

# Savings at the Frontier – How to improve liquidity management for agents serving small informal groups and savers

A 'how-to' note by Lisa Chassin and John Balaba

March 2020



## Introduction

**When financial service providers (FSPs) want to offer financial services to informal savings mechanisms (ISMs) such as savings collectors and savings groups in rural or peri-urban areas, they rely on agents—either their own or external—to act as “liquidity cashiers”. These agents often need to be supported to maintain working levels of cash and e-money, if they are to deliver the intended value to the ISMs.**

This is what Savings at the Frontier (SatF)—a partnership between Oxford Policy Management (OPM) and Mastercard Foundation—and its nine partner FSPs from Ghana, Tanzania and Zambia, discovered in their efforts to link up with ISMs.

‘Savings at the Frontier – Getting closer’ is a focus note that shares emerging insights on expanding outreach and increasing usage through better placement of touchpoints. This ‘how-to’ note explains why efficient agent liquidity management is important. It looks at a range of tested practices in agent liquidity management that the SatF programme and its partners have gathered since the start of the project, as well as practices employed by other FSPs, and concludes by considering whether FSPs are better off outsourcing agent liquidity management.

### Box A – Informal savings groups linkages



*Image credit: Savings at the Frontier/OPM/Nana Kofi Acquah*

In a typical informal savings group, members meet regularly to pay their savings contribution into a shared ‘piggy bank’—frequently a wooden or metal box carefully looked after by the group’s treasurer. Part or all of the amount collected is often lent to individual members. At the end of the cycle, the contributions plus interest from loans are shared out among the group members.

Linking such a group to a formal FSP involves creating a group account into which members deposit their savings, and from which they withdraw loans and share-outs. In addition, FSPs often offer individual accounts, so members can make transfers from their individual account to the group account and vice versa. These individual accounts also allow members to opt for fixed individual deposits, or to use their funds to make person to person (P2P) transfers and payments.

FSPs can then rely on agents to help facilitate deposits and withdrawals of cash from the individual and group accounts.

### Why ensuring agent liquidity should be high on FSPs’ agendas

Agent liquidity management involves ensuring that agents have enough float in their e-wallet and/or cash in their register to be able to service customers whenever required. In other words, ensuring that the agent has enough cash on hand to meet customer demand.

From a business perspective, this is essential for agency banking to prosper. The reality in the field, however, makes this very difficult.

**The Financial Inclusion Insights (FII) surveys identify lack of liquidity as the top challenge faced by agents, second only to**

network downtime.<sup>1</sup> The causes of this problem are manifold. For example, agents struggle to predict fluctuations in client demand. They sometimes lack access to sufficient capital, as they rely on their savings and commissions to reinvest in business liquidity. Distances and transport links in rural areas make it expensive for agents to rebalance (due to the opportunity costs of the time spent out of their shop, as well as direct travel costs). Even in urban areas, rebalancing can be a problem; although distance is less of an issue, the time agents spend in line waiting to get served can be a setback. Besides, rebalancing points are also not always open when agents need them, say, after 5 pm or at weekends.

Rather than just being a hindrance, **lack of liquidity tends to be the principal source of customer dissatisfaction**, and represents a real customer risk, as it “deprives users of their own money.”<sup>2</sup> This feeling of not being able to access one’s own money when needed can cause irreversible damage to the client’s trust in the FSP, and can tarnish its brand’s reputation. In the specific case of savings groups, it can also result in having to split transactions, which particularly affects the cost of withdrawals.

However, these liquidity challenges can often be mitigated by linking agents to informal savings groups, as members’ deposits cashed-in tend to offset the predominant cash-out transactions that characterise many rural mobile money flows across sub-Saharan Africa.<sup>3</sup>

**FSPs can play a crucial role in enabling agent liquidity management.** Doing so not only safeguards their brand from undue criticism, it also ensures that the time and money they have invested in establishing and maintaining agency banking generate returns.

