Mobile Money
for the Unbanked

Building, Incentivising and Managing a Network of Mobile Money Agents:

A Handbook for Mobile Network Operators

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Focus on Agent Networks
Building, Incentivising and Managing a Network of Mobile Money Agents

Introduction

As mobile network operators around the world are discovering, mobile money is a complicated business. Far more complex than traditional mobile value-added services, mobile money platforms require that operators tackle a host of difficult strategic issues and operational challenges. One of the most difficult of these is the need to put together an agent network.

Why do agent networks matter?

The press likes to claim that mobile money services offer users "a bank in your pocket." But as any practitioner knows, this is not a good metaphor. Although customers can generally conduct some transactions, like initiating a peer-to-peer payment, using their mobile phone, it is only when physically present with an agent that customers can convert cash to e-money and convert e-money to cash. Particularly in the early days of a mobile money deployment, these services will be in high demand. Users will need to sign up and purchase e-money before they can perform any other transactions; moreover, they will often want to convert e-money into cash as soon as they have performed these other transactions because they aren't yet comfortable with storing value in the system.

Less tangibly, but equally importantly, agents are the front-line, human face for an operator's mobile money service. When users have questions, they are as likely to pose them to their local agent as to a call centre. And customers will have questions, given that mobile money is unlike any service they will have used before. Indeed, it is typically agents who teach users how to perform transactions using the mobile phone – even transactions which can be performed without the participation of the agent. Conversely, if an agent makes a mistake, or commits fraud, it may be difficult to for users to distinguish between the agent and the service he represents. For these reasons, building a good agent network is an essential precondition to launching a successful mobile money service.

What does a good agent network look like?

Before sitting down to design a distribution strategy for mobile money, operators can identify the characteristics of a good agent network. In every market, operators and customers alike will want agents that are ubiquitous, trustworthy, low-cost, and liquid.

Ubiquitous

Customers will be more likely to start using a mobile money platform if agents are close at hand. After all, financial inclusion levels are low in many developing countries in part because bank branches are inconvenient to poor people. According to the CGAP-GSMA Mobile Money Market Sizing Study, customers are more likely to be frequent users of mobile money if there is a mobile money agent near their home.

(Note, however, that users' desire for ubiquity must be balanced with the requirement that each agent be adequately compensated for participation. As we discuss in this document, oversaturation of a market with agents means that agents will be unable to perform enough transactions to earn enough commissions to compensate them for their investment in mobile money. As such, a good agent network is grown in proportion to the number of active users.)

Trustworthy

Customers will never use mobile financial services if they do not believe that their money will be safe. Fraudulent financial services, although usually on a small scale, do emerge in developing markets from time to time, leading customers to be skeptical about trusting someone else with their money. Moreover, even if customers have a high degree of trust in the mobile network operator that brands the offering, they will also need to feel comfortable with the local representative of that brand.

Low-cost

Mobile money services are heralded as a way of offering financial services to previously unbanked people. Since poor people do not have large sums of money to deposit or otherwise transact with, the argument goes, it is impossible for traditional bricks and mortar banks to serve them profitably. This implies that the cost structure of a mobile money agent must be dramatically lower than that of a bank if it is to profitably serve poor customers.

Liquid

One of the main functions of a mobile money agent is to perform cash-in/cash-out transactions which cannot be executed without sufficient reserves of both cash and electronic value. Because both are forms of value, we will refer to both cash liquidity and e-money liquidity in this document. With respect to e-money, however, it is equally valid to think in the terms of traditional distribution channel analysis: agents must maintain inventory of electronic value that is sufficient to preclude stock-outs most of the time.

What is the relationship between mobile money distribution and airtime distribution?

It is widely understood that offering financial services using the mobile channel is significantly less expensive than using bricks and mortar branches because the mobile infrastructure of handsets, base stations, etc. has already been laid. Just as an internet business like Amazon.com would have been economically unviable had the physical infrastructure of cable, routers, and so on not already been in place, so too mobile money is only feasible once the mobile network infrastructure is in place.

When it comes to mobile money, however, mobile network operators arguably have an even more valuable asset than their communications networks. In markets around the world, mobile network operators have developed extensive distribution networks to sell airtime, either in the form of vouchers or electronic top-ups. Although it is often possible to purchase airtime in formal retail channels (supermarkets, etc.), these outlets typically do not offer operators the reach into rural areas (and poorer parts of urban areas) where many of their customers work and live. As such, many mobile network operators have built from scratch distribution networks that can encompass tens of thousands of agents, allowing their product (airtime) to achieve a degree of ubiquity in the marketplace that is often matched only by Coca-Cola – putting airtime, along with Coke, "within an arm's reach of desire."

It is distribution networks like this that the most successful mobile money deployments in the world have leveraged. As such, it makes sense for mobile network operators to seek to leverage at least parts of their existing airtime distribution network when it comes time to build a mobile money agent network. This is because the airtime distribution network has the same characteristics that users and the operator alike value:

- *Ubiquity:* The airtime distribution channel has an extraordinarily reach into even remote parts of most countries.

- *Trustworthiness:* Every day, thousands of customers willingly hand over cash to their local airtime distributor, confident that they will receive airtime in return.

- *Low-cost:* Airtime retailers typically have low or no fixed costs, and, as sole proprietors, do not distinguish between profits and take-home pay.

- *Liquidity:* Airtime resellers already manage airtime and cash liquidity in coordination with their distributors. Moreover, those resellers who engage in other kinds of business are likely to generate significant "cash in the till" from those sales.

However, leveraging this infrastructure for mobile money has turned out to be a formidable challenge. It turns out that many airtime agents (and channel intermediaries, like superdealers) find that the economics of distributing mobile money are less attractive than those of distributing airtime, and so choose to pass on the opportunity. We discuss this dynamic in the second section of this handbook, and describe the other kinds of retail outlets that can serve as mobile money agents instead.

In any case, however, many of the management processes that we describe in this document are different from those which govern airtime distribution. For one thing, agents must maintain two kinds of interrelated inventories, e-value and cash, rather than just one (airtime). This requires more sophisticated liquidity management systems. For another, mobile money is a service that must be offered differently from the way airtime is sold. This requires more intensive training, and oversight, of agents.

For these and other reasons, operators typically need to think about mobile money distribution as a separate challenge from airtime distribution, even though in certain cases they may be able to realise some synergies between the two channels. In practice, nearly every mobile money deployment in the world has embraced some outlets that sell airtime and some that don't as mobile money agents, and we make the assumption that this will be the case for most operators making use of this handbook.

Building a Network of Mobile Money Agents

Introduction

In this article, we explore the key issues facing operators as they build agent networks to support their mobile money platforms. For easy navigability, we've structured the article as a series of questions, with responses that draw on the experiences of operators around the world. For many questions, it's not yet possible to indicate best practices with certainty, particularly since 'best practice' will likely vary by market on account of features unique to each country. Still, we strive to provide a clear analysis of the merits and drawbacks of various approaches.

We begin by defining the roles that operators assign to agents and how these roles vary across (and sometimes even within) markets; we consider the optimal size of an agent network, both at launch and thereafter; and we discuss what operators should require from agents and on what basis they should select them. We then take a close look at some of the processes that need to be in place to build the network: systems for recruiting agents, processing applications, and training new agents.

What do agents do?

Agents perform three key roles: they register customers, educate them, and facilitate cash-in/ cash-out transactions. Agents for M-PESA in Kenya perform all of these functions; in other deployments, these functions are disaggregated and assigned to different classes of agents. These responsibilities can be disaggregated even further – distinguishing agents by the size of the cash-in/cash-out transactions that they are authorised to perform, for example. There are advantages and disadvantages to setting up agent classification systems in which different agents specialise in different things, and operators need to understand these before deciding which model works best for them.

Agent Uniformity: the Safaricom Model

One of the most important characteristics of Safaricom's M-PESA agent network is its homogeneity. That is, while the logo may be painted on each agent's storefront in a slightly different way, every M-PESA agent has the same set of responsibilities and authority and adheres to the same set of guidelines.

This approach works well for three reasons. First, agent uniformity is easy for customers to understand. When a customer sees an M-PESA sign, they correctly assume that they can perform any type of transaction there. Likewise, because every agent displays the exact same M-PESA tariff card with a simple pricing model, customers can easily understand how the service works and what they should be paying for each type of transaction. Second, the consistent customer experience delivered by the uniform M-PESA agent helps foster trust – particularly for customers that are new to formal financial services. And third, integrating the responsibilities of customer registration and cash-in / cash-out makes it easy for customers to start transacting on the platform immediately after signing up.

Agent heterogeneity: when not all agents are the same

Yet many other mobile money providers have decided against agent uniformity, instead assigning different sets of agents different roles or characteristics. For instance, MTN Uganda has two different categories of agents: field registration agents who are tasked simply with signing up new customers, and cash-in/cash-out agents. This represents a departure from the uniform M-PESA model by separating responsibilities into two types of agents.

The agent model chosen by South Africa's Standard Bank Community Banking represents a departure from the M-PESA model too, but in a different way. They have built an agent network composed of different types of agents: small shops, bank branches, bill-payment counters. All of these agents perform cash-in/cash-out, but each category has a different tariff structure.

