



ALISON WRIGHT, 2019

# FINCA FORWARD CASE STUDY

## ADDRESSING AGENT LIQUIDITY NEEDS WITH HAPA CASH BY KUUNDA DIGITAL

December 2020

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## **FINCA FORWARD**

Founded in 2018, FINCA Forward is a United States Agency for International Development-supported innovation fund that facilitates commercial partnerships between financial technology startups and microfinance institutions. FINCA Forward deploys its hypothesis-driven matching service to:

1. Support microfinance institutions to run structured proof-of-concepts to experiment with, and learn from, emerging technologies designed to address strategic and critical operational challenges.
2. Provide early-stage financial technology startups access to financial institutions to test, iterate, and refine products, receive feedback from early adopters, develop scalable solutions, and build investable ventures.

## **ABOUT THE AUTHOR**

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## CONTENTS

EXECUTIVE SUMMARY	1
THE ROLE OF AGENT NETWORKS IN FINANCIAL INCLUSION	3
MARKET CONTEXT	4
PROBLEM STATEMENT AND CHALLENGE	6
SOURCING INNOVATION	8
HAPA CASH BY KUUNDA DIGITAL	8
PRODUCT OVERVIEW	8
PROOF-OF-CONCEPT IMPLEMENTATION	11
GOAL AND OBJECTIVES	11
GOAL	11
OBJECTIVES	11
PARTNERS	11
IMPLEMENTATION	12
PRODUCT ONBOARDING	12
PRODUCT LAUNCH AND PERFORMANCE	14
RESULTS	16
NEXT STEPS	18
TANZANIA	18
NEW MARKETS	19
LAUNCHING COMPLEMENTARY PRODUCTS	19

## EXECUTIVE SUMMARY

### THE CHALLENGE

Digital financial services have shown enormous potential to extend formal financial services to unbanked and underbanked populations. However, in predominately cash-based economies, consumers need a cheap and easy way to convert electronic money into cash, and vice versa, for digital financial services to succeed. Agent networks have emerged to fill this need. Through a franchise-like model, providers of financial services recruit and train preexisting businesses to perform financial transactions, including cash-in/cash-out, for customers on their behalf, making them agents of the provider. In addition to providing customers with a convenient way to access financial services, this model promotes stronger communities and increases economic opportunities. Agents benefit from additional revenue collected from commissions, as well as increased foot traffic to their stores.

However, agent networks face several operational challenges that threaten the sustainability of the model, the most persistent of which is liquidity management, the practice of maintaining enough liquidity to perform cash-in/cash-out transactions. In situations where an agent lacks enough liquidity, cash-in/cash-out transactions are denied, resulting in reduced commission revenue for agents and a negative impact on customer experience and their trust in agent networks and digital financial services more broadly. While this challenge is present in all markets with agent networks, it is most acute in Tanzania where an estimated 20% of customer transactions are denied due to a lack of liquidity.<sup>1</sup> Solving this perennial challenge is essential to ensure the sustainability of agent networks and realize the potential of digital financial services to extend financial services to unbanked and underbanked populations.

### THE SOLUTION

Kuunda Digital recognized the extent of the agent liquidity management challenge and developed Hapa Cash, a product suite designed to address the primary barriers agents face to effective liquidity management. The first product the team developed was Hapa Cash Overdraft. The product is designed to address e-float-related agent liquidity management challenges by enabling agents to go into a negative balance on e-float for a short period, typically one day, and continue meeting customer demand for cash-in transactions. Interest charged to agents on an outstanding overdraft is by design always less than the commission received from completing cash-in transactions. In doing so, this attribute ensures that agents make a net profit on cash-in transactions when using Hapa Cash Overdraft.

### PROOF-OF-CONCEPT IN TANZANIA

FINCA Forward partnered with FINCA Microfinance Bank Tanzania (FINCA Tanzania) and Vodacom to run a six-month proof-of-concept (POC) of Hapa Cash Overdraft with a sample of Vodacom's M-Pesa agents in Tanzania. FINCA Tanzania provided capital to finance agent overdraft disbursements and took the lead on securing regulatory approval from the Bank of Tanzania to implement the POC. Vodacom provided historical transactional data from its M-Pesa agents, which Kuunda utilized to develop its overdraft eligibility scoring approach, and managed product branding, marketing, and outreach to agents. Interest income received from the product was shared between the three partners.

<sup>1</sup>Helix institute, *Fitting the Pieces of the Liquidity Management Puzzle*. (2018).

Between mid-December 2019 and the end of June 2020, the product made over 300,000 overdraft disbursements to agents, totaling \$2.2 million. The POC was successful in proving that Hapa Cash Overdraft addresses e-float-related agent liquidity management challenges while at the same time representing a viable commercial opportunity for all product partners. Key insights from the POC include:

1. The attributes of the product ensured that only a small proportion of outstanding overdrafts went into arrears during the POC, with most agents repaying within one day of receiving a disbursement. Ultimately, this suggests that that FINCA Tanzania had limited risk exposure when financing agent overdrafts through the product.
2. Agent demand for an e-float overdraft was confirmed, suggesting that the product addresses e-float-related liquidity management challenges. By the end of the POC, M-Pesa agents actively transacting with the product used and repaid their overdraft limits on average 19 times per month.
3. The business impact on agents of the product financing cash-in transactions that they would have otherwise denied was significant. Agents transacting with the product were able to increase their commission revenue by between 30 and 75% by the end of the POC.

## **NEXT STEPS**

Insights from the successful POC were used to develop an evidence-based business case for commercial scale, which was approved by FINCA Tanzania and Vodacom in June 2020. FINCA Tanzania received full regulatory approval from the Bank of Tanzania for a commercial launch of the product during the same month. The three product partners, Kuunda, FINCA Tanzania, and Vodacom, began the process of commercializing and scaling Hapa Cash Overdraft in July 2020. By the middle of 2021, the partners aim to scale the product to reach 40,000 actively transacting M-Pesa agents per month in Tanzania.

Having validated its approach to e-float-related agent liquidity management challenges, Kuunda began the process of establishing partnerships with mobile network operators and financial institutions to launch the product in new markets. Of course, Hapa Cash Overdraft only solves one facet of the agent liquidity management challenge. In this context, Kuunda is preparing to test and launch the two complementary products of the Hapa Cash suite, Marketplace and Working Capital Facility, during 2021. Due to the importance of solving agent liquidity management challenges to extend formal financial services to unbanked and underbanked populations, FINCA Forward and its partners will continue to provide technical assistance and investment capital to Kuunda to bring these new products to market.

## THE ROLE OF AGENT NETWORKS IN FINANCIAL INCLUSION

Over the past decade, digital financial services have demonstrated the immense potential to extend formal financial services to unbanked and underbanked populations. For providers such as mobile network operators (MNOs) and banks, emerging digital technologies have substantially lowered the cost of providing financial services, transforming the economics of delivering financial services to lower-income and more remote customers. With virtually all transactions in developing countries conducted with physical cash, the growth of digital financial services would not have been possible without the ubiquitous presence of enabling infrastructure that provides a simple way to convert digital money to cash, and vice versa. Ensuring that digital financial services can reach the remaining 1.7 billion unbanked adults globally will require an expansion of this critical cash-in/cash-out infrastructure.