## How FSPs can support agent liquidity management

When talking about agent liquidity management, it is worth differentiating between liquidity planning, liquidity monitoring and liquidity rebalancing, as follows:

1. **Liquidity planning** enables an agent to predict and respond to fluctuations in the need for liquidity, so there is enough cash/float to meet customer demand.

2. **Liquidity monitoring** consists of taking stock of an agent’s float and sending out alerts for rebalancing once a certain limit is reached.

3. **Liquidity rebalancing** refers to the act of replenishing agents’ cash drawers and e-wallets when necessary.

Smooth liquidity management requires all three actions. Below, we describe some common, as well as some new, approaches being tested by **SatF partner FSPs** (identified in **green**) and **other providers across the world** (identified in **orange**), which could significantly improve liquidity management.

## Liquidity planning: tips for FSPs

### Teaching agents to plan

A useful method for agents to plan their cash and float levels is the ‘1.5-times’ stock rule. According to this rule, at the start of each day, agents should have sufficient cash and e-float in stock to cover one and a half times the previous days’ total of deposits and withdrawals. For example, if on a given day, an agent facilitates cash-outs of Tanzanian Shillings (TZS) 1,000,000 for withdrawals, and facilitates cash-ins of TZS 2,000,000 in deposits, the next day s/he will need to have TZS 1,500,000 (1,000,000 x 1.5) in cash and TZS 3,000,000 (2,000,000 x 1.5) in e-float in order to effectively serve customers.

The ‘1.5-times’ stock rule is a good way to help ensure that:

- Cash and e-float levels are sufficient, so surges in demand can be handled;
- The right balance of cash/e-float is maintained, so resources are managed efficiently; and
- The level of cash held is not higher than necessary, so risks are minimised.

<sup>1</sup> The Financial Inclusion Insights (FII) program, led by CGAP and funded by the Bill & Melinda Gates Foundation, covers Bangladesh, Ghana, India, Kenya, Nigeria, Pakistan, Rwanda, Tanzania and Uganda

<sup>2</sup> Doing Digital Finance Right: The Case for Stronger Mitigation of Customer Risks, CGAP, 2015, p.5

<sup>3</sup> Building Rural Digital Ecosystems, One Small Payment at a Time, CGAP, 2018

FSPs need to train agents on the ‘1.5-times’ rule, as well as monitor and enforce its implementation (see Box B).

### Sharing information with agents

Agents often feel that they could more effectively manage cash-outs for share outs if they knew about imminent large-scale digital payments in advance.<sup>4</sup> This is why some FSPs—such as

**Mwanga Community Bank** in Tanzania<sup>5</sup> or **RCPB** in Burkina Faso<sup>6</sup>—encourage savings group leaders to inform their agent about upcoming cash-outs a few days prior to share-out,<sup>7</sup> so that s/he has time to secure the float. SatF’s partner FSP **Equity Bank Tanzania** agents also attend occasional group meetings, to identify volumes of savings and likely cash-out dates.

## Box B – The ‘1.5-times’ stock rule as applied to agent liquidity management

The agent liquidity management form below illustrates how using the ‘1.5-times’ stock rule can enable the calculation of deposits and withdrawals and the required amount of float/ cash.

Agent Liquidity Management Form						
Agent e-flow account			Month			
Day of the month	E-float at the start of the day	Cash at the start of the day	Daily Deposits Actual	Daily Withdrawal Actual	1.5 times Float Rule (e-flow balance needed the next day)	1.5 times Float Rule (cash needed the next day)
1	60,000	45,000	50,000	20,000		
2	75,000	45,000	60,000	40,000	75,000	30,000
3						
4						

Source: PHB Development, E-Workshop on Agent Liquidity Management

To avoid relying exclusively on savings group leaders, FSPs can also share information on anticipated group disbursements and trends with agents and super agents, so they can secure float/ liquidity and prepare ahead of disbursements/ repayments.

