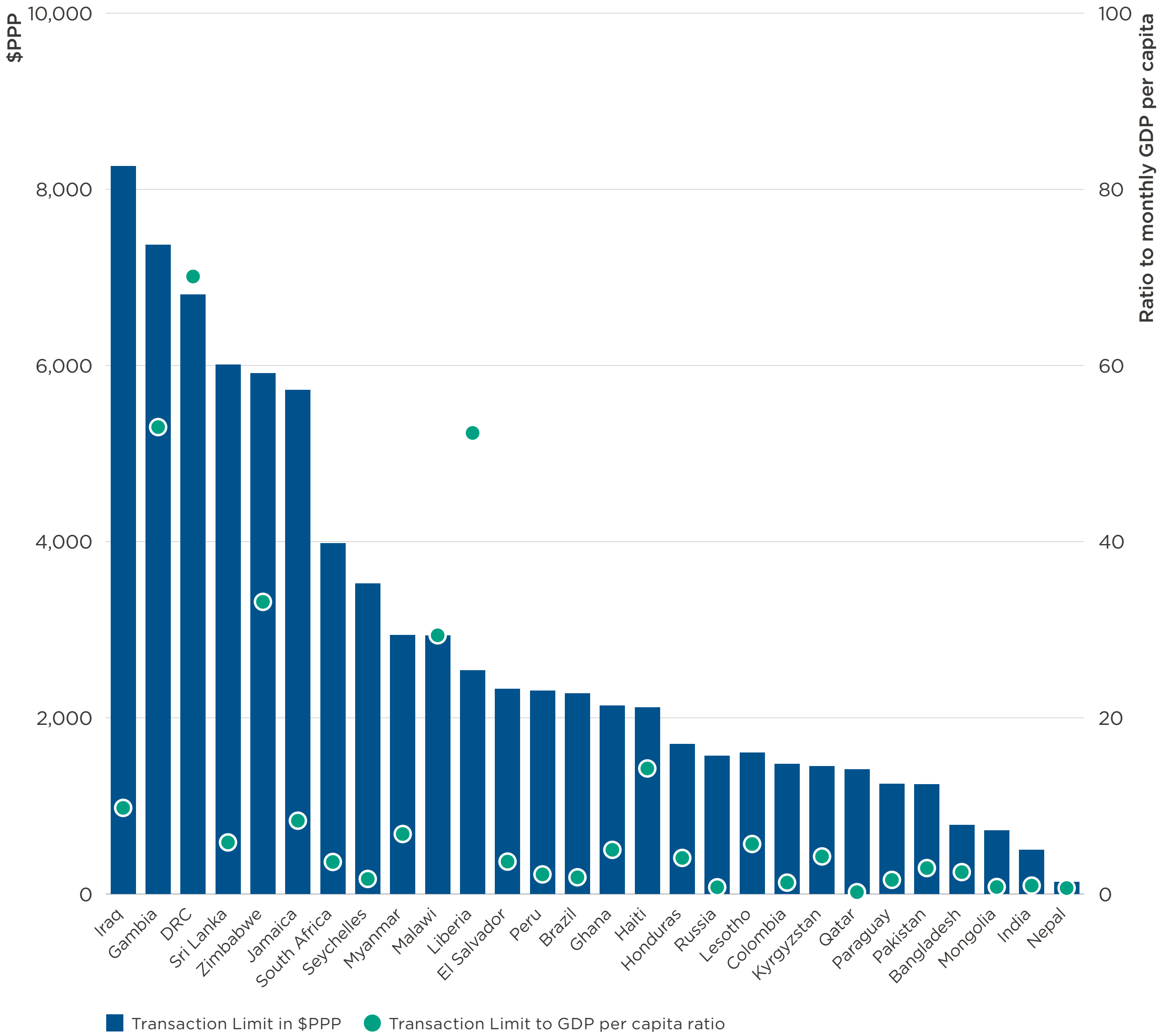
licensed provider by the Central Bank, monitoring them regularly. There are no prescriptive transaction limits in the regulations. Some regulators apply a combination of transaction limits (e.g. on both single transactions and on the total monthly value).