In developed markets, consumers can rely on extensive networks of automated teller machines (ATMs) and bank branches to deposit and withdraw physical cash as needed, with an average of 66 ATMs and 20 bank branches per 100,000 adults.<sup>2</sup> Even in the world's most advanced economies a large proportion of daily transactions are conducted in cash, meaning that cash-in/cash-out infrastructure remains essential. This critical infrastructure is distinctly lacking in developing markets with only four ATMs and three bank branches per 100,000 adults.<sup>3</sup> With low-income populations and low population densities, particularly in rural areas, establishing brick-and-mortar branches and ATMs in these markets is a high-cost endeavor that makes little economic sense for banks and other providers of financial services.

Agent networks have begun filling this gap in enabling infrastructure. Banks, MNOs and other financial service providers (FSPs) identify, recruit, and train individual entrepreneurs (e.g., small kiosks) or pre-existing formal networks, such as post offices, in a franchise-like model to provide financial services to consumers on their behalf, such as cash-in/cash-out transactions, making them agents of the provider. These agent networks function as new forms of financial services infrastructure by empowering local marketplace actors with point-of-sale devices or tablets to fulfill customer needs conveniently, affordably, and quickly. Estimating the number of unique agents representing banks, MNOs, and other FSPs, remains challenging. However, data collected by GSMA (an industry organization that represents the interests of MNOs worldwide) on mobile money agents working on behalf of MNOs can be used as a functional benchmark. In 2019, there were 7.7 million mobile money agents registered globally that facilitated \$62.4 billion in transactions. Of this number, just 4.2 million were active during the year.<sup>4</sup> The high level of agent inactivity highlights the challenges faced by banks, MNOs, and other providers of financial services in managing and sustaining agent networks. Providers face challenges across all the key elements of agent network management; agent onboarding, training, monitoring, and liquidity management. Progress has been made in developing and deploying digital solutions to solve onboarding, training, and monitoring related challenges. However, liquidity management remains the perennial challenge threatening the sustainability of agent networks and the entire digital financial services ecosystem. While liquidity management challenges are present in all markets, Tanzania stands out among its peers. According to research, MNO-led mobile money agents deny up to 20% of daily transactions in Tanzania due to a lack of e-float, cash, or both.<sup>5</sup>

<sup>2</sup>World Bank, World Development Indicators. (2018).

<sup>3</sup>Ibid.

<sup>4</sup>GSMA, Mobile Money Metrics. (2019).

<sup>5</sup>Helix institute, *Fitting the Pieces of the Liquidity Management Puzzle*. (2018).

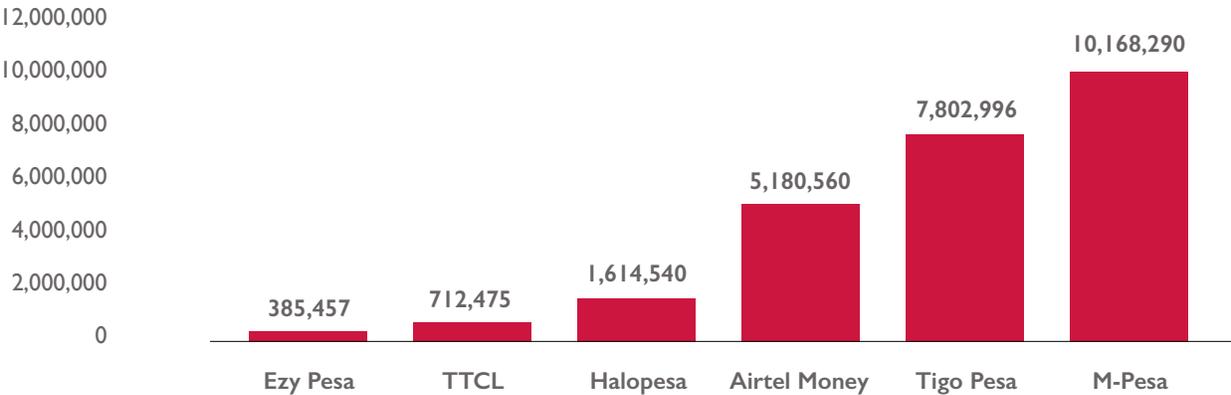
Solving this persistent operational challenge, and continuing to innovate in agent onboarding, training, and monitoring, is essential if the potential of digital financial services to bring the remaining 1.7 billion unbanked individuals into the formal financial system is to be realized.

**MARKET CONTEXT—MOBILE MONEY AND AGENT NETWORKS IN TANZANIA**

Mobile money was first introduced to the Tanzanian market in 2008 with the launch of Vodacom’s M-Pesa and Zantel’s Z-Pesa (now Ezy Pesa). Today, these early entrants have been joined by four other MNOs to create a vibrant and competitive mobile money market. The impact of mobile money on financial inclusion in Tanzania has been significant. At least 39% of the Tanzanian population over 15 years old have a mobile money account.<sup>6</sup> The success of mobile money as a driver of financial inclusion was made possible by increasing access to mobile phones among Tanzanians; between 2008 and 2018 the number of mobile phone subscriptions per 100 Tanzanians increased from 31 to 77.<sup>7</sup>

M-Pesa by Vodacom has the largest market share with 10,168,290 accounts (39%), followed by Tigo Pesa and Airtel Money, with 30% and 20% of accounts, respectively. Together, these three MNOs have 90% of the mobile money market share in Tanzania. Overall, there are a total of 25,864,318 registered mobile money accounts in Tanzania.<sup>8</sup>

Figure I: Mobile Money Subscriptions (Accounts) in Tanzania by MNO as of December 2019