	Community retailer	Cell phone	Standard Bank ATM	Standard Bank branch	Other banks ATM	Other retailer POS (MasterCard merchant)	EasyPay retailer
Payment to another Standard Bank mobile banking account	1% with min 50c max R10	1% with min 50c max R10	not applicable	not applicable	not applicable	not applicable	not applicable
Purchase goods from retailer	1% with min 50c max R10	1% with min 50c max R10	not applicable	not applicable	not applicable	R2,25	not applicable
Cash paid into your Standard Bank mobile banking account	1% with min 50c max R10	not applicable	R4,50	R9,00	not applicable	not applicable	R9,00
Cash out	1% with min 50c max R10	not applicable	R4,50	R9,00	R4,50	not applicable	not applicable
Airtime purchase (MTN, Vodacom, Cell C, Telkom)	free	free	free	not applicable	R4,50	not applicable	not applicable
Electricity purchase	free	free	free	not applicable	R4,50	not applicable	not applicable
Balance enquiries	R0,50	R0,50	R2,25	not applicable	R2,25	not applicable	not applicable
Mini-statement	R0,50	R0,50	not applicable	not applicable	not applicable	not applicable	not applicable
Payments to another bank account	R3	R3	not applicable	not applicable	not applicable	not applicable	not applicable
Payment of an EasyPay bill	R3	R3	not applicable	not applicable	not applicable	not applicable	R3,00
Payment to a credit card	R3	R3	not applicable	not applicable	not applicable	not applicable	not applicable
Purchase and/or cashback at other retailers Point-of-Sale	not applicable	not applicable	not applicable	not applicable	not applicable	R4,50	not applicable
Cheque deposits	not applicable	not applicable	free	free	not applicable	not applicable	not applicable

Standard Bank Community Bank schedule of fees – 2009

But why have these deployments broken from M-PESA's proven agent model and decided to allow different agents to perform different functions (in the case of MTN) and charge customers different prices for transacting at different types of agents (in the case of Standard Bank)?

In MTN's case, the decision to separate the registration function from the cash-in / cash-out function enabled them to quickly acquire customers, for two reasons. First, MTN was able to rapidly mobilise a large sales team since it is quicker and easier to onboard a field registration agent than a cash-in / cash-out agent. Moreover, a field registration agent spends 100% of his time promoting mobile money, whereas cash-in / cash-out agents are typically engaged in other lines of business, leaving them with less time to promote the service aggressively. Second, field registration agents are mobile, whereas cash-in / cash-out agents are not. This means that MTN can deploy field registration agents to customers in the places where they congregate, such as malls or festivals. Cash-in / cash-out, on the other hand, have to wait for customers to come to them.

In Standard Bank's case, their strategy was to tap into existing distribution channels – channels like bill-payment outlets that were already in place in the relatively sophisticated South African market – but they found that doing so required paying different commissions to different kinds of outlets. To preserve its own margins, Standard Bank decided to charge customers different tariffs that mirrored the different commissions that they paid different categories of agents.

The decisions made by MTN Uganda and Standard Bank required them to make tough tradeoffs. For Standard Bank, leveraging pre-existing distribution points to rapidly scale their agent network justified the risk that customers would be put off by a tariff structure that varied by agent type. For MTN, the ability to rapidly sign up new customers using customer acquisition agents justified taking two risks. The first is that aggressive field registration agents, in an effort to maximise their commissions, would sign up customers that have no real need for the services offered by MTN MobileMoney – although MTN Uganda's management believe that all its customers are potential users of mobile money, making such an ambitious customer-registration effort worthwhile.

The second risk is that even customers who wanted to use the service might struggle to find a cash-in / cash-out agent to start transacting after signing up with a field registration agent.

Further refinements

Beyond the deviations from the agent uniformity model already seen by MTN Uganda and Standard Bank Community Banking, a third kind of variation is possible. **We expect that operators will begin to appoint different classes of agents based on the transaction values which they are empowered to perform.** For example, small, informal agents might have low transaction limits, while bank branches, supermarkets, or other formal outlets with deep pools of liquidity would specialise in large-value transactions. This will offer users the ability to make very large and very small value cash-in/cash-out transactions, transactions which today are either unaffordable or impossible but would make the service more attractive to high and low value customers. But operators will have to balance this opportunity to permit a broader range of transactions – and thereby entice users at the base of the pyramid and at the high end to sign up – with the added complexity of a heterogeneous agent network.

Nevertheless, operators, particularly those who are launching a new mobile money platform, should not forget how complex mobile money can seem to potential users. This is particularly important when the target market is unbanked people with low levels of financial literacy. When this is the case, operators should exercise caution when introducing refinements into their agent network that could confuse the target market.

How big should an agent network be?

Operators and users alike want agent networks to be as large as possible. **However, there are good reasons why growth in agent networks has to be carefully planned to ensure the overall success of the deployment. Our analysis suggests that operators should take a three-phased approach to scaling their agent network:** (1) recruit an adequate number of agents throughout the market to support a commercial launch; (2) redirect resources from agent recruitment to customer acquisition after launch; then, once an equilibrium between the number of agents

and the number of customers has been achieved, (3) grow the two in parallel.

Pre-launch

Before launching, operators recruit the number of agents they believe will be sufficient to meet demand from early adopters. This number will be smaller than the number of agents that the operator seeks to have in the long run, but experience shows that growing the agent network too fast, too soon entails significant risk.

To justify sticking with the service, agents need to perform a certain number of transactions per day. That's the only way they can earn a sufficient return on their investment in float. **When operators recruit too many agents before launch, there often won't be enough business to go around, causing agents to defect.** This can happen quickly. One mobile operator recently launched a service and within two months had signed up 3,000 agents but just 60,000 customers. Assuming each customer performed two transactions per month, this would provide each agent with just one transaction per day on which he would likely earn less than a dollar in commissions. This poor return led many agents to reinvest the capital they previously committed to float into something more productive and to forget key processes related to mobile money. **This cycle can jeopardise a deployment: when agents lose interest and stop holding float, customers become frustrated because they can't find a liquid agent and stop generating the very transactions agents need to justify their investment in mobile money.**
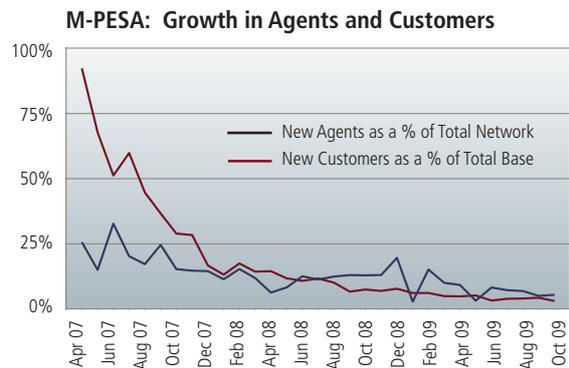
Since the number of agents that operators seek to have active at the time of launch is small (relative to their ultimate ambition for the scale of the network), it's important to optimise their geographical distribution. For instance, deployments that focus on money transfer will need to recruit agents in strategically defined 'send' and 'receive' areas. In the case of M-PESA, this meant recruiting not just in Nairobi, but also in rural areas. To map the specific remittance corridors for which each end will require coverage, some operators examine data from existing airtime transfer services, or leverage market knowledge from bank partners that may already offer remittance services.[1]

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[1] It is because domestic remittance corridors are inter-regional that pilot tests of mobile money in narrowly circumscribed geographies often fail.

Post-launch

After going to market, operators should change their focus from signing up agents to signing up customers. Having previously signed up a cadre of new agents, operators need to, as quickly as possible, send those agents the business that will keep them committed to mobile money. Over time, the ratio of users to agents will thus begin to increase.

For example, Safaricom launched M-PESA with just a few hundred agents in Kenya (that is, fewer than 5% of the number of M-PESA outlets today). Thereafter, they signed up new customers much more rapidly than new agents: in the first quarter, for example, the number of users quintupled, while the number of outlets barely doubled. Within six months, the number of users per agent had grown from zero to 600.

M-PESA: Growth in Agents and Customers

That ratio continued to increase until it reached 1,000 users per agent in June 2008. It was only then, roughly 15 months after launch, that Safaricom started recruiting new agents more quickly than new customers (again on a percentage basis).

Customers Per Agent

Managing controlled, sustained growth

Because each market is different, it is impossible to generalise about what the ratio between users and agents should be. **Ultimately, operators will know when they've found this equilibrium when users have convenient access to agents that maintain float – because agents, in turn, get enough customers to reward them for doing so.**

Once this equilibrium is achieved, operators should seek to maintain balance by growing their agent network and their customer base roughly in parallel. **Operators can do this by carefully timing their use of mechanisms that will accelerate growth in customer numbers (from increased above-the-line marketing expenditures to temporary trade promotions that encourage signing up new customers) or the agent network (such as special incentives offered to aggregators for signing up new agents).**

What should mobile operators look for in a prospective agent?

Mobile operators accustomed to designing airtime distribution networks, typically with the goal of ubiquity in mind, may ask why it is important to screen agents so methodically. Mobile money agents need to be selected more carefully than airtime retailers because mobile money and airtime are distributed in two fundamentally different ways.

Airtime is sold by retailers as a product. It comes in the form of a physical scratch card, has a clearly marked price, and requires a simple exchange of cash and a product between customer and retailer. Even in markets where electronic top-up is available, customers understand the exchange as an electronic equivalent to buying a scratch card.

