

This is the pre-published version of the Teaching Case. For published version of both teaching case and teaching note, see *The Case Centre*. [Here](#).

ABOKE-PESA¹

SCALING UP A MUTUAL CREDIT CURRENCY

Mid-October 2023. Limited by the lack of mobile phones among villagers, Wazee Hukumbuka – a farmer's cooperative in Aboke, Kenya – was transitioning its community currency from digital to paper. The change of technology enabled to rethink the currency's governance to include neighbouring villages joining the system. They had asked Silas Otieno – a community leader – for advice. What governance factors should he consider?

ABOKE

Aboke was a rural village in the Uyundo area of Siaya County, northwestern Kenya (see Exhibit 1). Uyundo had about 8,000 inhabitants dispersed across twelve villages, of which, with its 250 residents, Aboke was half the size of the next smallest village in Uyundo (see Exhibit 2). Located 30 km from the Ugandan border, Aboke occupied a strategic position on the main road from Uganda to Kisumu – Kenya's fifth largest city.² One therefore often found second-hand products – such as clothes, shoes and kitchen-ware – and farmers' harvest sold side by side twice per week, on Tuesdays and Thursdays, at the village's central market (see Exhibit 3).

Subsistence farming driven by small-scale land-holders was the main economic activity in Aboke, just as in larger Siaya County, amounting to over 60% of employment opportunities in the region and taking over 75% of the County's arable land. In plots averaging 1-2 acres – about half a football pitch – and owned for the most part by the eldest man in the household, Aboke families cultivated maize, sorghum, beans, cassava and sweet potatoes mainly for own consumption. Other farming produce contributing to their daily food-intake were vegetables such as tomatoes, onions, avocado and kales and fruits such as mangoes, papayas, bananas, and oranges. Rice, sugarcane and groundnuts were cultivated as cash-crops for external markets and occupied 1.2 % of the County's arable land. The rest of the region's arable land remained for the most part idle.³

Aboke's position some 25 km. from the Northern shores of Lake Victoria – the third largest fresh-water lake in the world – gave it an enviable humid climate and two seasons of reliable rains, with long rains falling between March and June and short rains falling between September and December. Although Siaya County was home to lakes, rivers and swamps, with inexistent irrigation infrastructures

¹ This case was prepared by Ester Barinaga, Professor of Social Entrepreneurship at Lund University, School of Economics and Management (Sweden) as well as at the Copenhagen Business School (Denmark), and Silas Otieno, farmer and community leader in Aboke. The case is based on the authors' fieldwork and interviews conducted during four visits in 2022 and 2023. The research the teaching case builds on has been funded by The Danish Ministry of Foreign Affairs, grant number GFIEG 18-11-CBS.

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² See [here](#).

³ See [here](#).

and with inadequate water harvesting and storage, over 90% of agricultural production was rain-fed, a highly risky mode of farming to which neither established banks nor micro-finance institutions were willing to extend credit. Erratic and unreliable rain patterns brought by climate change exacerbated the risk, aggravating farmers' already dire economic and financial conditions.

Despite land availability, good climate conditions, excellent soil quality, and a majority farming population, Siaya County was a net food importer. With the region producing only enough food to feed its population for 9 months of the year,⁴ it relied on importing staples and vegetables. A combination of high prices of agricultural inputs – fertiliser, pesticides, rental of plowing machines, fuel –, poor agricultural practices, and lack of access to credit resulted in most households experiencing food scarcity, taking fewer meals per day and having a limited diversity in family diets. Climate change had worsened the situation, food insecurity affecting over 80% of the region's households in 2016.⁵ The consequences of poverty and malnutrition were visible not the least in Siaya's mortality rates, the highest in Kenya (15,5 per thousand inhabitants in 2019, compared to 10,5 for the whole country).⁶

In short, the rains, the market, and economic need structured the rhythm of life and future possibilities of the people living in Aboke.

SILAS OTIENO

Born in 1978 to an Aboke family, Silas Otieno was the youngest of thirteen children of which only five had survived beyond childhood. His father, a priest, was in his late 70s when Silas was born. In his late 40s, his mother fell ill becoming too weak to take care of him. With an aging father and an ailing mother, from age four, Silas was sent to live with a much older brother in Kisumu City who had a son his age. Those were happy and loving years – indeed he called his brother's wife "mum" and it was only as an adult that he learnt that his own mum was not "grandma." But when, aged twelve, his father-acting-brother reached retirement and could not support Silas' upbringing any longer, he was once more forced to move, this time to another brother living in the poor fishing community of Port Victoria. Silas slept on a mat on the floor of a *posho* mill – a single-room maize mill – which he had to sweep clean from the day's flour grinding before going to sleep.