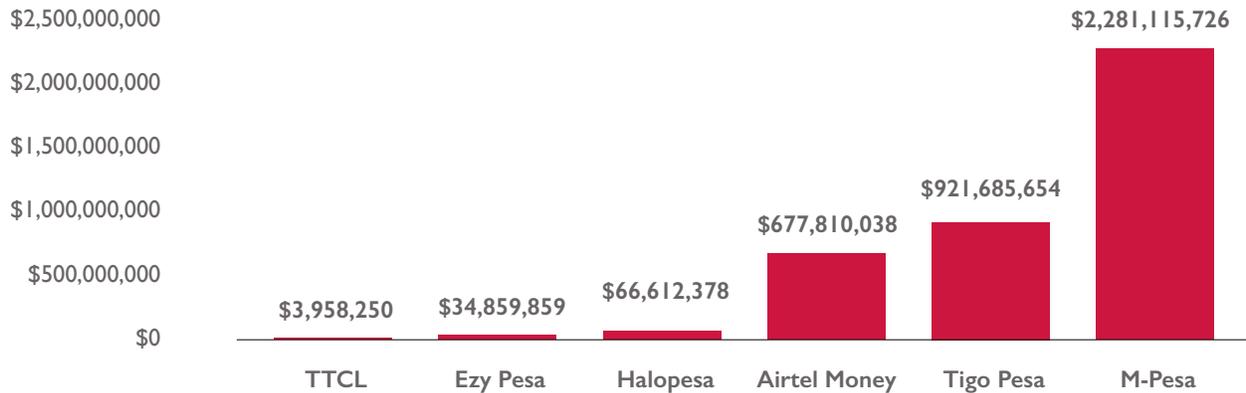


Source: <https://www.tcra.go.tz/publication-and-statistics/statistics>

Tanzanian consumers conduct 270 million transactions per month (Q4 2019 average) through mobile money platforms. The largest proportion of transactions are conducted through M-Pesa, 46%, followed by Tigo Pesa, 30%, and Airtel Money, 18%. Each month, Tanzanians transact almost \$4 billion through mobile money, 57% of which is transacted through M-Pesa.

<sup>6</sup>World Bank, Global Financial Inclusion Database. (2017).  
<sup>7</sup>World Bank, World Development Indicators. (2018).  
<sup>8</sup>TCRA Quarterly Communications Statistics. (2019)

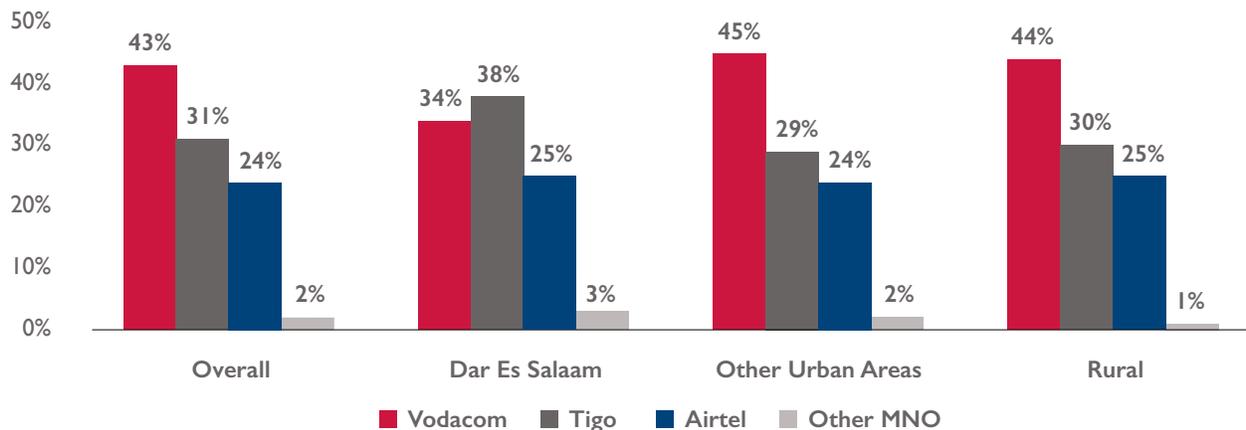
Figure 2: Average USD Value of Mobile Money Transactions per Month (Q4 2019) by MNO



Source: <https://www.tcra.go.tz/publication-and-statistics/statistics>

Uptake in mobile money in Tanzania is supported by large networks of agents that provide cash-in/cash-out services, person-to-person transfers, and other financial services, in every community across the country. While data on the exact number of agents in Tanzania is hard to determine due to confidentiality agreements between data aggregators and MNOs, as of December 2019 there were 1,433,598 registered agents in the East Africa region of which 946,911 were active.<sup>9</sup> Given that Tanzania is among the largest mobile money markets in East Africa, it can be assumed that a sizeable proportion of these agents are located in the country. The 2015 Agent Network Accelerator (ANA) offers some additional insight into the structure of agent networks in Tanzania. Based on a nationally representative survey, the ANA estimates that 43% of agents in Tanzania are managed by market leader Vodacom (M-Pesa), followed by 31% by Tigo, and 24% by Airtel.<sup>10</sup> It should however be noted that only a minority of agents are exclusive to a single MNO. Seventy percent of agents offer services to Tanzanian consumers on behalf of one or more MNOs.<sup>11</sup>

Figure 3: Structure of Agent Networks in Tanzania (2015)



Source: <http://www.helix-institute.com/>

<sup>9</sup>GSMA, Mobile Money Metrics. (2019).

<sup>10</sup>Helix Institute, *Agent Network Accelerator Survey: Tanzania Country Report*. (2015).

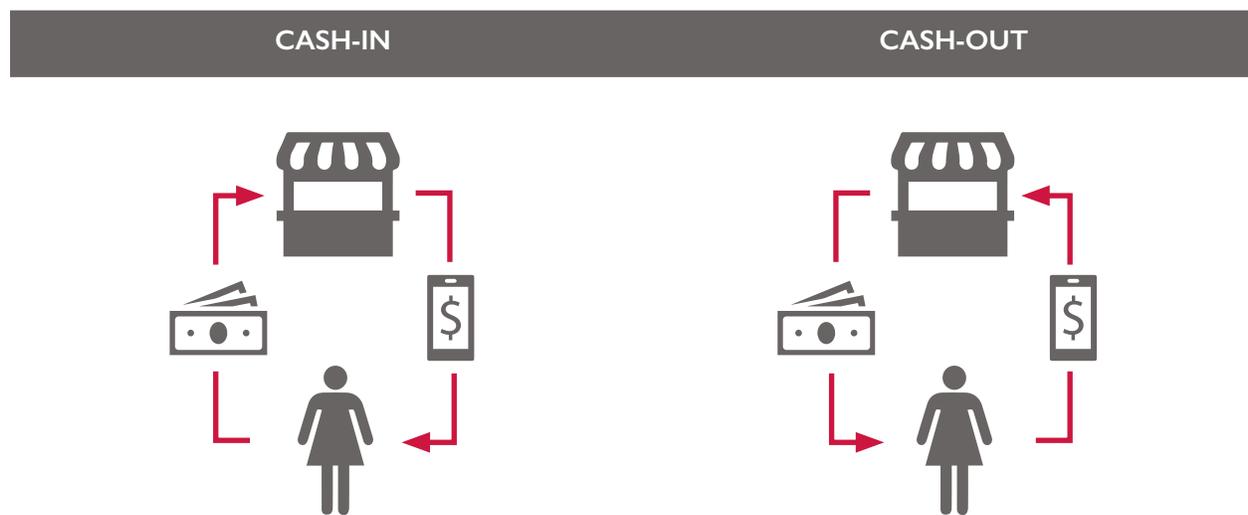
<sup>11</sup>Ibid.