Conversely, mobile money agents offer customers a service: loading or unloading monetary value into or out of the customer's account. Moreover, as service providers, agents are also expected to help educate customers about mobile money – an unfamiliar concept to target customers – and, if they themselves are trustworthy, play a pivotal role in the early days of a deployment in building trust. For all these reasons, the bar for mobile money agents should be set higher than for airtime retailers.

To some extent, operators can control the quality of their mobile money agents by establishing eligibility requirements. Some of these criteria will likely be dictated by regulation, but in most markets operators need to develop selection criteria of their own. These typically include the following:

#1: Ability to maintain sufficient cash and e-money float balances.

In nearly every market, deployments stipulate minimum values of physical cash and e-money float that agents must maintain. These minimum values are designed to ensure that agents will be able to serve the projected number of customers for their catchment area. For instance, Zambia's Celpay requires agents in metro Lusaka to maintain US$780 in float, and rural agents to maintain US$575 at any point in time.[2]

But how can operators assess whether a potential agent has the means to maintain the required amount of float? Pakistan's easypaisa leverages Telenor's data on airtime agent sales to identify retailers that are healthy and liquid businesses prior to approving them as a mobile money agent. Operators who are offering mobile money services in partnership with banks can leverage their partner's expertise in evaluating the financial health of small businesses. And in cases where the retailer is a current client of the bank, operators can make use of the data gathered over the course of the relationship between bank and retailer. For instance, MTN Mobile Money in Ghana works with 9 bank partners, each of whom leverages their knowledge of existing clients to help identify suitable agent candidates.

Float Requirements
Typically, operators require agents to commit to holding a certain amount of cash and e-money. This is almost always in addition to the "cash in the till" that retailers would hold anyway. Operators need to decide what they can realistically expect agents to maintain in float, taking into account agents' access to capital, their alternative investment opportunities, and so on. **It is also worth noting that, in our experience, minimum float requirements are flouted (with the operator's tacit consent) in many markets in the early days of a deployment.** As discussed in the introduction to this section, it is only when agents are sent customers who want to transact that they begin to see value in maintaining float.

#2: Strategic retail locations

As with any retail business, location for mobile money agents is important. In recognition of this, WING, a bank-owned, multi-operator deployment in Cambodia, has focused on creating a dense network of agents along a busy road in Phnom Penh where many prospective customers work in garment factories. WING staff have personally vetted the suitability of each agent location. In the long term (and when sustainable), mobile money deployments often seek to have at least two agents in each locale to promote healthy competition.

Agent Branding and Merchandising
Agents are often required to brand their shops with materials furnished by the mobile money service provider. This usually consists of signs or banners for the outside of the shop which advertise that the establishment is a mobile money agent for an operator and not merely a seller of airtime; and then a poster for the inside of the shop that plays a customer education and protection role.

When deciding how much to require of agents, operators should be realistic about the amount of leverage they bring to the relationship. For example, Safaricom in Kenya prohibits its M-PESA agents from selling airtime for rival mobile networks and insists that M-PESA agents be prominently branded as such. But it was able to do so in part because of its dominant market position (74% market share at the time M-PESA was launched), a position of negotiating strength that few other operators enjoy.

#3: Literate staff

Mobile money agents must be literate since their responsibilities always include performing processes that involve reading and/or writing. In some cases, it will be necessary for agents to be literate in a language other than their native one. For instance, agents for M-Paisa in Afghanistan must be able to read in English or in phonetic Dari and Pashto to conduct transactions on their handsets and record information.

#4: Trusted by the community

Because mobile money is a financial service, the credibility of a new service can be enhanced if agents themselves are already deemed trustworthy by consumers. This can be achieved in several ways. Many operators have established partnerships with large retail chains that offer high brand visibility

[2] For more information, see "Case Study - Zambia" in the *2009 Mobile Money for the Unbanked Annual Report.*
http://www.gsmworld.com/documents/mmu_2009_annual_report.pdf

to serve as agents – chains which frequently also have deep pools of cash liquidity which they can leverage for cash-out. In other cases, operators have used aggregators with local knowledge of the retail landscape in particular areas to source the most trusted and respected agents – even when they're small and informal businesses.

#5: Reach
Signing up multi-outlet agents (supermarket chains, banks, microfinance institutions, etc.) often offers a quicker route to scale than recruiting single-outlet shops one by one. But given that the retail sector is largely informal in most markets conducive to mobile money, independent outlets typically form the backbone of any operator's agent network.

How are agents recruited?
Recruiting agents is one of the most time-consuming and costly parts of launching a new mobile money service, given that the value proposition for agents is not yet obvious to the pool of potential agents. Broadly speaking, it involves three activities: identifying potential agents, educating them about mobile money, and encouraging those who are interested to apply. Since in most markets the pool of potential agents is much larger than the number who will ultimately become agents – at least in the early days of a deployment – operators have to cast a wide net in order to sign up their target number of agents.[3] One key decision operators need to make is whether to do this work in-house or to outsource it. In the early days of its M-Paisa deployment, Roshan tasked its regional sales managers with the responsibility for signing up M-Paisa agents, but found that they did not have sufficient bandwidth to devote to the effort. Alternatively, some operators hire resources within the mobile money team who are responsible for recruiting agents. The major drawback to this approach is that these new recruits will probably not know the retail landscape in sufficient detail throughout the country to identify promising agents efficiently. When operators decide to outsource agent recruitment, they must also decide to whom to outsource, and on what terms.

The experience of Vodacom Tanzania, which has tested multiple recruitment strategies when setting up an agent network for M-PESA – from leveraging airtime distribution channels to engaging a field support agency, and finally to an aggregator model – illustrates the advantages and disadvantages of each approach.

Leveraging Operator Airtime Distribution Channels
When initially planning for M-PESA's launch, Vodacom Tanzania hoped to leverage its existing airtime distribution channel in building an agent network. Specifically, Vodacom Tanzania wanted its six airtime superdealers (that is, the businesses to which Vodacom Tanzania sells airtime and which in turn sell it on to the channel) to spearhead the recruitment of agents, exploiting superdealers' and their dealers' knowledge of the channel to identify potential agents based on their location, volume of airtime sales, and other factors. But when Vodacom Tanzania approached its superdealers and asked them to take on this role in exchange for a share of future commissions, they only agreed to contribute their directly owned outlets to serve as M-PESA agents, but declined to play a more strategic role[4] as the M-PESA commission model was not designed to pass on commissions to further tiers.

Engaging a Field Support Agency
Vodacom Tanzania realised that building an agent network throughout the country without the help of their superdealers would require a lot of legwork. There are few chain stores in Tanzania, so quick wins (getting a large number of agents by signing a single deal) would not be common. And since they would be contracting with them directly, the obligation to conduct due diligence on potential agents was significant. To ease the demands on internal resources, Vodacom hired Afrikings – the company already responsible for field marketing and sales for Vodacom's airtime distribution network – to recruit M-PESA agents. Even with their help, this turned out to be a slow process; out of 100 potential agents that would attend an information session about M-PESA, only ten would show interest, and many of these would ultimately prove unsuitable in the due diligence process – a process which, even

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[3] Eventually, operators can scale back oreven eliminate most of their recruiting efforts, once the number of potential agents which self-identify and apply on their own is sufficient to meet the operator's growth targets.

[4] For a more thorough discussion of why this often happens, see our "Incentivising Mobile Money Agents" at http://www.mmublog.org/agent-networks.

for successful applicants, took 3–4 weeks. In part, the problem was that Afrikings representatives lacked detailed knowledge of the retail landscape in the many towns and villiages they were responsible for, meaning that they were unable to quickly sort through the large number of potential agents to hone in on the most promising candidates. Nevertheless, by April 2008 Vodacom had assembled 100 agents and went to market with M-PESA.

The Aggregator Model

As time went by, it became clear that Vodacom was unable to recruit agents fast enough to keep pace with growth in the customer base. So it decided to add a layer in the distribution channel between Vodacom and its agents that could speed the agent acquisition process. These new players, called aggregators, were to be responsible for recruiting new agents and for managing their float. In return, they would be paid a bonus for each agent recruited and a percentage of commissions earned by that agent going forward. Aggregators were given no regional exclusivity, unlike Vodacom Tanzania's airtime superdealers.

This structure proved to be effective, and it persists at Vodacom Tanzania to this day. There are seven aggregators, and the intention is ultimately to have no more than ten.[5] Vodacom Tanzania has found that these aggregators can sign up agents extremely quickly; one, for example, signed up 50 agents in three weeks.

Defining the Role of Aggregators

Speed is the crucial advantage of the aggregator model. Typically, the driver of such rapid growth in the agent network is an incentive scheme for aggregators that rewards them for each agent they sign up. For obvious reasons, this compensation structure is more effective than one where aggregators are paid a salary or flat fee regardless of the number of agents that they sign up; however, the operator should not commit itself to paying such bonuses indefinitely, since at some point in the growth of the service it will no longer be necessary for aggregators to source applications; agents will apply for themselves.