Poverty meant hunger and Silas soon engaged in small business activities to be able to eat. He would wake up at 5 in the morning, walk to the lakeshore, row a boat, fish and sell the fish in the market before heading to school. He moved again, back to Aboke, at age sixteen, where he started another business. He would collect wood in the forest, burn it into charcoal, load it into a bike and ride to Busia, a market town 60 km away, where he would buy breakfast with the first day-earnings as well as maize to sell in Aboke's central market. He soon experienced the difficulties of the business. One day, at age seventeen, after the 60 km ride to Busia loaded with charcoal, he had to return without having sold any. On his ride back home, low in mood and without having had anything to eat, he unloaded the charcoal and threw it to the river. It was too heavy and he was too weak to ride the 60 km back. "That was the end of my charcoal business."

A couple of sisters who were living in Kisumu invited him to move back to the city and support his high-school education. Silas was eighteen. In Kisumu, his brother put him in contact with an Indian car-dealer who trained Silas as a car mechanic. Two years later, Silas opened his own garage and repaired cars for three years.

The car-mechanic business didn't earn enough though. During that period Silas rented a room with a friend for 200 KES – 13 USD at the time – which they could barely afford. But those years allowed him to reconnect with friends and neighbours from his previous life in Kisumu. More pivotal, in the

⁴ County of Siaya. 2021. [Here](#).

⁵ See MoALF (The Kenya Ministry of Agriculture, Livestock and Fisheries). 2016. *Climate Risk Profile for Siaya*. Kenya County Climate Risk Profile Series. The Kenya Ministry of Agriculture, Livestock and Fisheries (MoALF), Nairobi, Kenya. [Here](#).

⁶ <https://www.statista.com/statistics/1319086/crude-birth-death-in-kenya-by-county/>

neighbourhood where the two young men lived, he saw mountains of waste laying everywhere. A man of action by nature and an entrepreneur by circumstances, Silas soon realised the economic potential of household waste. Together with a former friend who had studied environmental science at university and with a few others, they discussed ways to make a business of cleaning the city. Soon they were registering a youth-based community-based organisation (CBO): Shade International.

The cooperative charged families for collecting their waste and disposing of it at the city's landfill. Like in so many other societies around the world, dealing with waste was one of the most stigmatised activities one could engage in. Hence the novelty of the business. Shade International was the first of its kind. "It was a new concept at the time", Silas reminisced. "Nobody did anything with waste and the city had no collection service but working with waste collection didn't exist. The concept was to go to families and collect their waste for a monthly payment. But they answered 'why?! You are going to do something with my waste so it is you who should pay me for it.' It was difficult to get families to pay."

Empathy and community organising skills turned out to be the key. It was the early 2000s and AIDS was ravaging communities. "We would knock on their doors and a child would come out and tell us that his daddy had died the previous day. Or we would see a sign for the funeral outside their doors. So we started to contribute to the funerals and gained their trust that way." The group of friends also started organising community cleaning days in public spaces. "But people didn't have knowledge and the day after the place would be full of waste again." However, the cleaning days brought the attention of World Vision – a Christian humanitarian organization that through bottom-up participatory processes worked with children, families, and their communities to address poverty – which started supporting their community waste-cleaning events. At the same time, several members of the CBO left for other jobs leaving Silas alone. He went ahead and registered a new business, Kisumu Waste Management Services, bought carts and hired youths. Silas became a prominent "waste entrepreneur" – as he proudly presented himself –, admired for his pioneer role and mentor to the many youth involved in Kisumu's flourishing waste collecting business sector.

LEARNING TO SEE POVERTY AS A LACK OF MONEY

It was his waste collecting business that brought Silas to a new approach to poverty. And money.