The ability to make a mobile money transaction upon registration for a mobile money account is a critical facilitator for mobile money usage. As mobile money services scale up, the average number of transactions per active customer grows. If mobile money accounts have modest single account or monthly transaction limits, invariably mobile money users will feel constrained from fully utilising their mobile money accounts. This can lead to circumvention by customers who may open multiple mobile money accounts or reversion to cash transactions and entrenchment of the informal economy. It is therefore important that single account and monthly transaction limits are set at a reasonable level.

Figure 6 illustrates the broad range in limits that are set across markets both in terms of $PPP and also when we take average incomes (proxied by GDP per capita) into account. For example, mobile money providers in the Democratic Republic of Congo and Gambia face significantly less constraints on transaction limits compared to India and Nepal, where monthly transaction limits on entry-level accounts are $500 and $140 respectively.

Figure 5

Monthly transaction limits for entry-tier accounts



Source: IMF Financial Access Survey, GSMA Mobile Money and GSMA Intelligence

Know Your Customer

Know Your Customer (KYC) encompasses the processes and procedures for conducting due diligence on customers of mobile money providers. KYC is a requirement when opening a mobile money account and carrying out cash in or cash out transactions. When KYC requirements are disproportionately high or onerous, they discourage customers from enrolling in a mobile money service or carrying out transactions. It is therefore important that KYC requirements are simplified for low risk users and appropriately calibrated as the risk profile of the customer changes.

Under this dimension, the Mobile Money Regulatory Index examined the proportionality of KYC requirements, including regulation on ID requirements, minimum identification requirements, ID verification processes and AML/CFT reporting obligations.

Regulation on ID requirements

Governments have a primary duty to provide regulatory guidance to financial services providers on the type of identification requirements that can be used to access financial services. We examined the relevant anti-money laundering legislation and regulations of the countries under review and found that all but 10 countries[16] have statutory or regulatory provisions for positive identification of customers. Among the countries that have statutory or regulatory provisions for positive identification of customers, some countries specify the type of identification documents accepted for conducting KYC, providing much-needed clarity. This is particularly prevalent in countries with national identification schemes. Where the type of identification document has not been provided, documents beyond government-issued IDs may be used as minimum requirements for accessing mobile money services (for example, in Uganda, a letter from a local council, ward or village executive, etc. may be accepted as a form of ID).

Minimum identification requirements

In the majority of countries with minimum ID requirements specified, users require at least one form of ID and/or a mobile telephone number to open or operate a mobile money account. In other countries, the regulation is non-prescriptive and operators are given flexibility to set minimum KYC requirements, subject to regulatory review or approval (for example, Thailand, Romania and Afghanistan). More stringent countries require documentation beyond an ID and a telephone number (such as proof of address), making it onerous on customers to open mobile money accounts (e.g. Egypt and Honduras).

AML/CFT reporting obligations

The global norms set by the Financial Action Task Force (FATF) on AML/CFT reporting are largely reflected by the 100 per cent compliance rate. All countries analysed have AML/CFT reporting obligations, which extend to providers of mobile money services.

16 Angola, Ethiopia, Swaziland, Seychelles, Lesotho, Botswana, Malawi, Qatar, Democratic Republic of Congo and Mauritania.

Agent networks

The ability to cash in and cash out within proximity to where customers live and work is vital to the success of a mobile money service. At the foundational stages of a mobile money business, customers require agent outlets to exchange their conventional money for e-money and recipients of mobile money transactions require agent outlets to liquidate their e-money for conventional money. Agents also play a critical role in registering new customers to the mobile money service. We therefore looked at the extent to which regulations provide for the use of agent networks and their activities.

This dimension examines four key indicators: the eligibility of agents; the authorisation of agents, including the proportionality of agent authorisation requirements; permitted activities of agents; and agent network condition.