Theoretically, the responsibility of aggregators could end once an agent is signed up. But it is important to avoid putting into place an incentive structure that rewards aggregators for signing up bad agents – that is, those who are not going to actively serve customers (because they don't maintain float or for some other reason). One solution to this problem is to only pay out the full commission for signing up an agent to the responsible aggregator once that agent has performed some minimum number of transactions and/or signed up a certain number of customers – although aggregators would probably complain about this, given that the actions of agents are, ultimately, outside of the aggregator's control after the recruitment phase.

Vodacom Tanzania decided that its aggregators were positioned well not only to recruit agents, but also assist them in managing cash and electronic-value liquidity. As such, they decided to offer aggregators a percentage of the commissions earned by agents they'd signed up to M-PESA in exchange for helping them manage those agents' float. We discuss this arrangement in more detail in the "Managing Mobile Money Agents" section of this handbook where we refer to entities tasked with managing agents' liquidity as masteragents. The key point for now is to note that, by tasking aggregators with both recruiting and ongoing cash management, Vodacom Tanzania effectively incentivised them to sign up quality agents – that is to say, agents who are liquid and who will stand ready to transact with customers.

It is telling that, today, Safaricom recruits agents in a manner very similar to Vodacom Tanzania, even though it got started by recruiting agents using in-house teams. As customers started flocking to Safaricom's M-PESA in late 2007, those agents started making significant profits. In turn, huge numbers of agent applications started to flood Safaricom, outpacing its ability to review them properly. At the same time, agents began appointing other agents and managing their liquidity (i.e. activity of masteragents).[6]

When deciding which of these recruiting models is best for them, operators need to ask a series of basic questions. What are the internal capabilities – whether in the airtime distribution team, or the mobile money team – that could be leveraged for building an agent network? What is the appetite of airtime superdealers for distributing mobile money? Are

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[5] It is interesting to note that one of these aggregators is Afrikings, Vodacom Tanzania's field marketing and sales support agency.
[6] See "Three keys to M-PESA's success: Branding, channel management and pricing" by Ignacio Mas and Amolo Ng'weno.

there entrepreneurs in the market who can take on the aggregator role? Are operators comfortable giving up some control over the identification and recruitment process? Only after answering these questions can the appropriate agent recruitment strategy be developed. What is clear is that aggregators speed the growth of an agent network and can play a valuable role in its ongoing management.

Is there an application process?
While the application forms are typically simple, prospective agents often struggle to produce the required supporting documentation to complete an application. This should not be surprising. Safaricom requires everything from certificates of incorporation to 6 months worth of bank statements. For some prospective agents, these are not easy documents to source. Operators therefore need to balance a desire to diligently vet prospective agents by requiring extensive documentation with the equally strong need to build a network of sufficient scale. Generally speaking, there should be a clear rationale for each document required, and operators should test whether desirable agents will be able to supply all these documents.

From agent applicants that are not already Safaricom airtime dealers, Safaricom requires the following documents:

- Copies of Memorandum and Articles of Association

- Certified copies of VAT and corporate income tax certificates, where applicable

- A profile of the company and a business plan

- List of outlets

- Certificate of Incorporation or equivalent

- An official shareholding statement or equivalent

- Copies of IDs and passport photos of company director(s)

- Copies of IDs of key staff

- Completed M-PESA agent application form

- Business permits for each of the outlets

- Proof of minimum 6 months trading history in the form of 6 months of company bank statements

- Completed personal declaration forms by company director(s)

- Police certificate of good conduct for directors or persons playing equivalent role, office administrators, and primary assistants.

And just as some agents may struggle to produce the required supporting documents, some operators often find it difficult to process them at a reasonable speed.

Thus, prior to launch, operators should consider how long each application will take to review, reconcile it with the anticipated size of their agent network and scale their back office operations accordingly.

Some operators decide to supplement this back office review by physically visiting each prospective agent to inspect their premises, verify staff capabilities, and consider whether the location is desirable.

What obligations are contractually imposed on agents?
Contracts between operators and agents vary considerably across markets, but common clauses include:

- *Branding:* operators commit to furnishing agents with the marketing and branding materials which they need; agents, in turn, agree to use only materials provided by the operator

- *Commissions:* operators reserve the right to vary and / or suspend any commissions at any time (and when operators use masteragents and pay agents via masteragents, masteragents are obligated to pay out commissions to agents within a certain timeframe)

- *AML/CFT:* agents commit to carrying out AML/CFT checks, subject to training by the operator or its appointed proxy, and any reporting obligations imposed by the operator and/or regulator

- *Float:* agents commit to maintaining a certain level of float (when operators use aggregators, this responsibility may be assigned to the aggregator instead)

- *Termination:* operators and agents typically reserve the right to terminate their relationship at any time and without cause

If an operator has chosen not to appoint masteragents, then its agents should be contractually prohibited from ceding, delegating, or sub-licensing any of their rights or obligations to any third party.

How are agents trained?

Training agents is a non-trivial undertaking. Agents must not only have a good conceptual grip on mobile money, be able to conduct transactions (including following all the associated business processes, such maintaining a transaction logbook), and fulfill KYC and AML/CFT requirements; they must also be able to explain the service to customers and provide basic support to them. Every operator with a mobile money platform needs to develop a training program that covers these essential elements.

Training Cash In/Out Agents

To deliver this training, operators need to decide whether to train agents in the field, (generally at the agent's retail shop), or at some central location. In Uganda, new handlers – that is, any new front-line employee of a cash-in/cash-out agent for MTN MobileMoney – receive up to six hours of training in the field. This training is a mix of theory and practice and is administered by representatives of Top Image (a field marketing support agency) that are dedicated to mobile money.[7] The training culminates in an exam, and if the handler doesn't pass, the Top Image representative comes back the next day to conduct further training. In practice, however, sometimes new handlers are trained by other employees of the agent.

In contrast, Safaricom requires the owner or manager of each new agent to attend a full-day session in Safaricom House in Nairobi, which also culminates in an exam. This does inconvenience new agents and may discourage some small, "mom and pop" shops in remote areas from applying to be agents, since it would require shutting the shop, and forgoing a day's revenue, to attend the session. However, the advantage for Safaricom is that it is better able to control the content that is presented to agents and can expect the agent's full attention for the day. Safaricom supplements this training with follow up visits (also by Top Image).

Splitting the difference, Orange in Côte d'Ivoire holds half-day training sessions for new Orange Money agents in regional hubs around the country, which are supplemented by in-store visits by staff thereafter.

Training Field Registration Agents

Operators who use a separate class of agents for customer acquisition generally employ a different training mechanism for them. In Uganda, field registration agents receive 2–3 weeks of field training when they start with MTN (although they are typically paid very little, if at all, during this time). This is mostly spent trailing more experienced agents to learn about the features of mobile money, the KYC process, etc. WING in Cambodia, has chosen instead to train its field registration agents in 2–3-day-long sessions before sending them out into the field to start signing up customers. Of course, the content for these sessions differs significantly from that which is presented to cash-in/cash-out agents, too: customer acquisition agents only need to be trained on one transaction type, but may need additional training on sales techniques.

[7] Top Image was used for the first 6 months, but recently MTN moved their functions in-house.

Incentivising Mobile Money Agents

Introduction

In this section we seek to answer a broad question: how can mobile network operators design a set of incentives that encourage agents to become active and productive participants in mobile money distribution? This is important because agents are at the frontline of every mobile money deployment: if they don't sign up customers, no customers sign up; if they don't hold float, customers can't transact; and if they aren't reliable, the mobile money service won't be seen as reliable. Since incentives are a powerful way to shape agents' behaviour – to encourage them to recruit customers, to hold float, and to build customers' trust – it is important to get those incentives right.

That, however, is difficult. If operators pay agents too little, agents will not support the service (essential because mobile money is intangible, unlike fast moving consumer goods, which act as advertisements for themselves when sitting on the shelf). If operators pay agents too much, they will destroy their business model, which is predicated on the cost advantage of using a network of agents to serve customers compared to, for example, formal bank branches. And if operators pay agents for the wrong things, they will incentivise agent behaviour that undermines, rather than supports, the health of the mobile money service.

We have prepared this document to guide operators as they put agent incentives into place, and to offer ideas to operators who are considering changing agent incentives. We focus on setting commissions, but it should be stressed that, from the agent's perspective, the commissions that he earns are just one of the incentives that he benefits from. The volume and size of transactions that the agent is able to handle – which the operator can influence through its spending on advertising and other kinds of marketing – and the effect that serving as a mobile money agent has on foot traffic and hence the sales of other products in an agent's outlet – are the other parts of the equation that determine how much an agent earns.

What is the process for establishing an agent commission model?

Understanding agents' requirements

In every deployment we know of, agents are paid on a variable (commission) basis. The commissions that operators pay agents must, at a minimum, be generous enough to persuade agents to invest in float, learn and remember relevant processes, and serve mobile money customers. Agents are almost always in some other line of business before signing on to a mobile money platform, so agents must perceive the return from serving as a mobile agent to be at least as good as any other line of business that they might get into.