The success of mobile money in Tanzania was enabled by a favorable regulatory environment that provided an opportunity for innovation in financial services. When approached by Vodacom and Zantel to launch M-Pesa and Z-Pesa (now Ezy Pesa) in 2008, the Bank of Tanzania had not yet developed regulatory guidance for digital financial services. To overcome this and explore the potential of digital financial services to increase financial inclusion in Tanzania, the Bank of Tanzania decided to issue letters of no objection to the two MNOs that provided an opportunity for them to launch.<sup>12</sup> In adopting a progressive regulatory approach, the Bank of Tanzania has enabled mobile money, and digital financial services more broadly, to flourish in Tanzania. Today, this approach to regulation is known as “test and learn,” which gives MNOs, FSPs, and other providers of financial services the opportunity to develop and deploy new financial services, and the Bank of Tanzania space to monitor developments before drafting regulation.<sup>13</sup>

## PROBLEM STATEMENT AND CHALLENGE

Maintaining enough liquidity to perform cash-in/cash-out transactions requires agents to manage physical cash and electronic/mobile money float (e-float). When performing cash-out transactions, agents transfer electronic/mobile money from the customer’s account to their e-float account then provide the customer with the same amount of physical cash. If an agent lacks enough cash, the transaction is denied. For cash-in transactions, the opposite transfer occurs. Agents receive cash from the customer and deposit an equal amount of their e-float into the customer’s electronic/mobile money account. If an agent lacks enough e-float, the transaction is denied.

Figure 4: Cash-In/Cash-Out Mechanics



<sup>12</sup>GSMA, *Enabling Mobile Money Policies in Tanzania*. (2014).

<sup>13</sup>Ibid.

While some progress has been made in digitizing and modernizing agent onboarding, training, and monitoring, liquidity management remains the most critical operational challenge facing the sustainability and expansion of agent networks. Current liquidity management practices, including rebalancing (exchanging e-float for cash or vice versa) at banks or through informal WhatsApp groups, have failed to sufficiently address the challenge. Agents are forced to rebalance at least once per day and struggle to access rebalancing services after 5 pm and during weekends, both critical business times. The four primary barriers to effective liquidity management are:<sup>14</sup>

1. Unpredictable fluctuations in client demand.
2. Long wait times at rebalancing points (e.g., banks).
3. The need to close businesses to rebalance.
4. Lack of resources to buy enough float.

Liquidity management is the most significant variable cost that agents face, representing at least 10% of total operational costs. Notably, this percentage is almost certainly an underestimate as it only represents direct costs, including transportation fees, transaction fees at rebalancing points, and business phone calls.<sup>15</sup> Agents also face high indirect costs, such as the opportunity costs associated with closing to travel to rebalancing points and lost transaction fees due to denied customer transactions.

The inability to effectively manage agent liquidity results in denied transactions and has negative impacts on agents, customers, and providers of financial services:

- **AGENTS** – lost transaction commissions, in addition to the opportunity costs associated with rebalancing, reduces profitability, and challenges the agent value proposition. If agents are unable to reach profitability, then the sustainability of agent networks will be affected.
- **CUSTOMERS** – without functional cash-in/cash-out infrastructure, unbanked and underbanked populations cannot benefit from the proliferation of digital financial services and will remain excluded from formal financial services.
- **PROVIDERS** – denied transactions have a profound impact on customer trust in agent networks and pose a grave reputational risk to providers of financial services. Unless addressed, this threatens to impede the efforts of providers to drive uptake in digital financial services more broadly.

<sup>14</sup>Helix institute, *Fitting the Pieces of the Liquidity Management Puzzle*. (2018).

<sup>15</sup>Ibid.

## SOURCING INNOVATION

FINCA Impact Finance (FIF), through its global network of microfinance institutions, delivers responsible financial services to low-income customers around the world. The organization recognizes the immense potential of digital financial services to expand formal financial services to unbanked and underbanked individuals at lower costs and faster speeds than ever before. However, these populations live in predominately cash-based societies and thus require a bridge between the digital and physical world. Agent networks fill this gap and have therefore emerged as one of the key pieces of enabling infrastructure for financial inclusion. FIF, as a mission-driven financial institution, is invested in working with partners across the ecosystem to validate and onboard innovative approaches to solving the challenges this critical infrastructure faces. In this context, FINCA Forward has been focused on identifying technology innovators that have developed products and solutions with the potential to address the various aspects of the agent network liquidity challenge.

### HAPA CASH BY KUUNDA DIGITAL

Kuunda Digital was launched in 2018 by a core team of Zoona<sup>16</sup> alumni as a consulting firm designed to provide expertise in digital financial services, agent networks, and data analytics to MNOs and FSPs working in the informal market of emerging economies. While working on consulting engagements with clients in Sub-Saharan Africa, the Kuunda team observed that challenges in managing liquidity were hindering the expansion of agent networks, particularly to rural and hard-to-reach areas. Furthermore, none of the solutions or approaches in the market adequately solved the complex set of liquidity management challenges. After recognizing a clear gap in the market, the Kuunda team launched a product development business unit and began building Hapa Cash.

Hapa Cash is a suite of three tools designed to address the primary barriers to effective liquidity management, Overdraft, Marketplace, and Working Capital Facility. Overdraft enables agents to go into a negative balance on e-float for a short period, typically one day. Marketplace connects agents to facilitate the exchange of e-float for physical cash. Working Capital Facility provides agents with access to working capital to utilize for airtime, mobile money, and other liquidity requirements. The first product developed was Hapa Cash Overdraft, which is the focus of this case study. To execute the go-to-market strategy for Hapa Cash, the Kuunda team aimed to partner with a mission-driven FSP and a leading MNO in Tanzania to test Hapa Cash Overdraft and demonstrate its value proposition before launching commercially.

### PRODUCT OVERVIEW

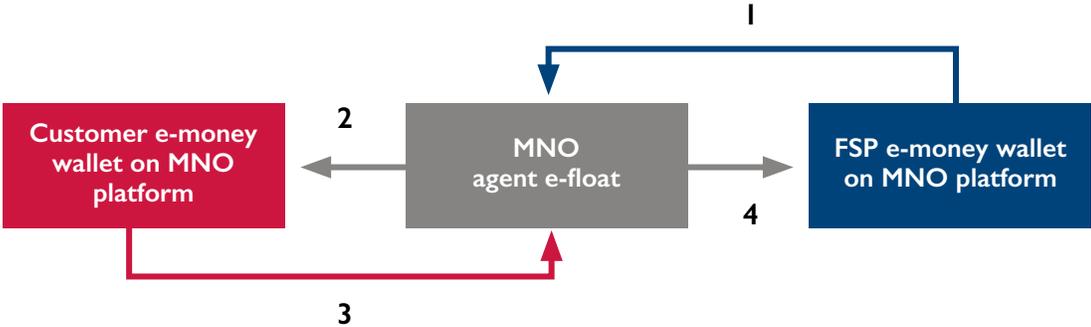
Hapa Cash Overdraft is designed to address e-float-related agent liquidity management challenges. The product provides agents with access to a single day overdraft which allows them to continue meeting cash-in transaction demand when they run out of e-float. In addition to solving a key customer pain point, Hapa Cash Overdraft is designed to increase the commissions agents can earn by increasing the volume of transactions that can be successfully completed.