Agent eligibility

The vast majority of countries are not prescriptive on eligibility requirements for agents in terms of the type of agent or institution that may qualify to be an agent. India, Kenya, Tanzania, Morocco, Armenia and Dominican Republic are prescriptive on the minimum requirements needed for agent eligibility, while Vietnam, Tunisia, Angola, Qatar and Mauritania do not permit non-banks agents (or the regulations do not refer to the provisions for agents).

Agent authorisation

This indicator looks at whether authorisation is required for the appointment of individual agents or whether notification to the regulator of the appointment of an agent is adequate. The majority of countries analysed do not require any prior authorisation of individual agents, though there are several exceptions (for example, authorisation is required in Jamaica and Nepal). Mobile money providers typically appoint large numbers of agents in quick succession. It would be impractical for regulators to require prior authorisation of each agent appointed, based on the resource constraints of the regulator to undertake the task of vetting agents and restriction of the freedom of contract.

We also analysed the proportionality of non-bank agent authorisation requirements, relative to the authorisation requirements for bank agents. As bank agents act on behalf of a bank, the moneys they receive from customers have the same protection conferred on deposits in a bank. These agents therefore attract more stringent regulation; for instance, the authorisation of individual agents. The findings are overwhelmingly positive, with the authorisation regime for non-bank mobile money agents being proportionately lower than for bank agents.

Agent activities

Limiting the activities that can be performed by agents may have the unintended consequence of curtailing the growth of mobile money services, as agents would be unable to respond to the evolving nature of the mobile money business. This indicator analyses the extent of the activities that agents are permitted to perform. We found that slightly more than half the countries reviewed allow agents to perform cash in, cash out and customer registration services. Some countries impose restrictions on customer registration while allowing cash in and cash out services (e.g. Sri Lanka and Armenia).

Agent network condition

This indicator considers three subsets: mobile money provider liability for agent actions; geographical limits for agents; and whether different tiers of agents are permitted. As expected, in most countries, mobile money providers cannot limit their liability for agent activities. On agent tiers, we found that some countries make provision for 'super' agents as a distinct cadre of agents from regular agents. While legally it is superfluous to designate some agents as 'super' agents, such designation is useful for mobile money providers to distinguish agents whose operating limits may differ.

The most compelling condition however is geographical limits for agents. The success of a mobile money service depends largely on the ability to spread distribution points as widely as possible. Restrictions on the location of agent outlets can result in areas being underserved and users, or potential users, being denied the opportunity to effectively use their mobile money services. Geographic limitations may include restrictions on the number of agent locations in a given geographic area or locating agents within specified geographic limitations. For example, in India, at least 25 per cent of physical access points must be in rural areas and payments banks must establish a controlling office for a cluster of access points.[17] In Bangladesh, individual agents are required to work in a limited geographical boundary.[18] While some regulatory provisions may have altruistic intentions, for example, to drive rural adoption, they may have the unintended consequence of excluding large numbers of users, or potential users, from mobile money services.

Infrastructure and investment

While other dimensions examine elements of regulation that influence the regulatory environment, this dimension analyses the external factors that could have an effect on the ability of mobile money services to thrive. These factors include sector specific taxation; ID verification infrastructure, interoperability infrastructure, provisions on the utilisation of interest income and national financial inclusion strategies.

Mobile money taxation

This indicator looks at whether there are any sector-specific taxes applied on consumer-facing mobile money transactions, as these can impact mobile money sustainability and increase the cost to consumers. The findings show that mobile money tax has gained traction in Sub Saharan Africa with Kenya, Tanzania, Uganda and Zimbabwe having some form of mobile money tax. While in Kenya and Tanzania, the tax is an excise duty on revenues, Uganda introduced a one per cent tax on all mobile money transactions, over and above the 10 per cent excise duty levied on transaction charges (later revised to 0.5 per cent on withdrawal transactions only). Its adverse impact was immediate, as customers shunned transactions and mobile money agents, particularly those in rural areas, saw significant reduction in traffic and revenues.[19]

ID verification infrastructure

While customer identification and verification is a statutory and regulatory requirement for financial services providers, the mechanisms through which customer identity is verified are often not set out in regulation. This indicator measures the extent to which governments support providers of mobile money services with ID verification tools, such as access to ID verification databases. The verification may be automated or a manual process checking against national ID databases. Only a handful of countries have form ID verification systems available to mobile money providers, with eight countries conducting online verification.[20] All other countries have no ID verification systems available to mobile money providers beyond viewing the identification document.