Michael Oloko, a teacher at Jaramogi Oginga Odinga University of Science and Technology (JOOUST) and neighbour to Silas during his years starting up the waste business, had become part of an international research project on grassroots innovations for waste management. Given Silas novel organisational waste management practices, Michael engaged him in the research project early on. Silas told the foreign researchers what he did and how he did it, and learnt from them how others did. At every visit, he dedicated time to follow them. "I followed them because of their ideas. For example, with María [Zapata Campos – a scholar from Gothenburg University, Sweden], the idea of [building] a waste-pickers' union has been very good. It has created a link with the County Government."

He also started following other guest researchers the international project invited. It was thus that he came into contact with the idea of poverty as a structural scarcity of money. He learnt to trace the paths through which conventional money came into a community to soon leave it without having worked for the community. He came to understand that the more money circulated in a community, the more economic activity there was in that community. And vice-versa, the less money circulated in a community, the less economic activity in that community (see Exhibit 4). And he realised that, with Kisumu being peripheral to the national and global economies and with Nairobi being the country's economic hub, Shillings – Kenya's national currency – only sluggishly entered Kisumu through remittances and austere government budgets to speedily leave the city through the buying of food and other imports. Finally, he discovered that communities around the world were addressing the scarcity of money by creating their own moneys, moneys that could only circulate within a community and were thus made to work for that community: community currencies.

Inspired by how swiftly Silas as well as the poor communities they worked with embraced the

unconventional perspective to money and the unusual tool to address poverty, JOOUST alongside a Danish and a Swedish university embarked in another international research collaboration, this time on grassroots financial innovations. The collaboration was to learn from community currencies already in place in urban informal settlements and rural communities in Mombasa and Nairobi to then design and introduce a community currency in Kisumu's informal settlements.⁷

Full of curiosity and enthusiasm, Silas joined the researchers in their trips to those Kenyan rural and urban communities that were using their own currencies, learnt of their various designs, discussed the pro's and con's of having a social entrepreneur external to the community managing those currencies, and shadowed the researchers as they went about studying how Kenyan Shillings entered, circulated, and left Kisumu's informal settlements. Eleven months after the beginning of the project, Covid-19 hit the world and the work moved online. Silas participated in the online meetings and trainings the researchers organised with urban communities to introduce Maendeleo Trading Credits (MTCr) – a digital community mutual credit currency in Kisumu.⁸

HOW DOES A MUTUAL CREDIT CURRENCY WORK?

Mutual credit is probably the most common monetary design among community currencies. Various referred to as Community Exchange Systems (CES), Local Exchange Trading Systems (LETS), Clearing Circles or Barter Circles, it is the design followed as much by the oldest existing complementary currency – the WIR, founded in Switzerland in 1934 – as by one of the most successful and inspiring recent initiatives – the Sardex, founded in Sardinia, Italy, in 2009.⁹

Mutual credit currency systems build upon the triple idea of 1, a group of individuals agreeing to buy from each other; 2, group members granting each other individual interest-free credit lines, often up to a limit; and 3, these credit lines being denominated in the group's own community currency. This means that a group member can trade with other members even when s/he has no conventional money and the balance recorded in his/her individual community currency account equals 0. In such a situation, the system records a debt in the buyer's account and a credit in the seller's account. Money is created as group members trade among themselves, while debts and credits are cleared as trade carries on. (For an explanatory example, see Exhibit 5.)

Typically, such currency initiatives are initiated locally, organised democratically, and driven as a non-profit. Transparency is deemed crucial, members being able to see each others' account balances, thus generating trust and facilitating the democratic governance of the system. Other governance issues are related to the specifics of the monetary design, such as the unit of account used and its connection to the national currency. Except for time-banks where the unit of account is the hour, the unit of account of mutual credit currency systems is equivalent one-to-one to the national currency, thus facilitating the valuation and pricing of the goods and services that members trade. And yet, though 10 units of a community currency are made equivalent to 10 units of the national currency, the community currency is not convertible to national money. The rationality behind non-convertibility is that these currencies are designed to perform as a complement to the national currency. Making them convertible would instead turn them into substitutes, inciting people to save the local currency so as to convert it into the national currency and thus severely hampering its capacity to circulate within,

⁷ For descriptions of extant community currencies in Kenya in 2019, see the following two journal articles: Barinaga, E. & Zapata Campos, MJ. 2023. [Tinkering with malleable grassroots infrastructures](#): Kenyan local currencies in informal settlements. *Urban Geography*. Barinaga, E. 2020. [A route to commons-based democratic monies?](#) Embedding the production of money in traditional communal institutions. *Frontiers in Blockchain*. See also the two teaching cases: Barinaga, E. 2022. Sarafu: A cryptocurrency for Kenyan rural communities. *SAGE Business Cases*. Barinaga, E. & Giacomini, V. Kenyan community currencies. *Harvard Business Publishing*.