<sup>16</sup>International Finance Corporation, Omidyar, and Quona-backed financial technology startup with operations in Zambia and Malawi.

Kuunda targeted the initial iteration of Hapa Cash Overdraft at mobile money agents managed by MNOs. To operationalize this iteration, FSPs provide the balance sheet for the overdraft facilities, lead on regulatory approvals, and support the operational monitoring of the outstanding overdraft portfolio. Alongside this, MNOs provide transactional data on their agents for eligibility scoring, lead on branding and marketing to agents, agent training, and address any day-to-day agent technical support requests.

Agents are given the opportunity to opt in to Hapa Cash Overdraft through the same mobile-based interface they utilize to conduct customer transactions on behalf of MNOs. After choosing to opt in, agents are scored by Hapa Cash based on transaction history and assigned a maximum overdraft limit. When a registered agent attempts a cash-in transaction with insufficient e-float, the Hapa Cash platform verifies the agent has remaining overdraft available. If available, the funds required to complete the transaction automatically transfer from the FSP e-money wallet to the agent e-float (step 1 in Figure 5). Immediately after receiving the funds, the cash-in transaction executes, with e-money transferred to the customer’s wallet in exchange for physical cash (step 2). At this stage, the agent has an outstanding overdraft that requires repayment. When conducting a cash-out transaction, the agent receives e-money from a customer in exchange for physical cash (step 3). The incoming e-money is then automatically used to repay the outstanding overdraft plus interest using an “auto-strike” functionality (step 4). Interest charged to agents on an outstanding overdraft is always less than the commission received from completing cash-in transactions. Agents are therefore guaranteed to make a net profit on cash-in transactions when using Hapa Cash Overdraft. If an agent with an outstanding overdraft balance does not repay by the following day, access to additional overdraft disbursements is automatically restricted. If an agent still has an unpaid overdraft balance at the end of the month, the product recovers the outstanding balance from accrued commissions for the month. In exceptional cases where accrued commissions are insufficient, the MNO automatically blocks agents from transacting until the outstanding overdraft has been repaid.

Figure 5: Mechanics of a Hapa Cash Overdraft transaction



## WHY FINCA FORWARD SELECTED HAPA CASH BY KUUNDA DIGITAL

1. **TEAM** – The Kuunda team has demonstrated experience in implementing complex digital financial services products in partnership with MNOs, FSPs, and third-party service providers in several emerging and frontier markets. In addition to clear execution capability, the team’s focus on addressing the challenges associated with the informal market aligns closely with FINCA’s mission.
2. **PRODUCT** – Several products in the market have developed approaches to addressing e-float-related agent liquidity management challenges. These solutions typically analyze agent transaction history to determine eligibility for e-float credit and enable eligible agents to request lump sums of e-float on credit to cover expected cash-in transactions. Compared to these other solutions, Hapa Cash Overdraft is differentiated by the following key factors:
  - **The product automatically finances the exact amount required to complete individual cash-in transactions.** Compared with lump sum e-float loans, this product attribute ensures that overdraft disbursements are used to finance e-float liquidity needs and cannot be diverted to other uses, for example, to finance working capital or other expenses. Additionally, there is a reduced risk of over-indebtedness, as agents transacting with the product do not have the opportunity to borrow more than is required to finance individual cash-in transactions.
  - **Overdrafts are collateralized with agent commissions.** The maximum overdraft limit is set at a low multiple of the average weekly commission accrued by an agent, minimizing default risk for the FSP partner.
  - **No behavior change is required.** The duration of the overdraft is designed around an agent’s normal rebalancing schedule so that agents are not required to adapt their current routines or habits to use the product. Moreover, the product directly integrates with the same channel that agents use to conduct transactions.
  - **Instant repayment from commissions reduces default risk.** The product is designed around an instant sweep mechanism to reduce default risk. As soon as any e-money is credited to an agent’s e-float balance, it is automatically used to repay any outstanding overdraft.

# PROOF-OF-CONCEPT IMPLEMENTATION

## GOAL AND OBJECTIVES

### GOAL

The goal of the POC was to demonstrate that Hapa Cash Overdraft has the potential to address e-float-related agent liquidity management challenges while at the same time representing a viable commercial opportunity.

### OBJECTIVES

To explore the effectiveness of the product in achieving the stated goal, the POC was designed around the following three objectives:

1. Demonstrate that the attributes of the product, and the underlying credit decisioning engine, can deliver low default rates.
2. Validate that the product addresses the e-float-related liquidity management challenges faced by agents.
3. Increase agent profitability to demonstrate the potential to improve the sustainability of agent networks.

The POC was launched in mid-December 2019 and continued for a period of six and a half months until the end of June 2020.

### PARTNERS

FINCA and Kuunda partnered with the leading mobile money service provider in Tanzania, Vodacom, to run a POC of Hapa Cash Overdraft with a sample of Vodacom’s approximately 180,000 M-Pesa mobile money agents. Through these agents, known as Wakalas in Swahili, Vodacom serves over 10 million customers throughout Tanzania. By using an M-Pesa account, Tanzanians can conduct person-to-person mobile money transfers, access savings and credit products, and pay for goods and services directly at select merchants. Finally, and perhaps most critically, M-Pesa agents provide a bridge between the digital and physical worlds by offering cash-in/cash-out services to customers that allow them to fully engage with digital financial services. Given the scope of the agent liquidity management challenge in Tanzania, Vodacom was eager to experiment with a potential solution.

FINCA Tanzania allocated an initial \$150,000 to fund agent overdrafts for the duration of the POC (of which just under 50% was eventually required) and took the lead on securing regulatory approval for the product from the Bank of Tanzania. As a mission-driven financial services provider, FINCA Tanzania saw an opportunity to address one of the key operational challenges facing agent networks by partnering with Kuunda on Hapa Cash Overdraft.

## IMPLEMENTATION

### PRODUCT ONBOARDING

#### Regulatory Approval

FINCA Tanzania, as a regulated Tanzanian financial institution, took the lead on securing regulatory approval for the POC from the Bank of Tanzania. Under the Bank of Tanzania's favorable regulatory environment for innovation, the test-and-learn approach, FINCA Tanzania secured regulatory approval to conduct a POC of Hapa Cash Overdraft over a six-month period in partnership with Vodacom.