Technological solutions can be leveraged to facilitate the process of sharing information with agents. For example, **Segovia Technology**, a payment platform provider, tracks information on upcoming payments, including beneficiary location, payment amount and payment date. It can map out bulk payment recipients for a given date, and can predict liquidity demand for certain areas. It provides a “Bulk SMS Liquidity Alert Tool” that can be used in combination with

liquidity demand forecasts to alert agents about upcoming payments.”<sup>8</sup>

### Sharing cashflow predictions with agents

By monitoring past transactions and trends, data analysis can offer insights to facilitate liquidity management.

SatF has developed a cashflow prediction tool to support FSPs in serving savings groups. Using a set of variables, it can identify when groups are likely to have an excess or shortage of cash, so that agents can best plan for liquidity.

Another initiative comes from **PesaKit**, a fintech based in Kenya, which has developed an app that looks at all transaction data in order to predict

<sup>4</sup> Improving Large-Scale Mobile Money Disbursements: Overcoming Liquidity Constraints in Humanitarian Bulk Payments, IRC, 2018

<sup>5</sup> Linking ISM, Case Study MCB, UNCDF, April 2018

<sup>6</sup> Protecting Savings Groups Reached Through High Tech Channels, Case Study Burkina Faso, UNCDF, Feb 2018

<sup>7</sup> On average, groups “share out” (i.e. disburse all their saved funds) to members once a year. However, some groups may share out after longer periods or only share-out accumulated interest.

<sup>8</sup> Improving Large-Scale Mobile Money Disbursements: Overcoming Liquidity Constraints in Humanitarian Bulk Payments, IRC, 2018

future demand for float and to provide efficient estimates of float inventory.<sup>9</sup> For the analytics to work, agents must conduct transactions for a minimum of one month, so that sufficient transaction data are gathered to allow predictive analysis. The app has two main features:

- an artificial intelligence-enabled chatbot to respond to agent queries on a variety of liquidity management issues. For example, agents can ask how much float or cash they







need to maintain on a daily basis, or how many customers they can expect at different times of the day, week or month; and

- a daily insights menu to communicate predictive liquidity management tips to agents every morning at different times, depending on the agent’s location. Tips include the appropriate time to open and close agent outlets, and the cash and e-float required per day, among others.

**Box C – How FSPs serving savings groups can support agent liquidity management**

FSPs can use their knowledge of savings group behaviour to assist agents in their liquidity management. For example, they can share information on the behaviour of groups and their members with agents, to help them predict liquidity needs. Below are some types of information they can share:

**Examples:**

	Predicted dates of deposits, maturity of fixed deposits and share-outs		Trends in terms of cash contributions to transfers from individual accounts
	Predicted value of deposits		Trends in terms of cash loans to transfers from group account
	Weekly, monthly and seasonal fluctuations in deposits and withdrawals		Trends in terms of cash share-outs to transfers from group account

FSPs can also influence group behaviour to reduce the variability of agent liquidity needs by promoting savings using group and individual accounts, and encouraging the use of accounts for payments and transfers, instead of cashing out. The table below shows the benefits of encouraging different types of behaviour for agent liquidity management.

**Benefits of encouraging different types of behaviour for agent liquidity management:**

Examples	Greater predictability	Need for lower e-float balance at agents	Need for lower cash balance at agents
Groups depositing all member contributions into group account	X		
Members depositing cash at agent before meeting		X	
Members transferring from own to group account before meeting		X	
Groups transferring loans from group to member accounts			X
Groups transferring share-outs to member accounts			X
Members making transfers and payments from their account			X
Members placing share-outs in fixed deposit accounts			X

Source: PHB Development, E-Workshop on Agent Liquidity Management

<sup>9</sup> Distribution 2.0 - The future of mobile money agent distribution networks, GSMA, 2018

## Liquidity monitoring: best practices

### Providing agents with liquidity dashboards

A dashboard is a performance-monitoring tool that organises and visualises a small set of key performance indicators. Dashboards can help agents to be transaction-ready by ensuring workflows are not interrupted, improving agent transactions, reporting and planning, and by developing their ability to determine float trends.<sup>10</sup> Dashboards can be used by agent supervisors or agents themselves. Centralised monitoring systems can also help agent supervisors and FSPs to identify agents who consistently fail to hold adequate liquidity.<sup>11</sup>