⁸ For a description of those events, see the teaching case [Barinaga, E. \(In progress\). Maendeleo Tokens: A digital currency for informal traders in Western Kenya](#).

⁹ For a description of Sardex, see the teaching case Barinaga, 2023: A digital business-to-business currency. *The Case Centre*.

and work for; the community it is implemented to serve.

ABOKE-PESA

When the pandemic-induced measures were imposed “life became unbearable in [Kisumu] city.” Informal markets were sealed and street vendors chased by the police. In a city with over 60% of the population living hand-to-mouth from selling in streets and informal markets, the economic blow on households was sudden and sharp. Food insecurity worsened from already high pre-pandemic levels (71% of the population in 2018).¹⁰ The consequences reverberated through all business sectors. Silas recalled, “during Corona, most families did not have money to pay for waste collection. The little they had they used for food. So waste business went down.” Not only did the family’s income from waste collection services whittled away, the pandemic measures included the closure of schools and Silas’ wife lost her job at a private school. Without anything to do and with no income in the house, in May 2020 the family packed their things and moved to Aboke, where they owned a plot of land. They started farming and engaging with the community. “We had a good time; the boys really liked it.”

Silas brought his newly acquired understanding of money and his city contacts to the community in Aboke. He met Wazee Hukumbuka – Swahili for ‘the elder remember’ –, a cooperative that organised farmers from four villages in the Uyundo area and whose members met every Thursday, at the end of the market day, to save together, share challenges and support each other. Silas joined their meetings. Eventually, he told them about the digital community currency in Kisumu. Interested, members of the cooperative asked whether they could learn more, and Silas invited his research contacts to Aboke.

It went fast from there. The researchers first visit was in mid-January 2022, training of Wazee Hukumbuka’s members proceeded during February and, by the end of March, they were setting up a digital mutual credit currency. They called it Aboke-pesa – Aboke to strengthen farmers’ identification with the new currency; *pesa*, the Swahili word for money. Aboke-money. By September 2022, the currency was used by some 35 persons in four villages – Aboke, Uyundo, Lilingo and Kodenya – and their gross expenditure for the last quarter of that year amounted to 16,832 Aboke-pesas.

DEVELOPING ABOKE-PESA

To strengthen Aboke community, Silas engaged members of Wazee Hukumbuka in a resources and needs mapping exercise he had learnt from the researchers. He conducted it in connection to Wazee Hukumbuka’s Thursday meetings, so as to be able to reach farmers and households from all four villages. The aim of the exercise was to get an overview of what resources existed in each community and what needs had to be covered by buying products and services from outside, thus providing a concrete description of how money – shillings – leaked out of the communities. It would also inform local farmers and households on what to produce. Most farmers cultivated the same produce – maize and beans –, and most families sold the same services – cooking by the road and hair-braiding at home –, which resulted in under-utilised resources alongside unsatisfied needs. Knowing what needs were being satisfied with products and services coming from outside the communities would give community members an indication of how to re-orient the products and services they offered. Finally, finding out the specific resources each community had, and lacked, could help members of the four separate villages to identify trade partners in other villages. That is, it could help members match the idle resources from one community with the unmet needs in another; a foundational idea of community currencies.

Silas structured the mapping exercise in three questions: 1, what product does each household provide? 2, what products are there in the community? And 3, what products are not found in the community and are bought from outside?

¹⁰ See Mistra Urban Futures. 2018. The importance of the informal food sector in the Kisumu food system. *Consuming Urban Poverty*, Policy Brief nr. 2. It can be accessed [here](#).

They drew instructive lessons that immediately boosted trade among Wazee Hukumbuka members and, therewith, use of Aboke-pesa. Silas recounted:

They became aware of products, and also of activities that were there but they were not aware of them. [...] They didn't know they can trade services. They thought it was only products. Like Phillyster's sisal. Initially they thought only of food to trade with Aboke-pesa, maize, beans, vegetables. They didn't think of other products to sell among them. They found that Kodeny had sisal and that Phillyster was weaving baskets and ropes to tie the cows. [She had been buying sisal from Busia, a nearby market town.] They managed to match Phillyster in Uyundo with sisal from Kodeny. Also there is this plant that Phillyster uses to make an ash that heals ulcers; it neutralises acidity in the stomach.