#### Technical Integration

With regulatory approval secured, Kuunda began the process of integrating Hapa Cash Overdraft with Vodacom's systems. For FINCA Tanzania, no integrations with core banking systems were required, substantially lowering the risk of onboarding the new product. Instead, the bank was provided with an e-money wallet on the M-Pesa service, which stored the capital allocated to fund agent overdrafts for the duration of the POC. To facilitate the operational monitoring of the outstanding overdraft portfolio, Kuunda provided FINCA Tanzania access to the product via a web portal that provided the details of each overdraft. For Vodacom, more extensive integrations were required. The MNO provided Kuunda with on-site server space and access to its information technology engineers to integrate the product into its core systems to allow agents to subscribe/unsubscribe for the product, receive overdraft disbursements, and repay outstanding overdrafts with commissions automatically. By integrating into Vodacom's existing systems, Hapa Cash Overdraft required no behavior change on the part of agents, who were able to access the product directly in the same mobile interface they usually use to conduct transactions on behalf of Vodacom.

Figure 6: Screenshots of Hapa Cash Overdraft (Wakala Songesha) Integrated into M-Pesa's Mobile Interface



## Branding and Marketing

Vodacom branded the product Wakala Songesha (agent overdraft), in line with its consumer overdraft product, Songesha, offered through a partnership with TPB Bank. To market the product to its agents and drive uptake, Vodacom implemented the following strategies:

1. **SMS** – Two SMS messages were sent to agents. First, eligible agents were sent an SMS informing them about the product daily. Second, eligible agents were sent a biweekly SMS with a notification of their available overdraft limits.
2. **BROCHURES** – 110,000 brochures were printed and distributed by M-Pesa to provide agents with product details.
3. **AUTOMATED OUTBOUND CALLS** – Pre-recorded audio messages provided information to eligible agents on how to register for, and use, the product.
4. **CONTACT CENTER CALLS** – Operators from the Vodacom contact center called eligible agents directly to inform them about the product and answer questions.
5. **TERRITORY DISTRIBUTION REPRESENTATIVES (TDRS)** – Vodacom deployed its TDRs to the field to educate eligible M-Pesa agents on the product and support them to register.

Figure 7: Wakala Songesha Advertisement



## Development of Agent Eligibility Criteria

Vodacom provided Kuunda with historical transactional data from a sample of its mobile money agents which Kuunda utilized to develop its initial eligibility scoring approach that would be tested and refined during the POC. Initial characteristics that Kuunda used to determine agent eligibility included showing more than six months of transaction history, a track record of rebalancing multiple times per day, and a demonstrated need for short-term liquidity to service intraday customer transactions.

## Commercial Agreement

The three product partners agreed to split interest income received from Hapa Cash Overdraft and share responsibility for loan losses.

## PRODUCT LAUNCH AND PERFORMANCE

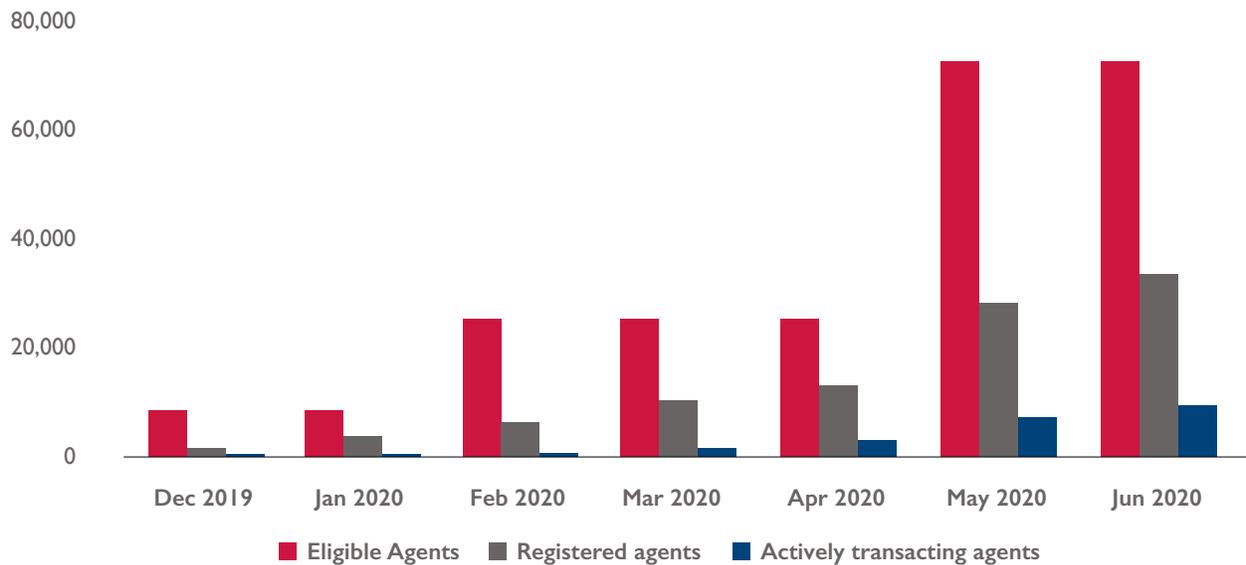
Hapa Cash Overdraft went live in mid-December 2019 and 8,000 eligible agents, located in Dar Es Salaam and the surrounding region, were given the option to sign up for the product. Uptake was slower than expected during the final weeks of December, with only 19% of eligible agents choosing to opt in and 15% of this proportion actively using the product, due to an unforeseen challenge. Shortly after product launch, the Government of Tanzania implemented a new policy of biometric registration of all SIM cards in the country. Vodacom's marketing and outreach resources were therefore focused on ensuring all agents completed the biometric registration process as soon as possible to avoid being blocked from transacting altogether. Understandably, given this context, the onboarding of a new product was a lower priority for the MNO.

By January 2020, Vodacom was close to completing the biometric registration of its entire network of agents, allowing the MNO to dedicate its marketing and outreach resources to driving uptake in the product. In doing so, the proportion of eligible agents that chose to opt in for the product increased to 45%. However, this did not translate to a significant increase in the proportion of agents actively transacting with the product. To resolve this issue, Kuunda worked with Vodacom to refine their marketing and outreach strategies.

To refine the marketing and outreach strategies and drive product uptake, the Kuunda team conducted a two-week market visit to interview M-Pesa agents. Field visits made it clear that awareness of the product among agents was extremely low. However, once agents were fully briefed on the product by a Kuunda representative, the vast majority reported that they would register for, and use, the overdraft. Based on findings from these visits, Kuunda made several recommendations to Vodacom including; establishing registration targets for TDRs, creating a TDR incentive scheme, distributing product brochures through TDRs, and re-training TDRs on the product. In addition, Kuunda recommended increasing the number and frequency of marketing messages communicated through SMS blasts, outbound calls, and outbound interactive voice recognition calls.

After testing the product with 8,000 agents in the Dar Es Salaam region, the POC team began opening the product to agents in other regions of Tanzania, beginning with 24,000 eligible agents in February–April and increasing to 71,688 agents in May and June. From February onwards, the impact of opening the product to new regions and improving marketing and outreach began to be realized. By the end of the POC in June 2020, 44% of the 71,668 eligible agents registered for the product of which 28% were actively transacting using the overdraft.