The first step in setting commissions, therefore, is to analyse the economics of the business of a typical agent. Since many potential mobile money agents sell airtime, and since both airtime and mobile money are offered by the same operator, many operators and agents assume that the return from serving as a mobile money agent should be comparable to that of selling airtime. But that isn't necessarily true. Imagine that a retailer, which already sells airtime, is trying to decide whether or not to invest $250 into becoming a mobile money agent. The best alternative to doing so is probably not simply investing in $250 more worth of airtime inventory, since the constraint on most retailers' airtime sales is not supply but demand. Given the wide availability of airtime in most emerging markets, it's reasonable to assume that the return that retailers get from selling airtime is high enough to justify their investment in a level of inventory that allows them to meet existing demand most of the time. If that's the case, the relevant alternative to serving as a mobile money agent is probably not airtime but something else – and that, for many retailers, is fast-moving consumer goods.

The right starting point, then, is for operators to ensure that serving as a mobile money agent offers a superior return to agents when compared with selling their least profitable or slowest moving inventory. This analysis requires a significant amount of field research – talking to potential agents about their business, understanding how they evaluate opportunities, and so on. But it is only through this process that operators can be sure that the commission structure they offer the channel is sufficiently compelling.

To perform this analysis, operators will need to estimate the size and volume of transactions that agents will be called on to perform and the ease and frequency with which agents can restock their balances of cash and electronic value – since the faster an agent can restock, the less capital he will have to tie up in float. These are the variables that the operator has significant control over – by introducing aggregators, for example, operators can make it faster and easier to restock their balances – but this, of course, introduces additional costs into the model. Operators also need to estimate parameters like the value of agents' (or their employees') time,[1] their cost of capital, and their alternative investment opportunities, all of which are variables over which operators have no control.

Finally, operators should not overlook the possibility that, by serving as a mobile money agent, retailers can increase foot traffic and thus sales of other goods in their shops. This effect – which will probably be strongest once a critical mass of users has started transacting, but before the market is completely saturated with mobile money agents – provides incremental revenue for agents at no additional cost to the operator.

Building a viable business model

The economics of the agent's business will therefore dictate the floor of the range of commissions that operators must offer. **The ceiling, on the other hand, will be a function of the operator's overall mobile money business model.** That is, commissions must be set such that an operator can achieve their financial goal for the mobile money service.[2] Operators therefore need to carefully model the commissions they plan to offer, making prudent assumptions about usage and scale, before approaching potential agents with a value proposition. (Of course, these assumptions will sometimes be incorrect, and operators may decide that they need to adjust the commissions they offer in response – see later section on "Can incentives be changed?")

How are the economics of airtime reselling different from serving as a mobile money agent?
It is natural for potential agents who currently sell airtime to evaluate the opportunity to serve as a mobile money agent by comparing it to the business of selling airtime. However, there are many reasons why it is not possible to simply compare the margin that retailers earn on airtime with the commissions that are paid out for facilitating cash-in / cash-out transactions. Operators need to be proactive in helping agents to understand these differences, and to put forward a value proposition that is compelling on its own merits.

First, the cash flows are usually different. As soon as an airtime reseller is able to sell airtime to a customer, he has not only recouped his original investment but also earned his profit margin. In contrast, mobile money agents often receive their commission weeks after performing a transaction. This is less attractive from an agent's perspective since he has to wait a long time for his profit but more attractive in the sense that a lump of many aggregated commissions may appear more valuable than an ongoing stream of very small commissions.

Second, the frequency with which agents can restock their cash and electronic value balances is not the same as the frequency with which airtime resellers can restock their inventory of airtime. In general, the less frequently an agent can restock the supply of any of good, the higher the margin he will need to earn in order to make stocking that good worthwhile. In some markets, agents can access cash or electronic value more frequently than they can restock airtime. But even setting aside this possibility, the fact that airtime agents can perform both cash-in and cash-out transactions allows them to make more efficient use of their inventory than is possible with airtime. Imagine an agent who predominantly performs cash-in but also the occasional cash-out. Every cash-out transaction he performs enables him to perform another cash-in of equivalent value on the same original investment in float. (Indeed, an agent who performed a perfect balance of cash in and cash out would

never have to restock at all.) In contrast, once airtime is sold, it's sold; agents cannot make money by accepting returns and then re-selling the airtime to someone else.

Third, mobile money agents in net receive areas can exploit the synergy between their existing retail business, which generates "cash in the till", and serving as a mobile money agent, which requires cash inventory to facilitate cash out. The larger this synergy is, the less investment the agent will need to make in cash float. In contrast, retailers do not accumulate airtime in the normal course of their business.

Fourth, the increase in foot traffic, and therefore in sales of other goods that agents enjoy when offering mobile money, is potentially greater than that effect when offering airtime, since in every market there are substantially fewer mobile money agents than airtime resellers – at least in the early days of a deployment.

Fifth, although airtime margins are usually fixed on a percentage basis, commissions on mobile money transactions usually vary depending on the size of the transaction. As such, it is hard to make a direct comparison without knowing the distribution of transaction sizes that an agent will perform.

Before approaching potential agents (or channel intermediaries, like super dealers) who are already involved in airtime distribution about the possibility of playing a role in mobile money, operators need to understand each of these points, and be able to clearly articulate to agents why serving as a mobile money agent makes good business sense for them. Nevertheless, operators should not be surprised if many potential agents find the economics of mobile agency less appealing than that of airtime reselling. In that situation, operators in many markets have found that retailers outside the airtime distribution network are more likely to enthusiastically sign up to serve as agents in the early days – but that as soon as those agents start to prosper, traditional airtime retailers (and distributors) are quick to revise their opinion about the value of serving as a mobile money agent. This process is accelerated in markets where customers can top-up their airtime balances using their e-wallet. When airtime resellers realise that customers have begun to do this, they often decide that capturing the commission on cash-in as a mobile money agent is better than being disintermediated from airtime sales altogether

even though operators are typically able to set these commissions lower than corresponding airtime margins for most transaction values.

What are the transactions for which agents are paid?

Usually, agents are paid for every transaction which they facilitate, which, in most deployments, are cash-in, cash-out, and customer registration. **As a general principle, the mobile money agent should make money on every transaction he performs.** This is because agents can pick and choose which transactions to perform, and it would be very frustrating to customers if agents refused to facilitate certain transactions because they were not sufficiently profitable for the agent. The operator, however, shouldn't mind losing money on individual transactions, so long as the overall business model makes sense. This is what enables operators to subsidise certain transactions (most typically cash in, which is free for customers but for which the agent still earns a commission) but then recoup that value in other transactions (most typically money transfer, for which the customer pays and the agent is not compensated).

Customer registration

Agents usually get a flat fee for registering new customers. This is not simply to grow the customer base; it is also to give agents a significant revenue opportunity from the very beginning of a deployment – with the expectation that, as the market matures, commissions from cash-in/cash-out transactions will begin to replace those for customer registration. **This requires a major upfront investment on the part of the mobile network operator.**

In many cases, however, this fee, or a part of it, is paid out only after the customer has performed her first transaction – to eliminate the incentive for agents to sign up users who never intend to use the service and/or to fail to educate customers about how to use the service after signing up. But even that is not foolproof; several deployments have found that some agents induce customers to perform a very small transaction right after registration (say, a cash-in followed immediately by a cash-out) so that they get their commission – after which the customer may never use the service again. If the cost to the customer to register for the service is less than the commission that the agent earns for signing her up, this risk is especially acute, since the agent can simply

subsidise the customer's registration charge (and perhaps even share a bit more), keeping the balance of the commission for himself. To minimise this risk, Zain in Tanzania has adopted an even more elaborate commission for agents who sign up new customers to Zap: a third of the approximately US$1 commission is paid to the agent after customer verification, but the remainder is paid only if the customer does 5 transactions in a 6 month period after registration.

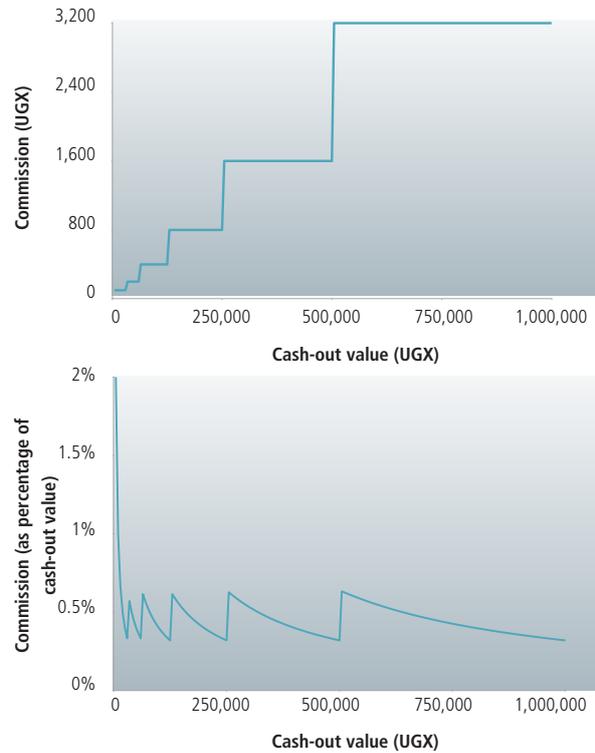**Commissions for customer registration agents**

Operators that use customer registration agents need to consider the particular financial requirements that its customer registration agents are likely to have. Experience in Uganda and Cambodia has shown that paying full-time customer registration agents solely on a commission basis is possible, but that **it is important to pay commissions such that successful customer registration agents are able to earn an attractive wage** (given their skills and labour market conditions) in total; otherwise, they will quickly churn – wiping out any investment the operator has made in training that agent.