**Madison Finance** in Zambia has developed such a system, with super agents monitoring float levels on a daily basis. **Equity Bank** Tanzania, monitors agent liquidity from both a central and super agent level: the head office shares snapshots of float levels at regular intervals to the agent supervisors, who, in turn, liaise with the agent for rebalancing. When float levels are critically low, the head office also sends messages to agents advising them to rebalance. **Access Bank** Ghana checks its agents' float balances through its partner mobile network operator platform.

**NFT Consult**, a Ugandan manpower provider, has developed an interesting dashboard that provides real-time liquidity indicators to help super agents or supervisors promptly identify agents who are likely to run out of float. The float score anticipates the agent's ability to serve the next customer.<sup>12</sup> The dashboard also gives the GPS location of the agent requiring liquidity.

## Liquidity rebalancing: innovative approaches

### Creating a network of rebalancing points

FSPs can set up super agents or enter into partnerships with banks and microfinance institutions (MFIs) to serve as rebalancing points for their agents.

This is what **Equity Bank** Tanzania, **Access Bank** Ghana and **TPB** Tanzania have done, allowing their agents to use their networks of branches or super agents to exchange cash for float. Access Bank has equipped its super agents with master wallets prepaid by HQ, to enable the super agents to rebalance the agents in their agent wallets with float. Equity Bank and Access Bank have gone a step further, as they have also developed partnerships for agents to rebalance through other financial institutions and NGOs. This has the advantage that they are located within the target communities, and largely addresses issues related to proximity.

**RCPB** in Burkina Faso is also making a point of connecting its agents with entities that have a larger financial capacity, to serve as rebalancing points. These are typically local shopkeepers, who receive commissions based on transactions made with agents.<sup>13</sup> Liquidity management partners can also include banks with an existing rural presence, post offices or large retailers.<sup>14</sup>

Some FSPs enhance the use of rebalancing points by adding a geo-mapping tool to improve the visibility of these points. For example, **NovoPay** in India uses advanced GIS mapping systems to match agents with nearby field officers, who top up agents' floats.

### Delivering liquidity to agents

Another rebalancing option is to directly hand over the required cash or e-float to agents, at their location. This can be done internally or by hiring third parties, including "aggregators", who buy float from a super-agent or the official liquidity provider, and deliver it to individual agents.

**Airtel Money** in Uganda relies on such entities; they have partnered with more than 50 aggregators (such as Blacknight, for instance) to serve as float intermediaries between super agents and agents.<sup>15</sup> In contrast, **FINO PayTech** in India has dedicated staff members who deliver

<sup>10</sup> Distribution 2.0 - The future of mobile money agent distribution networks, GSMA, 2018

<sup>11</sup> Liquidity - Solving Agents' Perennial Problem, MicroSave, August 2017

<sup>12</sup> NFT Consult: Data solutions for mobile-money agent management, insight2impact, February 2019

<sup>13</sup> Protecting Savings Groups Reached through High Tech Channels, Case Study Burkina Faso, UNCDF, Feb 2018

<sup>14</sup> AgriFin Accelerate Rural Agent Case Study

<sup>15</sup> Distribution 2.0 - The future of mobile money agent distribution networks, GSMA, 2018

and pick up cash, relieving agents of the time and expense associated with rebalancing.<sup>16</sup>

### Offering credit and overdraft facilities to agents

Providers can offer credit facilities to agents who are unable to meet the float requirements. **NMB** in Tanzania has developed such a credit facility known as “Floti fasta” for agents to smooth their liquidity management, particularly during evenings and weekends, when rebalancing options are more limited. Agents can access credit instantly when their float balance is running low.

Mobile Money provider **Zoona** has pioneered an overdraft facility in Zambia called ZoonaCash. This “allows agents’ float levels to drop below zero, so they can continue processing transactions for customers – as long as they re-balance the next morning”.<sup>17</sup> **Safaricom** in Kenya has developed an agent overdraft facility.