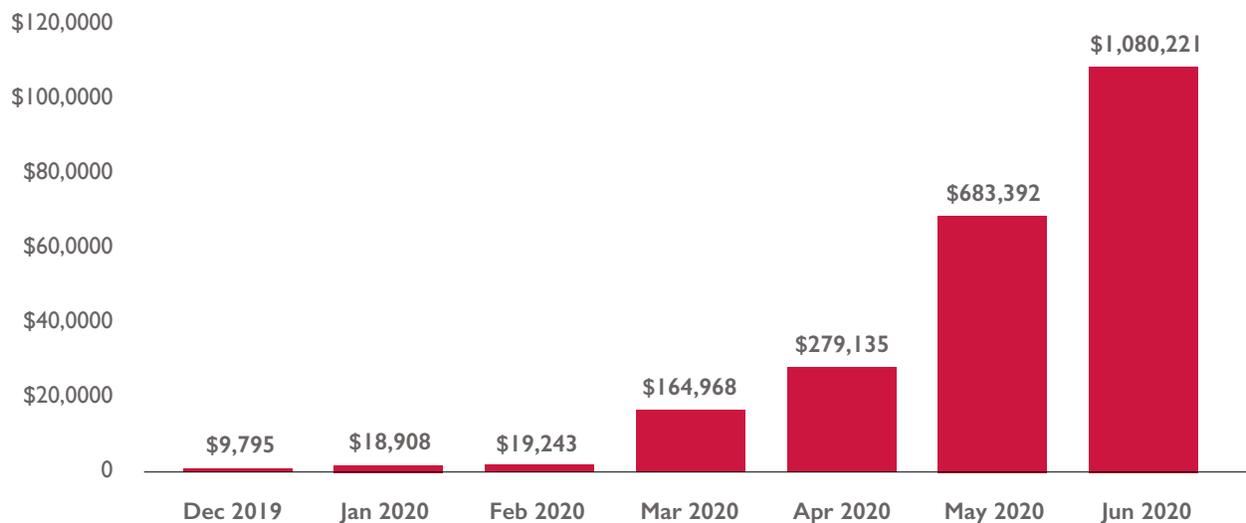
Figure 8: Eligible agents, registered agents, and actively transacting agents per month



From mid-December 2019 through the end of June 2020, Hapa Cash Overdraft made 329,954 disbursements to agents, totaling \$2.2 million. Given that the product is designed so that agents can only access the overdraft to complete a cash-in transaction when they run out of e-float, the product allowed agents to complete \$2.2 million cash-in transactions on behalf of customers that would have otherwise been denied. Defaults on outstanding overdrafts were low throughout the POC. Of all disbursements, 90% were repaid on the same day after receipt, 96% by the end of the second day, 99% after 10 days, and 99.72% after 30 days.

The product also proved to be an extremely efficient use of capital. The characteristics of the product resulted in a high velocity of repayments to disbursements per day. FINCA was able to fund large amounts of agent overdrafts with relatively little capital at risk during the POC. For example, in May and June the product disbursed \$683,392 and \$1,080,221 of agent overdrafts respectively with only \$65,000 of capital.

Figure 9: Value of overdraft disbursements (USD)



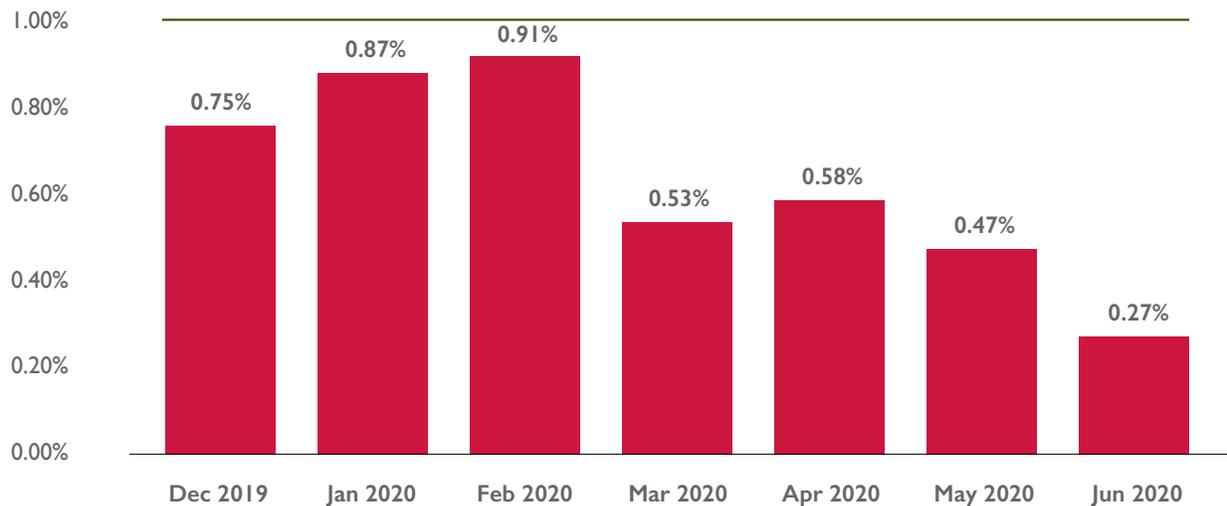
## RESULTS

The POC was successful in proving that the Hapa Cash Overdraft product addresses e-float-related agent liquidity management challenges while at the same time representing a profitable and sustainable commercial opportunity for all product partners. The attributes of the product and Kuunda’s credit decisioning approach was able to keep default rates low. Usage among registered agents was high, and by the end of the POC, agents were using and repaying their overdraft limit on average 19 times per month. Furthermore, feedback collected directly from agents confirmed demand for the product. Finally, agents using the product were able to increase commissions by between 30 and 75%, strengthening the agent value position and thus the sustainability of agent networks. Detailed POC results per objective are as follows:

### I. Demonstrate that the attributes of the product, and the underlying credit decisioning engine, can deliver low default rates.

The POC successfully demonstrated that the product can ensure low default rates for an FSP partner, a critical metric in proving that Hapa Cash Overdraft could represent a sustainable and profitable commercial opportunity. Only a very small proportion of outstanding overdrafts went into arrears during the POC, with most agents repaying within one day of receiving a disbursement. From April until the end of the POC, the percent of outstanding overdrafts in arrears followed a decreasing trend, reaching a low of 0.27%. Defaults were low during the POC, with 30-day defaults at 0.34% and 60+ day defaults at 0.18% of the total overdraft disbursement, comfortably below the POC target of less than 1%.