As discussed above, care should be taken to incentivise customer registration agents to only sign up customers that have a demand for the services offered on the mobile money platform and to educate them about how to use the service after registration – this should include pointing out cash-in/cash-out agents in the vicinity with whom the customer can begin transacting. If operators make a large part of the commission contingent on customer behaviour in the future, however, they need to bear in mind the cash-flow requirements of customer registration agents in the meantime (who, after all, have no revenues from another business that most cash-in/cash-out agents can count on). Some operators have offered new customer registration agents a small stipend that tapers off over time to solve this problem.

Cash in and cash out

In the majority of deployments, agents are paid for facilitating both cash-in and cash-out transactions. Usually, as transaction values increase, commissions increase in absolute terms but decrease as a percentage of the total. This structure ensures that agents are sufficiently compensated for performing even very small-value transactions. For example, these charts illustrate the commission that MTN MobileMoney agents earn in Uganda for performing cash-out transactions (there are approximately 2,000 Ugandan shillings to the US dollar):

Cash-out Commissions, MTN Uganda

These lines are not smooth because MTN Uganda, like many other mobile money service providers, sets commissions in tiers:

Cash-in Value (UGX)		Agent Commission (UGX)
Minimum	Maximum	
5,000	30,000	100
30,001	60,000	200
60,001	125,000	400
125,001	250,000	800
250,001	500,000	1,600
500,001	1,000,000	3,200

The principal advantage of setting commissions in tiers is that it allows operators to offer agents a more generous margin on low-value transactions than larger-value ones. Without doing this, agents would receive extremely paltry commissions for handling small value transactions, which could discourage them from performing them. But this can in turn set up an incentive for agents to encourage customers to "split" a transactions into multiple, small value transactions. MTN Uganda have designed their agent

commissions for cash-in to make it difficult for agents to do this: agents would have to convince customers to split any given transaction into at least three pieces in order to increase their total commissions, and customers would have good reason to resist this because they would pay much more in tariffs that way.

The most common alternative to paying commissions based on tiers is to pay agents the same percentage of value transacted regardless of the size of the transaction. This eliminates the incentive to split transactions, and can be supplemented with a minimum commission for both cash in and cash out, which ensures that agents are properly compensated for facilitating even small value transactions.[3]

In many deployments, agents earn commissions for cash out that are one and a half to two times higher than for performing cash in. Operators tell us that this is what agents demand. One possible explanation is that agents who primarily perform cash-in transactions are likely to be in dense, urban areas, allowing them to do a higher volume of business and to replenish their stock of e-money easily. Agents who primarily perform cash-out transactions are more likely to be situated in rural or semi-rural areas where they will handle fewer transactions and find it more time-consuming to replenish their stock of cash frequently. Therefore, it will be necessary for them to earn a higher margin on the transactions that they do perform relative to the agents whose primary business is cash in.

Zain Zap cash-in/cash-out commissions

Zain has also adopted the tiered model for its Zap service, but with a few key differences that are closely related and which, taken together, offer a strikingly different value proposition to agents than Safaricom does with M-PESA. First, Zain charges customers for cash in as well as for cash out. Second, Zain allows agents to keep 100% of the tariff they charge the customer for each transaction. Third, although Zain recommends a set of tariffs for cash in and cash out to its agents – and communicates them to customers – they recognise that some agents will modify these, and Zain's ability to control this is limited. As such, agents can charge more or less depending on their supply

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of e-money and cash and customer demand, and they can negotiate different tariffs with different customers. Finally, customers pay tariffs in cash to the agent.

What are the implications of Zain's approach? First, it's a simplified business model for both the operator and the agent. Zain doesn't make or lose any money on cash in and cash out; instead, it makes money on transfers and other customer-initiated transactions. Similarly, the agent captures all of the value that he creates by performing cash in or cash out, and he gets it in cash right away. It also allows Zain to focus its communications on their low transaction fee, typically US$0.12 per transaction, and position Zap as an affordable payment instrument.

On the other hand, the quality of the customer experience with Zap is potentially variable. By allowing its agents to set their own commissions, Zain permitted what probably happens to some extent even in deployments in which it is officially prohibited: agents increasing commissions when demand for electronic value or cash is especially high. In a theoretical world, this should result in optimal pricing – after all, agents can also offer discounts when demand is low – but in the real world, customers can view this practise as predatory. Part of the appeal of mobile money services that offer established prices is the simplicity and transparency of that arrangement to customers. As such, operators considering the Zap model should carefully consider whether the advantages outweigh the disadvantages.

Other agent commissions

Sometimes, operators choose to pay agents other commissions. Vodacom Tanzania, for example, gives agents a commission every time customers whom they registered buy airtime using M-PESA. This commission was established to reduce resistance to M-PESA by agents and aggregators who worried that their customers might stop buying airtime directly from them once they had signed up for M-PESA. The problem with this approach, from an operator's perspective, is it erodes some of the value that is created by migrating customers from purchasing airtime from agents to doing so on the mobile money platform. In most markets, operators do not pay such a commission, but some elect not to promote the ability to top up using the mobile money platform so as not to antagonise their channel.[4]

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[3] One relatively minor disadvantage to this approach is that, assuming the operator charges customers tariffs which are based on tiers, the operator's gross margin will vary substantially by transaction.

[4] Of course, operators who completely bypass their airtime distribution network when setting up a mobile money agent network do not face this channel conflict.

Does every agent have the same commission structure, or do they vary?

Paying every agent the same commissions is the norm, but there are exceptions. For example, operators can agree to offer more generous commission structures to agents with many outlets (for example, a chain of petrol stations) because signing up such agents allows the operator to quickly scale up its network.

In the "Building Agent Networks" chapter of this guide, we discussed how mobile money providers may someday appoint different categories of agents, allowing certain agents to specialise in especially large or especially small transactions. It is very likely that, if and when this occurs, such agents would need to earn different commissions, based on their differing cost structures.

Can incentives be changed? Why and how would they be?

An important driver of the success or failure of a mobile money deployment in financial terms is the commissions that operators pay agents. If operators set commissions too low, potential agents will find the value proposition insufficiently appealing, and the operator will struggle to sign them up. But if operators set commissions too high, operators may find that they are unable to achieve sustainability for the overall deployment. (This can easily occur if an operator's initial assumptions about other costs, revenues, and volumes turn out to have been overly optimistic.) However, reducing commissions risks alienating the agents whom operators rely on not only to deliver their mobile money service, but to promote it.

One solution to this dilemma is operators sometimes consider building some flexibility into the business model from the time of launch. This entails putting together a compelling set of commissions for agents, but making sure that at least some components of that package are clearly identified as short-term promotions that can be extended or withdrawn at the discretion of the operator. For example, operators may offer agents special bonuses for customer acquisition in the first few months after going to market. Or they may increase cash-in and cash-out commissions for a limited time, to reward agents who keep float on

hand even in the early days, in which transaction values are likely to be low. Then, as volumes increase, operators can assess whether commissions should be readjusted.

Even after launch, operators who make liberal use of such time-limited promotions can quickly respond to emerging issues throughout the lifecycle of the deployment. **Many operators have developed sophisticated trade promotion strategies in their airtime distribution business, and mobile money teams can tap into this expertise for ideas about how such promotions can be useful in mobile money as well.**

What are commissions for aggregators and masteragents?

Aggregators (defined in this document as an entity responsible for recruiting agents) are typically paid a flat fee of up to US$100 for signing up agents, while masteragents (who manage agents' ongoing liquidity) earn a proportion of the commissions that agents under their aegis earn. In exactly the same way as with commissions paid to agents for signing up new customers, operators should be careful not to skew the balance of incentives for aggregators / masteragents too far toward agent recruitment, as they are likely to succeed only in growing a very large network of inactive agents. Rather, aggregators / masteragents should reap the bulk of their reward from the ongoing share of commissions earned by their agents – which will encourage them to sign up good agents to begin with. Of course, operators should model the stream of gross receipts (i.e. tariffs less commissions) they expect to realise from an average agent before deciding how much of that value to share with aggregators for signing up the agent.

Some operators dictate how commissions between masteragents and agents are to be split; others allow masteragents and agents to negotiate this. In Kenya, Safaricom have recently decided to insist that masteragents share 80% of commissions earned with the agent, although sometimes in the market that percentage was lower (70%) because the masteragents were investing more time in cash management. In Afghanistan, M-Paisa agents can be left with just

50% of commissions earned when the aggregator / masteragent has put up the start-up capital required for float. (The reduction in the fraction of commissions which they are entitled to keep is thus in lieu of interest being paid to the aggregator / masteragent for the loan of start-up capital).

How do commissions get paid out?

There are three different mechanisms for paying out commissions, and some variation in how long after a transaction the associated commission is paid:

Timing	Instrument
■ In arrears (lump sum)	■ Electronic value
■ Immediately after transaction	■ Cash
	■ Bank transfer

Both Zap and True Money, (a mobile money service offered by Thai mobile operator True Move) pay commissions immediately after transactions have been completed. True pay them in electronic value. In the Zap model, agents are entitled to collect 100% of the tariff they charge the customer, and they take that payment in cash.