Interoperability

Interoperability is the establishment of a highly interconnected mobile financial ecosystem where transactions are digitised, providing a solution to the 'cash pain' experienced by customers and businesses and facilitating transactions from different sectors such as retail, utilities, health, education, agriculture and transport, as well as credit, insurance and savings. Interoperability can trigger growth in transaction volumes and values and increase usage of mobile money services. When technical standards for interoperability are mandated, it may not achieve the stated objectives. A market-driven approach to interoperability allows mobile money providers to determine their readiness and recognises the resources and complexity of implementation.

This indicator examines the extent to which interoperability is market driven. It specifically focuses on whether the technical standards are prescribed and mandated, rather than looking at whether there is a general interoperability requirement.[21] The Index findings are varied. Regulations are either silent on interoperability or set interoperability as an aspirational objective to be achieved upon market maturity, leaving regulatory intervention as a last resort. Some countries have specific regulatory instruments on interoperability such as Malaysia, Jordan and Egypt. Countries with bank led regulatory models or central mobile money switch platforms invariably become interoperable through national payments switches.

Payments and settlements infrastructure

As mobile money systems mature and become integrated into the financial system, the need to provide access to the national payments and settlement infrastructure for greater efficiency grows. This access includes the Central Bank allowing mobile money providers direct settlement by opening a

17 Reserve Bank of India (2014). Guidelines for Licensing of Payments Banks.
18 Bangladesh Bank (2018). Mobile Financial Services (MFS) Regulations.
19 Research IT Solutions (2018). ICT Sector Taxes in Uganda. See: http://online.fliphtml5.com/gnel/ujge/#p=1
20 Thailand, India, Pakistan, Bolivia, Peru, Brazil, Kenya and South Africa had automated ID verification systems. Bangladesh, Rwanda, Ghana and Colombia had not automated their ID verification.
21 We did not consider an interoperability requirement to be onerous in itself if there was flexibility for it to be market-led.

settlement account at the central bank or allowing mobile money providers to settle through a settlement agent with access to a settlement account or integration to the national switching infrastructure, such as national switches and clearing houses. This indicator examines the extent to which regulators provided access to national payments and settlement infrastructure. As with interoperability, regulation is mostly silent on this question, except for a few countries who make specific mention of settlement through the national payments infrastructure. Nevertheless, a large number of countries allow access to the national infrastructure either directly or through a settlement agent and/or integrated the mobile money providers to the national switch.

Interest payments

Moneys held in trust (or in escrow) on behalf of users of a mobile money service are usually eligible to earn interest. The consensus is for users of the mobile money system to benefit from the interest earned, with some countries, such as Tanzania, taking a liberal approach, allowing the mobile money provider to determine how best to pass on the interest benefit. Others, such as Ghana, allow the mobile money provider to pay out the interests to its customer and retain 20 per cent of the interest income as an incentive to invest in their mobile money business.[22] Ultimately, passing on the benefit of the interest accrued can motivate increased usage of mobile money.

This indicator examines whether interest can be earned on the pooled funds and whether the interest accrued can be passed onto customers as a benefit.

The findings show that more than one third of countries make no mention of the subject or expressly forbid earning of interest (in which case there would be no interest to distribute). Some countries seem to acknowledge that interest may accrue but do not specify whether such accrual may be passed on as a benefit to users. For example, Malawi's regulations allow the pooled funds to earn interest but they prohibit the accrual of the interest for the benefit of the mobile money provider.[23]

Financial inclusion polices

Appropriate regulation is informed by government policy. If the policy is well articulated, it is expected that the regulations that follow will match the policy objectives set out by governments.