Figure 10: Percent of outstanding overdrafts in arrears



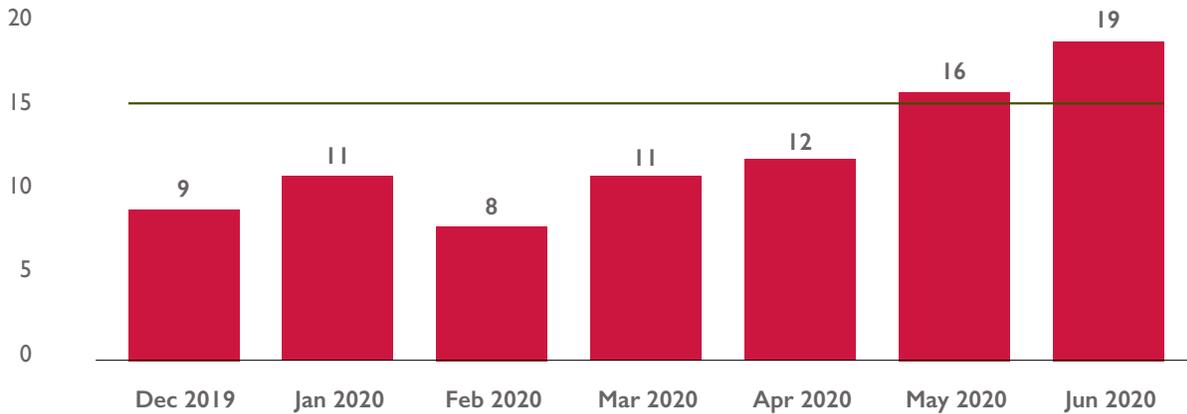
The product has several key attributes and functionalities that proved to be crucial in delivering low default rates. Auto-strike functionality gives two opportunities to recover an outstanding overdraft. First, when an agent conducts a cash-out transaction (providing a customer with cash and receiving the corresponding amount in e-money), the auto-strike automatically captures incoming e-money and uses it to repay any outstanding overdraft. Second, M-Pesa accumulates agent commissions and disburses a lump sum at the end of each month. The auto-strike functionality automatically recovers outstanding overdrafts from accumulated commissions, and agents receive a lump sum payment net of this amount.

The size of the overdraft limit allocated to agents, on average \$20, is initially set at a low multiple of their average monthly commissions for the six months prior to registering for the product. In doing so, the product aims to give agents access to an amount of overdraft that will make a difference to their business but not enough that creates an incentive to default. In cases where agents do start showing suspicious behavior, which is automatically captured through the product’s predictive behavior analytics, available overdraft is reduced over time.

**2. Validate that the product addresses the e-float-related liquidity management challenges faced by agents.**

To confirm product-market fit and validate that the approach addresses the e-float-related liquidity management challenges faced by agents, the POC team tracked average usage (defined as the number of times an agent uses and repays their overdraft limit) for the duration of the POC. On average, active agents were using and repaying their overdraft limits nine times per month at the beginning of the POC. By the end of the POC in June 2020, this number had increased to 19 times per month, well above the POC target of 15 times per month. In addition to tracking this indicator, Kuunda conducted two field visits during the POC to collect qualitative feedback directly from agents. Overall, feedback from agents was positive. Agents particularly welcomed the fact that the overdraft product was instantly available on an as needed basis and that there was no charge if the overdraft limit went unused. Lastly, the agents appreciated the economically productive pricing approach built into the product. The commission earned from each additional transaction that the product facilitates is by design always more than the interest charge. As a result, agents are guaranteed to make a profit when completing cash-in transactions with the product.

Figure 11: Average usage per agent per month



### **3. Increase agent profitability to demonstrate potential to improve the sustainability of agent networks.**

Agents are typically existing businesses, for example small retail stores, with competing day-to-day operational priorities. Providers are therefore faced with the challenge of ensuring that the value proposition of running an agent business alongside their existing services is compelling. If an agent does not see a compelling enough value proposition, then the agent business can be de-prioritized or discontinued altogether. Agents are typically paid by providers on a per transaction basis, meaning that agent profitability is closely linked to the volume of transactions that they can successfully execute.

In this context, the POC set out to identify whether Hapa Cash Overdraft could increase the number of cash-in transactions that agents can complete and therefore demonstrate potential to improve agent profitability. The product financed 329,954 cash-in transactions during the POC that would have otherwise been denied. The business impact of this is significant, with agents transacting with Hapa Cash Overdraft increasing their commission revenue by between 30 and 75%. The POC therefore clearly demonstrated that the product could address a critical pain point faced by agents and improve profitability.

The impact of the product extends beyond individual agents. The product made contributions to Vodacom's bottom line by facilitating transactions that would have previously not taken place due to liquidity shortages. Additionally, the value created for Vodacom goes further than purely monetary terms. By solving e-float-related liquidity management challenges, Hapa Cash Overdraft ensures that customers will no longer have cash-in transactions denied when they approach an M-Pesa agent. In doing so, the product will improve consumer confidence in digital financial services that are offered through M-Pesa. Given that the mobile money market is becoming increasingly competitive in Tanzania, the importance of this cannot be understated.

## **NEXT STEPS**

### **TANZANIA**

The six-and-a-half-month POC clearly demonstrated the positive impact of Hapa Cash Overdraft on e-float-related agent liquidity management challenges and the commercial viability of the product. Interest income received from the product, combined with the low default rate, demonstrated a clear path to profitability for all product partners. Insights from the POC were utilized to develop the business case for commercial scale which was approved by the three partners at the end of June 2020. FINCA Tanzania presented the results of the successful POC to the Bank of Tanzania and received full regulatory approval for commercial launch during the same month. Kuunda, its FSP partner FINCA Tanzania, and its MNO partner Vodacom began the process of commercializing and scaling Hapa Cash Overdraft in July 2020. The three partners aim to scale the product to approximately 40,000 actively transacting agents per month by the middle of 2021.

## **NEW MARKETS**

Kuunda set out to validate its approach to addressing e-float-related agent liquidity management challenges and secure partnerships with MNOs and FSPs to launch in new markets. The team has leveraged results from the successful POC in Tanzania to secure commitments from MNOs and FSPs in several new markets. FINCA Forward is currently supporting Kuunda and several FINCA subsidiaries to begin the process of onboarding the product. Like in Tanzania, FINCA Forward will use its POC approach to test the product in these new markets before preparing for full commercial launches.

## **LAUNCHING COMPLEMENTARY PRODUCTS**

While Hapa Cash Overdraft was successful in demonstrating an approach to solving e-float-related liquidity management challenges, issues remain. Agents will still face challenges managing cash balances and will therefore struggle to meet demand for cash-out transactions, something that Kuunda recognized when developing its initial concept for Hapa Cash. Alongside the process of bringing the Tanzania POC to commercial scale and entering new markets, the Kuunda team is preparing to test and launch the other two complementary products that complete the Hapa Cash suite, Marketplace and Working Capital Facility. In doing so, Kuunda aims to address the complete spectrum of liquidity management challenges that agents face in emerging economies. Given FINCA's interest in strengthening this critical enabling infrastructure for financial inclusion, FINCA Forward will continue to provide technical assistance and investment capital to Kuunda to bring these new products to market in partnership with microfinance institutions within the FINCA network and beyond.