Predictive techniques can be utilised to generate credit scores for agents by allowing appropriate levels of credit to be defined using algorithms that not only look at assets but also at transaction and compliance history. **Zoona** is already using data to develop internal “scorecards” for agents, which help to determine their eligibility for loans.

### Outsourcing liquidity management

Because liquidity management can be resource-intensive and requires particular skills and knowledge, some FSPs have decided to outsource this part of the agent network management to mobile network operators or aggregators, as a way of increasing the efficiency of liquidity management and reducing the risks to which they

are exposed. Outsourcing comes with some loss of control. The negotiation of a Service Level Agreement (SLA) with partners is important to ensure that liquidity management is carried out according to the FSP's standards and expectations.

**Vision Fund** in Zambia has outsourced its agent network and liquidity management to the mobile network operator Airtel. Other players such as **Yo! Uganda**—an aggregator providing monitoring and rebalancing services—offer their services to FSPs.

### Conclusion

Good agent liquidity management is essential to ensure good customer service and therefore usage of services. It is not sufficient for FSPs to only enforce initial capital requirements on agents and to provide a network of rebalancing points. They also need to provide agents with training, tools and information they can use to predict and monitor liquidity, and have teams (super agents and/or HQ staff) keeping an eye on the liquidity management of agents. SatF partners in Ghana, Zambia and Tanzania are using their branch networks to help agents manage their liquidity. Offering agents rebalancing options such as a network of rebalancing points, liquidity delivery or overdraft/ credit facilities is also an interesting option for supporting agents. FSPs can also decide to outsource agent liquidity management to experts, at the risk of losing some control over the process.

---

<sup>16</sup> Distribution 2.0 - The future of mobile money agent distribution networks, GSMA, 2018

<sup>17</sup> The Big Advantages of Being Small: How a mobile money startup beat the major players in Zambia, Jungwon Byun, 9 Feb 2016

---

## About the SatF consortium

Savings at the Frontier (SatF) is a six and a half year programme (2015-2022) that seeks to bridge the gap between the supply of formal financial services and informal savings mechanisms (ISMs) in Ghana, Tanzania and Zambia, so that ISM users in these countries have a greater choice and use of financial services that best meet their needs. SatF is a \$17.6 million partnership between Oxford Policy Management and the Mastercard Foundation. For more information—and to read the full SatF strategy—visit [www.opml.co.uk/projects/savings-frontier](http://www.opml.co.uk/projects/savings-frontier)



### Mastercard Foundation

The Mastercard Foundation works with visionary organisations to provide greater access to education, skills training and financial services for people living in poverty, primarily in Africa. As one of the largest private foundations its work is guided by its mission to advance learning and promote financial inclusion to create an inclusive and equitable world. Based in Toronto, Canada, its independence was established by MasterCard when the Foundation was created in 2006. For more information and to sign up for the Foundation's newsletter, please visit [www.mastercardfdn.org](http://www.mastercardfdn.org). Follow the Foundation at @MastercardFdn on Twitter.



### Oxford Policy Management

Oxford Policy Management is one of the world's leading international policy development and management consultancies. We enable strategic decision-makers in the public and private sectors to identify and implement sustainable solutions for reducing economic and social disadvantage in low- and middle-income countries supported by offices in the UK, Bangladesh, India, Indonesia, Nepal, Pakistan, Nigeria, Tanzania and South Africa. For further information, visit [www.opml.co.uk](http://www.opml.co.uk) or follow us on Twitter @OPMglobal.



### PHB Development

PHB collaborates with international development agencies, banks, regulators and other impact makers around the world to assess, implement and scale digital interventions. We leverage the expertise of our team to support the design of digital finance ecosystems that can strengthen the resilience of communities in need. To learn more about PHB activities, publications and trainings, visit [www.phbdevelopment.com](http://www.phbdevelopment.com)