– Silas Otieno, October 17, 2023

Apart from medicinal plant healing and weaving production, other much needed services were identified along with those community members that had the skills to provide them: clothes mending, farm weeding, *boda boda* (motorbike) transport. "They recognised that there were a lot of resources out there, not only food-stuff, that they could trade among themselves in Aboke-pesa."

The increased use of the digital community currency brought more and more varied sales, members soon attesting to be eating better. They now sweetened their food with locally produced honey from John and had Alice's traditional porridge for lunch. Farmers could now afford hiring help to weed their crops and those who had gone hungry for lack of a job and a plot of land were now feeding themselves and their family thanks to Aboke-pesa.

They, too, attested the currency was engendering cohesion within the community. Charles Oguda, an elder farmer declared, "it has brought us together; it has." Alice elaborated:

Together because when we are at the market, we now tend to buy from others with Aboke-pesa. Other people see and ask, and see how those using Aboke-pesa are selling more in the market. So they are attracted and come to ask.

– Alice Awuor, group interview, October 7, 2023

With Aboke-pesa drawing attention from farmers and households outside Wazee Hukumbuka, many wondered if they, too, could join the currency system. This, however, was conditioned to the priorities identified during the mapping exercise.

Those who sell brew don't associate. Alcohol is not part of Aboke-pesa. So now they have changed their businesses and associated to Aboke-pesa. Three women who sold alcohol now sell other things. Monica sold brew and now sells beans; Alice does not sell alcohol any more and now sells firewood and yeast that she produces from millet that she grows. And Mathilda who sold brew and she now sells chicken. There is also Manase, a man who sold brew and now sells maize.

– Alice Awuor & Stephen Were, group interview, October 7, 2023

Some who came here and registered, they didn't have business. They did nothing. But we told them that in Aboke-pesa, they have to trade, so they have to have a business. So they started. Like these two persons. One started to sell *skumawiki* [a local, much appreciated, cabbage sort], and the other started selling maize. Both are men.

– Alice Awuor, group interview, October 7, 2023

Others saw opportunities to diversify their sources of income.

Me, I was a car mechanic. I could do the services but it wasn't enough. So I developed and added another business, I now also make chairs and I do that in Aboke-pesa. [...] when a customer is in Aboke-pesa, then they can also pay car services in Aboke-pesa.

– Charles Oguda, group interview, October 7, 2023

When coming to meetings on Aboke-pesa, I came with my wares. I am a farmer but I also sell dishes and cutlery. I sold them in the small markets in Aboke-pesa and bought in Aboke-pesa. I saw an opportunity there.

– Charles Onyango Ochieng, interview, October 11, 2023

To widen the scope of products offered to the growing community of Aboke-pesa users, they agreed to sell in mixed prices those products which inputs necessarily came from the outside: part of the payment was to be done in Kenyan Shillings to cover the costs for the inputs, with the other part in Aboke-pesa. It was up to the buyer and the seller to agree on the particular mix of currencies for each trade.

A final and major lesson learnt from mapping their needs related to a single product, one that constituted a significant leak of Kenyan Shillings out of all four villages. "All communities spoke of cooking oil," Silas recalled. With the onset of the Russian invasion of Ukraine, sunflower oil prices had become exorbitant, people buying cooking oil by the spoon, "one spoon for the day's dinner." It was late 2022 and "all families were buying oil that came from outside the community. That's when the idea of the seeds and the oil came in."

Sunflower had been a common crop in the 80s, as had cotton, tobacco, sisal, and coffee. There had also been a leather factory in central Aboke. Ethnic tensions between central government – from the dominant Kikuyu tribe – and Western Kenya's Luo region led factories to move or to collapse. As the elders recounted, "this side of Kenya didn't have good-will from government and the factories relocated to other regions." Armed with their new understanding of the extent to which the generalised reliance on sunflower oil from external markets was debilitating the economy of families, members of Wazee Hukumbuka considered the potential of re-introducing sunflower into their farms. Maybe, they pondered, it could be integrated with Aboke-pesa to further strengthen the community?