In contrast, agents for all of Vodafone's money deployments are paid commissions monthly in arrears. At the end of each month, the operator tallies up the commissions that are owed to all of the agents of each masteragent, then transfers them, in electronic value, to the masteragent; in turn, the masteragent is responsible for disbursing the fraction of the commission due to individual agents.

At MTN Uganda, commissions can be paid in two ways, depending on the agent's preference: immediately, with the value transferred into the agents e-money account; or at the end of the month, with the value transferred into the agent's bank account. Typically, it is larger agents, with more sophisticated reconciliation processes, that prefer the latter.

One advantage of paying commissions in lump sums in arrears is that they may seem more valuable to agents than many small individual commissions. Another is that such commissions can be held back if the operator finds that an agent has earned them fraudulently. But the disadvantage is that agents

have to wait a long time to earn a profit from mobile money. Agents seem to vary in their preference along this dimension, both within and across markets, so MTN Uganda's ability to do both allows them to suit the preferences of any potential agent.

The main advantage of paying commissions on the mobile money platform is that it encourages them to roll those commissions into their stock of electronic value.

Managing a Mobile Money Agent Network

Introduction

In this article, we explore how mobile operators can ensure that the agent networks they have built and incentivised are managed effectively. A well-managed agent network can help operators build brand awareness, educate customers, and meet system-wide liquidity demands, all of which builds confidence among users in a service that is initially unintuitive. A poorly managed one, by contrast, will be characterised by widespread low-quality customer experiences, which in turn erode trust and drive away business.
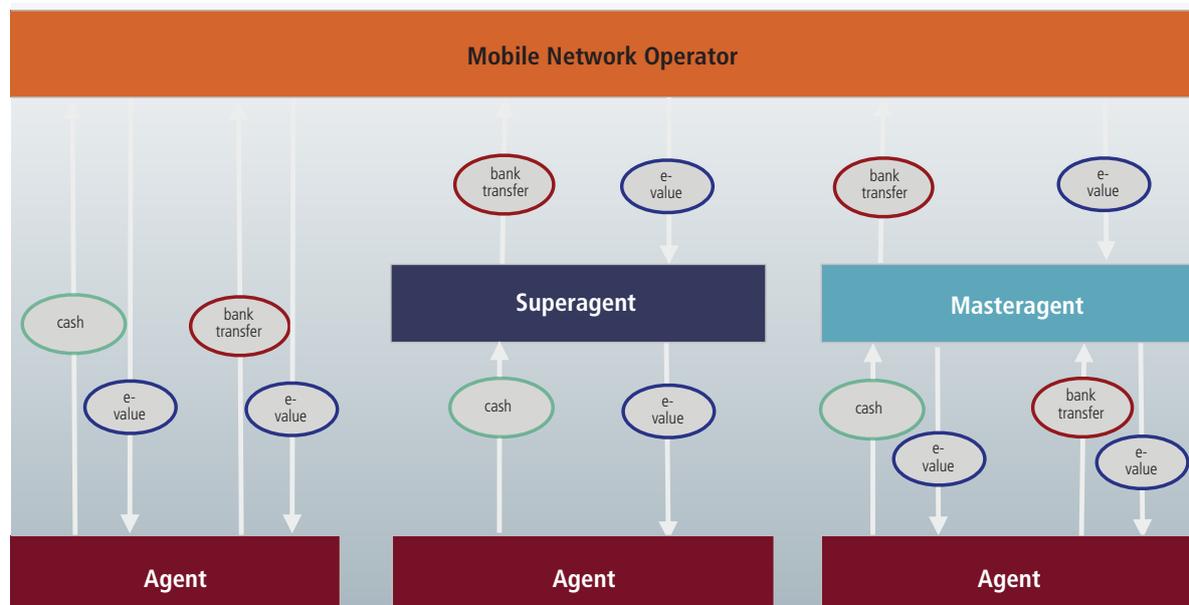
We address two broad questions in this section about agent network management. First, we consider the ways that operators can ensure their agents consistently deliver positive customer experiences, including the various mechanisms that can be used to ensure agent liquidity. Second, we identify the ways that operators have safeguarded their agent networks from being abused.

How do operators ensure agents are liquid?

Most agents will regularly need to restock their inventory of electronic value or cash in order to continue serving their customers. Agents who primarily perform cash in will need to restock their inventory of electronic value; agents who primarily perform cash out will need to restock their inventory of cash.[1]

Operators have developed a host of liquidity management processes, and most operators employ more than one. In part, the options that will be available to operators are shaped by their existing relationships with stakeholders like airtime dealers – as well as the quality and extent of the banking infrastructure in their markets and the willingness of banks to play an enabling role for mobile money. **All of these mechanisms have a cost, whether explicit (bank transfer fees) or implicit (time, capacity at company-owned stores, etc.), and whichever entity assumes these costs will need to be compensated for them – whether it is the operator, the agent, or an intermediary.**

Selling electronic value to the channel: a set of options

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[1] The few agents who find that they perform about as much cash-in as cash-out will have to restock much less frequently; the hypothetical agent whose electronic value float requirements were exactly equal to her cash float requirements would find it necessary to restock only when her business is growing.

Option 1: Selling and buying electronic value directly to and from agents

The simplest arrangement is for mobile operators to sell and buy electronic value directly to and from agents. Many operators have company-owned retail locations in the markets in which they trade, and they can use these outlets as mobile money and cash distribution points to agents (although they would also typically serve as agents to users as well). However, this approach requires agents to physically present themselves at one of the operator's outlets, which, particularly for far-flung agents, can take up a large amount of their time.

If the existing banking infrastructure in the market is sufficiently developed, an operator can leverage it to make selling and buying electronic value to and from remote agents easier. For example, MTN Uganda allows agents to buy electronic value by depositing cash into a bank account at its partner bank. Once the deposit has been confirmed, MTN Uganda transfers the electronic value to the agent. Since making deposits is free, this mechanism does not have any explicit costs, but it still takes up agents' time – again, for rural agents who live far from a branch of MTN Uganda's bank partner. This approach is a good option for operators who have partnered with a bank that can settle cash deposits in real time. It is also relatively straightforward: this approach does not require any modification to the bank's ordinary deposit-taking processes. Note, however, that buying electronic value from agents using this mechanism requires the agent to have a bank account, into which the operator can deposit funds (which the agent can then retrieve as cash).

In Thailand, where the banking infrastructure allows for instantaneous intrabank transfers, a True Money Express agent can buy electronic value by transferring money from her bank account to True's (a transaction that is completed on a mobile handset), after which her account is immediately credited with electronic value. (True enables this functionality by holding bank accounts at roughly a dozen banks in the country.) However, unlike the previous options, this approach has an explicit cost: a bank transfer fee of about 1%, which the agent pays. In addition, it works only for

selling electronic value to, rather than buying it from, agents – although since True Money Express agents do not yet facilitate cash out, which would entail accepting and potentially accumulating a large volume of electronic money from customers, there is rarely a need for agents to sell electronic value back to True.[2]

Option 2: Using superagents and masteragents

In most markets, however, it is unrealistic to expect agents to travel to an operator-owned outlet or a branch of the operator's bank partner and impossible for the banking system to facilitate instantaneous transfers and thus purchase of electronic value. **In these cases, operators appoint intermediaries to whom they will sell and from whom they will buy electronic value, who, in turn, will sell and buy electronic value to and from agents.** Like wholesalers in other distribution systems, these entities earn a somewhat lower commission than regular agents do, because they deal in bulk, but nevertheless they must be compensated for their role.

The most obvious candidates for this role are banks, ideally those with a relatively large network of branches, and banks who agree to perform this function are sometimes designated superagents. **For a fee, superagents agree to buy and sell electronic value in exchange for cash.** Safaricom has signed agreements with several banks in Kenya to perform such a role.[3] In this model, the restocking fee can be paid either by the agent or by the operator. While this model still requires agents to physically present themselves at a bank branch as they would in Option 1, it does enable an operator to partner with multiple banks – and leverage multiple networks of branches – to provide agents with more options. It also allows agents to convert cash into electronic value and vice versa instantaneously.

While banks occasionally play this role, more commonly, it is taken on by figures called masteragents, who agree to manage the liquidity of a set of agents. (Masteragents are almost always the same entities as aggregators, but for clarity we distinguish these roles from each other, since in theory their functions could be delivered by different entities.[4]) This means a masteragent buys electronic

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[2] For more information, see "True Money and M-PESA: Two Unique Paths to Scale" by Paul Leishman at
http://mmublog.org/south-east-asia/new-gsma-case-study-on-thailand's-true-money/.

[3] See "Three keys to M-PESA's success: Branding, channel management and pricing," a forthcoming article by Ignacio Mas and Amolo Ng'weno, for a more detailed discussion of the liquidity processes that Safaricom has put into place.

[4] For more on aggregators, see "Building a Network of Mobile Money Agents", the first section of this handbook, at
http://www.mmublog.org/agent-networks/.

value from the operator and then resells it to agents under its umbrella. If a masteragent supports a group of agents who, net, perform more cash out than cash in, the masteragent will purchase electronic value from agents and sell it to the operator. To minimise the frequency with which masteragents need to trade directly with the operator, operators can insist that masteragents support agents in both urban and rural areas, balancing cash-in and cash-out requirements.