This indicator examines whether countries have written national financial inclusion policies or strategies. It also examines the extent to which such policy frameworks identify mobile money as means to achieve financial inclusion and set targets to address the gender inclusion gap or women's financial inclusion; as well as the frequency with which governments collect demand side data to track progress and report on financial inclusion. The findings show that 18 countries[24] have financial inclusion policies that identify digital technologies (including mobile) as means to achieve financial inclusion targets with specific targets on gender inclusion. More than 30 countries have no written or publicly available financial inclusion policies. However, this does not mean that these countries have not addressed these broad policy objectives in their regulations.

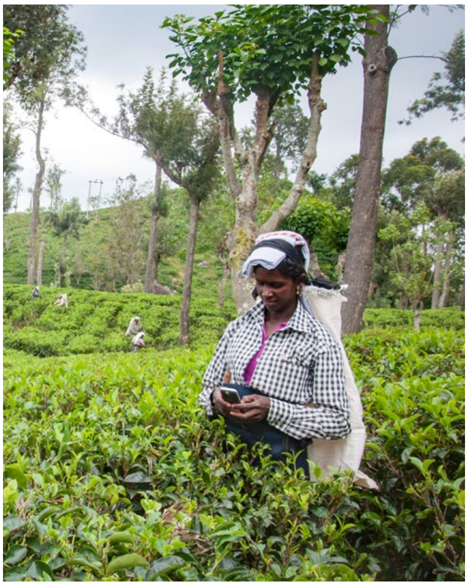
22 GSMA (2015). Regulatory reform: A conversation with the Bank of Ghana on the journey towards the new Guidelines for E-Money issuers.
23 Guidelines for Mobile Payment Systems (2011). Regulation 8.8: Interest earned or otherwise accrued to balances in the trust account shall not be to the benefit of or otherwise paid to the Mobile Payment service Provider.
24 Rwanda, Solomon Islands, Pakistan, Timor-Leste, Mozambique, Zambia, Madagascar, Tanzania, Sierra Leone, Zimbabwe, Samoa, Nepal, Uganda, Nigeria, Ethiopia, Burundi, Swaziland and Democratic Republic of Congo.

Conclusion

The Mobile Money Regulatory Index offers a unique benchmarking assessment of regulations in almost every country where mobile money is active. By examining in detail the six key aspects of regulation, it highlights the wide range of approaches that countries have taken to regulate mobile money. In particular, the Index shows that countries with thriving or fast-growing mobile money markets generally adopt enabling regulatory frameworks that incentivise providers to invest and roll-out a wide range of services, and incentivise consumers to use mobile money (particularly the underserved and unbanked populations).

The Mobile Money Regulatory Index will support dialogue between regulators and mobile money providers on reforms that can promote market growth, for example by learning from the experiences of other countries. For the development community, the Index will help identify subject areas and/or markets where technical assistance to governments and regulators can have the biggest impact.

The GSMA will continue to work with regulators, mobile money providers and donors to develop and apply good practice regulation across all markets where mobile money is active (or has the potential to scale up). We will also continually review the Index, providing updates and timely improvements to ensure its relevancy and usefulness to both regulators and the wider industry.