Silas presented the lessons from the mapping exercise to his researcher friends, told them about Wazee Hukumbuka's plans to create a sunflower seeds-bank for farmers in the region, and asked them for feed-back on the possibility to integrate oil production with the local currency. The European and Kenyan researchers agreed that a cooperatively run seeds-bank and oil-press had the potential to boost the economy of the villages in a way that benefitted the many. More relevant for the research collaboration, and for their funding partner, was the notion that anchoring Aboke-pesa in sunflower oil production could build resilience in the fragile rural community. Intrigued by the novel ideas, they surveyed the extent of farmers' interest in re-orienting their farms to sunflower production and in selling their produce in Aboke-pesa. Farmers responded overwhelmingly positive (see Exhibit 6) and, as a result, the foundation approved re-purposing part of the research budget into supporting the acquisition of sunflower seeds and an oil press.

In 2023, sunflower was again growing in fields throughout Aboke, small in scale initially, farmers not daring to believe the arrival of an oil-press to their community. By the end of the long-rains season, farmers from Ukwala, a fifth village, had joined the cooperative and Wazee Hukumbuka proudly counted 149 members. The oil-press was installed in late September. By then, Aboke-pesa was undergoing a radical technological transformation: it was moving from digital to paper.

MANY DIGITAL CHALLENGES AND ONE INTUITIVE SOLUTION

It began spontaneously. The number of Aboke-pesa users was growing but, being a poor rural community, few villagers had mobile phones, let alone smartphones. With power cuts common and signal coverage scarce, even those villagers that possessed a phone would often find themselves unable to use it. Or second-hand phones as they were, they would frequently break down leaving their owners without phones until they managed to save enough for repair or for yet another second-hand phone. This state of affairs limited their capacity to trade in Aboke-pesa. It also limited the possibility to enrol the increasing number of villagers interested in joining yet without a phone, commonly women. Alice came with a creative solution. She bought a notebook and wrote the transactions in it: negative figures for buyers' expenditures, positive figures for sellers' earnings; each recorded transaction denominated in Aboke-pesa. The notebook enabled both those who were already currency users and those who were shyly curious about it to trade in the community currency. (See Exhibit 7.)

It further developed with the elders' ingenious practices. Upon receiving the seeds for the seed-bank, Wazee Hukumbuka had distributed them among its members, with members' committing to return double the amount upon harvesting, thus expanding the seeds-bank. In loose pages neatly collected in colourful folders, Wazee Hukumbuka recorded the distributed and the returned seeds in kilograms. Such was established practice. It, too, recorded them in Aboke-pesa. Organisationally more empowering was the recording of the seeds farmers brought to the coop's office for storage after the abundant harvest. As a formula to integrate their sunflower-related productive activities with the community currency, the agreement between the farmers' coop and its members was that the cooperative would buy the seeds and pay for them 75% in Kenyan Shillings and 25% in Aboke-pesa. Wazee Hukumbuka would then process the seeds into oil and sell the oil to its members at a price paid 65% in shillings and 35% in Aboke-pesa. Once more, however, lack of phones limited the possibility to exchange and Wazee Hukumbuka, just like Alice, had started to record the trades on paper. (See Exhibit 8.)

When the researchers visited in October 2023, villagers were brimming with questions. How could they better integrate the activities around seeds and oil production with stronger use of Aboke-pesa? Should bigger farmers, with stronger buying and selling capacity, have higher credit and debit limits? Farmers from three more villages – Luhano, Ligege and Sega – were knocking on the cooperative's doors. Should Wazee Hukumbuka welcome them? How should they coordinate trade across villages – or “clusters” as they referred to them – some located 15 km away – or, at half an hour and 150 shillings in a *boda boda*? Those governance questions notwithstanding, one question troubled them most. Wazee Hukumbuka was partially paying for farmers' seeds harvest in Aboke-pesa. Now that “it [didn't] come from the phone, where [was] the money coming from?” A still embryonic, rudimentary transition from digital to ledger money was provoking profound questions on the management and social life of money.