Sometimes, masteragents employ staff who can shuttle cash to and from agents. More generally, they can be expected to take responsibility for ensuring that their agents are liquid and thus ready to transact with customers. It is for this reason that most operators give masteragents tools to monitor the electronic value balances of its agents. That allows masteragents to act pre-emptively when an agent may need to buy more electronic value soon. Of course, it is not possible to electronically monitor cash balances, but operators can encourage close communication between agents and their masteragents to ensure that cash doesn't run out: Vodacom Tanzania has recently issued its masteragents with mobile numbers that are toll-free for its agents so that they can communicate their liquidity needs freely, without worrying about incurring the cost of airtime.

This difference in degree of responsibility between superagents and masteragents is reflected in the way that they are typically paid. Superagents are paid each time they buy or sell electronic value from or to an agent, while masteragents are paid for liquidity management indirectly, by sharing with the agent a cut of the commissions that the agent earns by transacting with customers.[5] By tying the compensation of a masteragent to the success of its agents, operators motivate masteragents to ensure that their agents are liquid. Banks cannot assume this responsibility (and in any case are not usually tasked with managing particular agents, as masteragents are) so it makes more sense to pay them on a per-transaction basis.

Aside from liquidity, what are the other elements of a positive customer experience that operators must control?

In mobile money, operators have to rely on independent service providers to cover the last mile in the distribution chain and to own the face-to-face relationship with the customer. This keeps costs low and allows operators to develop agent networks that are ubiquitous. However, **it does create a risk that the service will be delivered inconsistently or poorly if agents are not well trained and closely monitored**. And as we describe in "Building a Network of Mobile Money Agents," offering mobile money is as unfamiliar to most new agents as using it is to most customers, so there is significant scope for things to go wrong. That makes it essential for operators to put an appropriate channel-management structure in place. **In addition to ensuring that agents are liquid, this structure needs to ensure that agents are prominently and consistently branded and observe relevant business processes – keys to a high-quality customer experience.**

Branding and merchandising

To ensure agents can be easily identified by customers and to build brand awareness for the service, it's important that mobile money agents be clearly branded in the marketplace. As such, operators usually require that its agents adhere to certain branding standards. **It is important that agents are visited regularly to ensure that these standards are being met.**

> **Branding and Merchandising True Money Express agents**
> Each True Money Express agent in Thailand receives a starter kit that includes all of the collateral required to start facilitating transactions. An entry-level kit includes mini-posters and stickers that new agents can use to advertise in their area, while advanced kits include a light box that can be installed outside a high-traffic agent's location. Also included in each type of starter kit is a method of making a physical record of each transaction: agents who select entry level kits are provided with logbooks, which build trust by offering customers an important tangible record of their transaction. The kits also include stamps, which can be used to stamp bills that have been paid at the counter (to replicate more closely the experience of paying a bill at the bank, where a stamp is also used) and a manual for agents that includes step-by-step instructions for each transaction type.

[5] Unlike airtime superdealers, mobile money masteragents sell electronic value at the same price at which they buy it from the operator.

Creating a mobile money brand

As noted in the introduction to this handbook, one of the assets that mobile network operators bring to the mobile money business is a powerful brand. However, operators vary in the extent to which they leverage this brand. **In general, we find that customers are most comfortable with mobile money sub-branding that is related, but clearly differentiated, from the operator's core brand identity.** When the mobile money brand is barely distinguishable from that of the operator, it becomes difficult for users to identify at which agents they are able to perform mobile money transactions (as opposed to purchasing airtime). At the other end of the spectrum, when the mobile money branding departs too radically from that of the operator, then the opportunity to capitalise on the strength of that core brand is missed.

Consistency

So far, we have discussed aspects of the customer experience that are easy to observe: is the shop properly branded, and is the agent liquid? **But it is often more intangible capabilities that distinguish good agents from bad ones**: can the agent's staff explain mobile money clearly to customers? Are they conscientious in completing the logbook at every transaction? Do they adhere to pricing guidelines?

To ensure that these and other such questions are answered affirmatively, operators or their designated proxies need to visit agents on a regular basis, to monitor their adherence to prescribed business processes and provide additional training as needed. Additional training means both offering "refresher" training on the basics of mobile money service provision, particularly to new staff, as well as training agents in new features or services that are launched on the mobile money platform.

Responsible parties

Since regular site visits are needed to ensure that agents comply with business processes and maintain proper branding and merchandising, operators often tap one single entity to deliver both functions. But just which entity is chosen varies between deployments.

Option 1: Existing Airtime Sales and Marketing Staff in the Field

Until recently, Zain's field airtime sales team was responsible for monitoring Zap agents in Tanzania. Zain relied on this approach because budget was unavailable for any other option. But Zain discovered that it was difficult to get their sales team to focus on Zap training and branding given that they were responsible for meeting a number of other targets as well. Moreover, since in many markets sales teams are compensated based on airtime sales in their region, it can be difficult to design an incentive structure that will encourage them to allocate the necessary proportion of their time to monitoring agents.

Even if such a compensation structure could be developed, it is not clear whether the skill set of a good airtime sales representative is the same as that which is required for monitoring and training mobile money agents.

Option 2: New Team of Dedicated Mobile Money Field Staff

MTN Uganda recently created a new in-house team to monitor their mobile money agents. The key difference between this approach and Zain's in Tanzania is that MTN teams are dedicated to the service and therefore do not have conflicting objectives that might cause them to de-prioritise mobile money. This approach addresses the incentive misalignment that comes with using in-house airtime sales teams, and it allows the operator to hire representatives who are conscientious, can explain complicated subjects (such as mobile money) well, and so on – i.e., who are well-suited to monitoring and training agents. The downside, from an operator's perspective, is that this approach requires a major increase in employees or contractors on the payroll.

Option 3: Outsourced Third-Party Agency

Vodacom Tanzania uses Afrikings, a third-party agency, to monitor their network of M-PESA agents. (Vodacom Tanzania also outsources airtime field marketing support to Afrikings, but Afrikings employs two separate sets of employees in the field: one dedicated to airtime, and the other to M-PESA.)

This arrangement provides Vodacom with the flexibility to quickly scale the number of field staff they require up or down, without having to hire a large number of new in-house staff. Vodacom also benefit from Afrikings' specialist skill-set in field marketing. And since the field representatives are dedicated to mobile money, their attention is not divided between M-PESA and airtime.

Option 4: Masteragents

In theory, deployments that manage the liquidity of their agent network through masteragents could

equally task these entities with monitoring branding and adherence to business processes. For instance, in scenarios where masteragents physically visit their agents on a regular basis to manage their liquidity, they could also take the time to perform monitoring duties. But while it's clear that synergies exist between these two activities, it is unclear whether masteragents will always appreciate the importance of agent monitoring and training and be prepared to engage.

Regardless of which stakeholder is ultimately selected, it's important that mobile operators retain control and oversight of their activities. Operators should insist on evaluation tools that are easily traceable, like checklists that must be completed for every agent visit, and develop management processes that will flag agents with problems so that they can be dealt with quickly. Operators should also quality check the entity responsible for agent oversight by conducting random "mystery shopper" visits to agents, and providing feedback to their representatives about those visits.

How can operators protect against abuse?

It is beyond the scope of this paper to comprehensively document every variety of fraud that has been observed in mobile money deployments. But it is worth noting the three broad types of abuse that can occur with the complicity of, or at the expense of, agents:

- **Money laundering and terrorist financing**
  Customers, agents, or both working together might seek to launder money or finance terrorist activities using a mobile money system.

- **Defrauding customers**
  Unscrupulous agents might attempt to defraud customers, sometimes by altering the fees they charge for providing a service, or more seriously by stealing a customer's money outright by, for example, faking a cash-in transaction.

- **Defrauding or abusing the system**
  Opportunities to abuse a mobile money system often stem from pricing and commission structures designed by operators. For instance, in cases where an agent has the opportunity to maximise their commissions by separating

a single customer deposit or withdrawal into multiple smaller ones, they may attempt to do so. Customers, too, can abuse such loopholes: for instance, some customers may attempt to complete a money transfer without paying a fee by having the sender and recipient deposit and withdraw funds from the same account.

To effectively protect against the different types of fraud or abuse that might fall within these broad areas, operators can:

1. **Invest in agent training:** Well-trained agents are the first line of defence against various types of fraud or abuse. For instance, in the Philippines SMART Money and the central bank spend a full day training new agents and additional time supporting them. One outcome is a network of agents who consistently adhere to KYC processes, which virtually eliminates the opportunity for customers to obscure their identity when transacting.

2. **Scrutinise pricing and commission models:** When designing their pricing and commission models, prudent operators spend time considering the various ways that an unscrupulous agent or customer might attempt to 'game' the system and try to minimise opportunities for such abuse.

3. **Educate customers:** Customers can protect themselves from fraud if they abide by a few key rules, such as never disclosing their PIN and always insisting on receipt of an official SMS confirmation when cashing in. Operators should find ways of communicating these messages to users through channels other than agents, since it is agents who might try to exploit users' ignorance to commit fraud. Some operators do this using point-of-sale posters and marketing collateral in registration kits.

4. **Implement technology:** Back-end transaction monitoring can help identify other forms of fraud. In the Philippines, for example, GCASH has implemented a sophisticated fraud monitoring technology solution that has the ability to screen billions of transactions, identify suspicious transaction patterns and flag them for investigation.

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