Appendix 1 The Mobile Money Regulatory Index

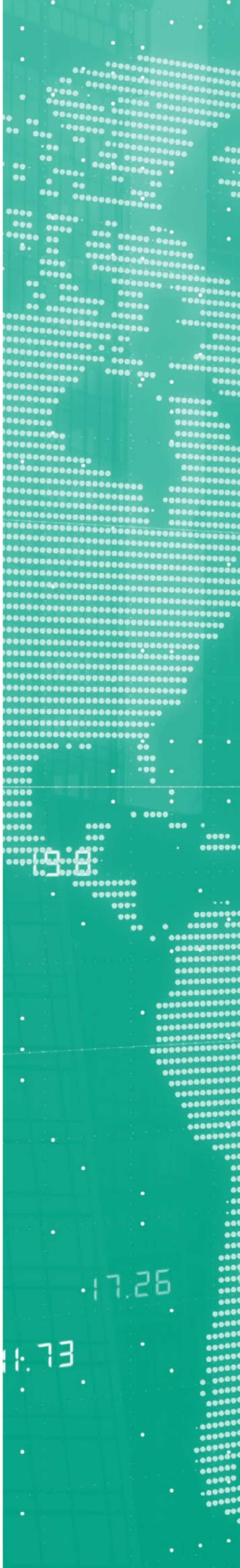
Country	Index	Authorisation	Consumer Protection	Transaction Limits	KYC	Agent Network	Infrastructure and Investment environment
Afghanistan	78.81	91.45	65.00	54.16	100.00	86.67	55.00
Angola	68.25	76.67	50.00	100.00	60.00	58.33	50.00
Armenia	72.93	70.00	80.00	87.04	70.00	65.83	65.00
Bangladesh	70.70	71.55	72.50	70.73	50.00	80.00	82.50
Benin	79.93	89.16	80.00	69.56	70.00	96.67	57.50
Bolivia	86.77	95.53	80.00	84.05	70.00	93.33	90.00
Botswana	59.57	46.67	50.00	68.79	40.00	100.00	67.50
Brazil	79.28	84.79	80.00	57.30	70.00	93.33	87.50
Burkina Faso	79.98	89.16	80.00	69.90	70.00	96.67	57.50
Burundi	75.03	85.53	80.00	39.14	70.00	100.00	60.00
Cambodia	86.05	99.33	80.00	100.00	50.00	96.67	72.50
Cameroon	72.20	66.67	72.50	65.49	70.00	100.00	60.00
Central African Republic	70.72	66.67	72.50	55.66	70.00	100.00	60.00
Chad	71.80	66.67	72.50	62.81	70.00	100.00	60.00
Colombia	81.52	93.92	100.00	53.12	70.00	75.83	85.00
Congo	71.48	66.67	72.50	60.73	70.00	100.00	60.00
Congo, D.R.	73.70	93.06	50.00	55.18	60.00	100.00	60.00
Côte d'Ivoire	79.82	89.16	80.00	68.82	70.00	96.67	57.50
Dominican Republic	35.25	0.00	80.00	0.00	50.00	58.33	70.00
Egypt	67.21	63.33	80.00	68.04	50.00	96.67	40.00
El Salvador	74.29	82.54	80.00	36.87	80.00	100.00	50.00
Equatorial Guinea	71.39	66.67	72.50	60.10	70.00	100.00	60.00
Ethiopia	65.83	46.67	50.00	85.52	70.00	100.00	60.00
Gabon	71.24	66.67	72.50	59.11	70.00	100.00	60.00
Georgia	80.66	80.00	80.00	77.72	80.00	96.67	65.00
Ghana	85.81	95.22	100.00	64.98	70.00	93.33	80.00
Guatemala	46.75	50.00	25.00	0.00	50.00	96.67	60.00
Guinea-Bissau	79.74	89.16	80.00	68.28	70.00	96.67	57.50
Guyana	73.13	80.00	55.00	100.00	50.00	82.50	60.00
Haiti	60.20	60.00	80.00	46.34	50.00	58.33	70.00
Honduras	75.86	87.60	80.00	50.53	50.00	100.00	75.00
India	74.85	70.35	85.00	71.66	80.00	61.67	90.00
Iraq	80.81	88.64	72.50	92.26	70.00	93.33	50.00
Jamaica	71.04	87.22	80.00	59.13	50.00	65.00	67.50
Jordan	86.96	99.93	80.00	91.55	70.00	100.00	57.50
Kenya	79.24	96.34	100.00	49.72	70.00	75.83	60.00
Kyrgyzstan	74.61	66.67	80.00	74.07	60.00	100.00	75.00