The last question was the easiest. Or so the researchers thought, so they addressed it first. “You are creating that money. Money is a system of credits, debts and balances recorded in ledgers. By agreeing to trade with each other and recording those transactions in the form of debts and credits on your ledgers, you have yourselves created your local money.” The villagers looked somewhat perplexed. This seemed all too elaborate an answer. Silas calmly stepped in. After all, he lived in the community and knew their ways. “As Wazee Hukumbuka, you are paying members for their seeds from a sort of cooperative fund. That's where the money is coming from, from your own community fund. It's just that you are not aware of it and you are not recording it.”

The villagers had built on their own established recording practices to develop a home-grown solution to the limitations arising from the digital nature of the community currency. The pervasiveness of those practices across communities and the intuitiveness with which they came to members could bestow a paper-based currency with a solidity and stability a digital platform was denying them. Yet, their extant ledger practices would have to be adapted to a local currency and villagers would have to be trained.

Together with Silas, the research team designed individual passbooks for each member to record their transactions in and a collective ledger for the group's records and, during two intense weeks in mid-October, trained the cooperative's management group along with farmers from all five villages. (See Exhibits 9 and 10.)

Content with Silas' explanation of how they were creating money and with the two weeks of training on how to create it properly, members of Wazee Hukumbuka expectantly waited for answers to the remaining questions. Now that they were the ones creating and managing their own currency, how should they run it? Immersed as he was in their communal practices and local knowledges, Silas knew he needed to play a key role in figuring out the solution to those questions.

STUDENT ASSIGNMENT

- In the case we read about the financial concerns of small-scale farmers in Aboke, Kenya. Represent the circulation of *Aboke-pesa* through the aggregate balance sheet in the following transactions (assume individual balances equal 0 at the start of the exercise):
 1. Alice buys 5kg of corn from William for 300 Aboke-pesas
 2. Alice rents Phyllister's mill to grind the corn for 200 Aboke-pesas.
 3. Alice sells her home-made porridge to William for 100 Aboke-pesas
 4. William pays Phyllister 80 Aboke-pesas for a cow-rope.
- Based on the previous balance sheet exercise, consider the researchers' statement that in such a system "You are creating that money. Money is a system of credits, debts and balances recorded in ledgers. By agreeing to trade with each other and recording those transactions in the form of debts and credits on your ledgers, you have yourselves created your local money." What do they mean? What are the implications of such a monetary system in terms of distribution of power?
- Silas Otieno's answer to Wazee Hukumbuka's question on where the local money comes from was: "As Wazee Hukumbuka, you are paying members for their seeds from a sort of cooperative fund. That's where the money is coming from, from your own community fund. It's just that you haven't written down that one."

Based on that answer, consider the following transaction between Wazee Hukumbuka and its members: The Board of Wazee Hukumbuka rents two hours of labour to weed the community's plot of maize from Alice, William and Phyllister, at 250 Aboke-pesas/hour. The payment is done from an account called 'WH Community Fund'.

Visualise that transaction in the two following ways:

1. Record the transactions in the aggregate balance sheet.
 2. Draw the monetary circuits
- Imagine you are a consultant working with Silas. You are to work together to advise the elders of Wazee Hukumbuka on how to define the cooperative's future scaling strategy. More specifically, they need answers to the following questions (from the case): "How could they better integrate the activities around seeds and oil production with stronger use of Aboke-pesa? Should bigger farmers, with stronger buying and selling capacity, have higher credit and debit limits? Farmers from three more villages – Luhano, Ligege and Sega – were knocking on the cooperative's doors. Should Wazee Hukumbuka welcome them? How should they coordinate trade across villages some located 15 km away – or, at half an hour and 150 shillings in a *boda boda*?"

EXHIBIT 1

MAPS OF KENYA AND ABOKE



Image: Location of Siaya County in Western Kenya. Source: [Nairobi123](#), via Wikimedia Commons.