Country	Index	Authorisation	Consumer Protection	Transaction Limits	KYC	Agent Network	Infrastructure and Investment environment
Lesotho	**83.62**	92.20	80.00	74.74	80.00	100.00	57.50
Liberia	**78.83**	88.96	80.00	37.63	80.00	100.00	75.00
Madagascar	**78.94**	80.00	80.00	69.63	70.00	100.00	70.00
Malawi	**81.99**	100.00	65.00	66.60	70.00	100.00	67.50
Malaysia	**89.70**	96.51	80.00	100.00	90.00	96.67	57.50
Maldives	**73.38**	70.00	80.00	100.00	50.00	82.50	55.00
Mali	**79.98**	89.16	80.00	69.87	70.00	96.67	57.50
Mauritania	**33.25**	10.00	50.00	0.00	60.00	51.67	60.00
Mongolia	**78.03**	88.12	80.00	53.96	80.00	90.00	60.00
Morocco	**78.15**	83.45	80.00	71.60	80.00	82.50	60.00
Mozambique	**62.25**	46.67	50.00	48.32	90.00	100.00	50.00
Myanmar	**73.63**	82.94	80.00	70.00	70.00	65.00	60.00
Namibia	**85.08**	84.43	80.00	100.00	70.00	100.00	72.50
Nepal	**66.57**	70.00	65.00	67.11	60.00	65.00	70.00
Nicaragua	**79.50**	70.00	80.00	100.00	70.00	100.00	60.00
Niger	**79.96**	89.16	80.00	69.73	70.00	96.67	57.50
Nigeria	**65.67**	46.67	100.00	72.80	80.00	58.33	50.00
Pakistan	**80.65**	75.53	72.50	84.10	70.00	93.33	100.00
Paraguay	**79.13**	70.00	80.00	72.53	90.00	100.00	67.50
Peru	**80.55**	92.67	80.00	64.17	70.00	75.83	92.50
Philippines	**82.18**	80.00	80.00	87.03	100.00	69.17	77.50
Qatar	**51.31**	40.00	80.00	57.03	60.00	16.67	72.50
Romania	**80.53**	98.43	47.50	83.33	100.00	65.83	65.00
Russian Federation	**76.10**	76.05	80.00	75.25	60.00	93.33	70.00
Rwanda	**88.93**	98.64	100.00	65.61	70.00	100.00	90.00
Samoa	**76.75**	70.00	72.50	100.00	70.00	82.50	70.00
Samoa	**66.01**	67.95	59.56	33.96	86.89	94.63	43.75
Senegal	**79.82**	89.16	80.00	68.81	70.00	96.67	57.50
Seychelles	**77.26**	98.12	50.00	77.13	60.00	100.00	47.50
Sierra Leone	**77.94**	80.00	80.00	72.95	70.00	86.67	75.00
Solomon Islands	**82.02**	70.35	80.00	92.74	80.00	100.00	80.00
South Africa	**57.92**	26.67	50.00	46.13	80.00	100.00	85.00
Sri Lanka	**76.98**	89.93	80.00	56.68	70.00	83.33	65.00
Swaziland	**70.50**	70.00	50.00	79.99	60.00	100.00	60.00
Tanzania	**78.17**	92.20	72.50	75.09	80.00	82.50	40.00
Thailand	**93.15**	89.67	80.00	100.00	100.00	100.00	92.50
Thailand	**68.17**	69.89	61.39	40.89	87.22	93.38	47.71
Timor-Leste	**70.08**	57.77	72.50	100.00	50.00	75.83	80.00
Togo	**79.83**	89.16	80.00	68.90	70.00	96.67	57.50
Tunisia	**63.91**	65.53	80.00	100.00	50.00	26.67	57.50
Uganda	**72.50**	46.67	80.00	100.00	90.00	93.33	40.00
Vietnam	**69.96**	96.55	80.00	100.00	50.00	0.00	65.00
Zambia	**84.69**	92.20	80.00	83.52	70.00	100.00	70.00
Zimbabwe	**74.78**	98.64	80.00	42.12	80.00	75.83	35.00

Appendix 2
Methodology

For a full breakdown of the Mobile Money Regulatory Index Methodology, visit the website below.

gsma.com/mobilemoneymetrics/assets/data/MMRI_Methodology.pdf gsma.com/mobilemoney



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