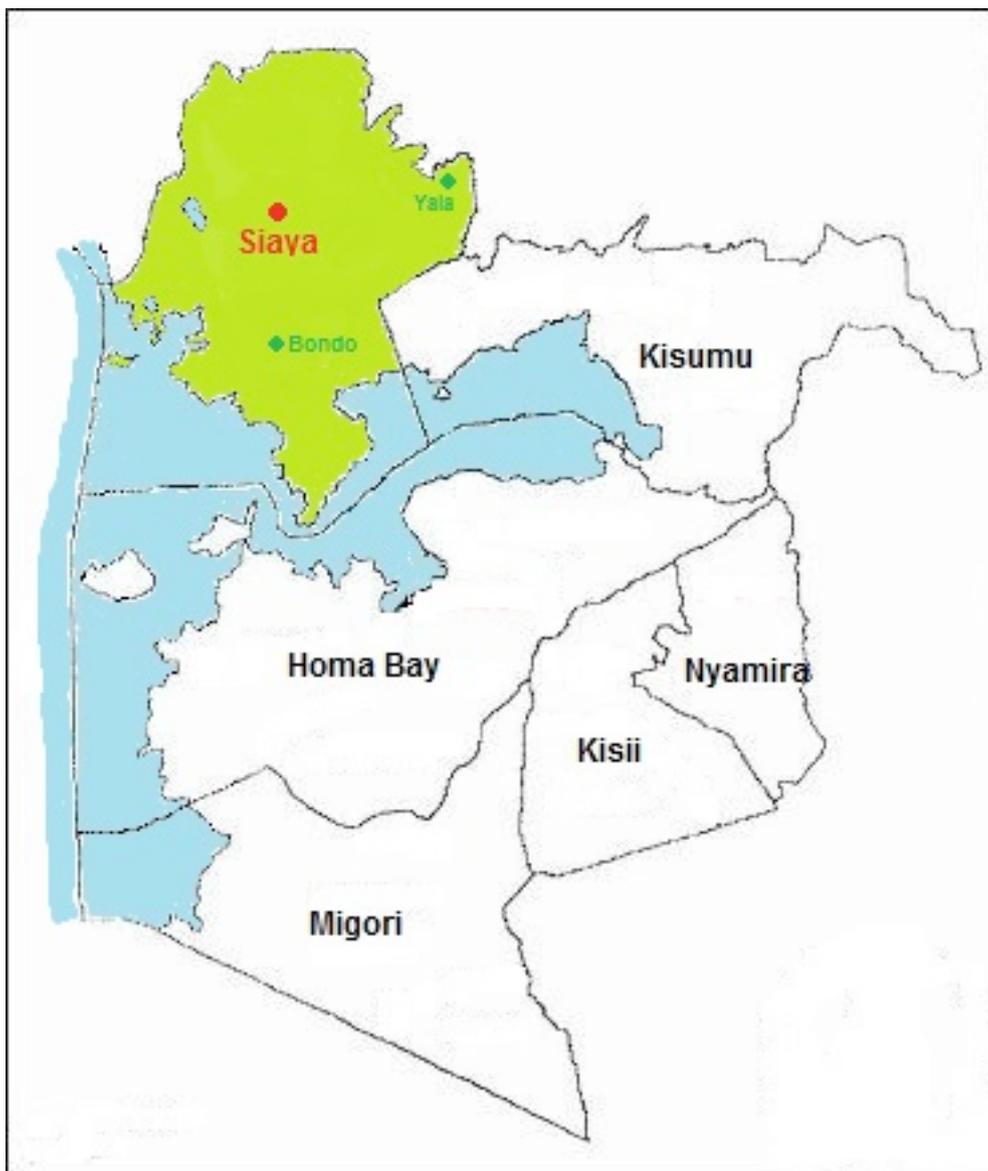


Image: Location of Siaya County in Western Kenya. Source: [Omondi](#), via Wikimedia Commons.

EXHIBIT 2

POPULATION SIZE OF VILLAGES IN UYUNDO SUB-LOCATION, SIAYA COUNTY, KENYA

Aboke village is part of “Uyundo sub-location”. Population figures provided in October 2023 by Maureen Otor, the Area’s Chief, show a total population of about 8000 persons distributed as follows:

- Uhembe A village: 500 inhabitants
- Uhembe B village: 500 inhabitants
- Wanyungu village: 800 inhabitants
- Walira village: 500 inhabitants
- Murumba A village: 1 200 inhabitants
- Murumba B village: 600 inhabitants
- Aboke village: 250 inhabitants
- Lunga village: 600 inhabitants
- Uyundo A village: 500 inhabitants
- Uyundo B village: 850 inhabitants
- Skala village: 720 inhabitants
- Malua village: 1 005 inhabitants

EXHIBIT 3

ABOKE'S CENTRAL MARKET

Source: Silas Otieno







EXHIBIT 4

CIRCULATION OF MONEY

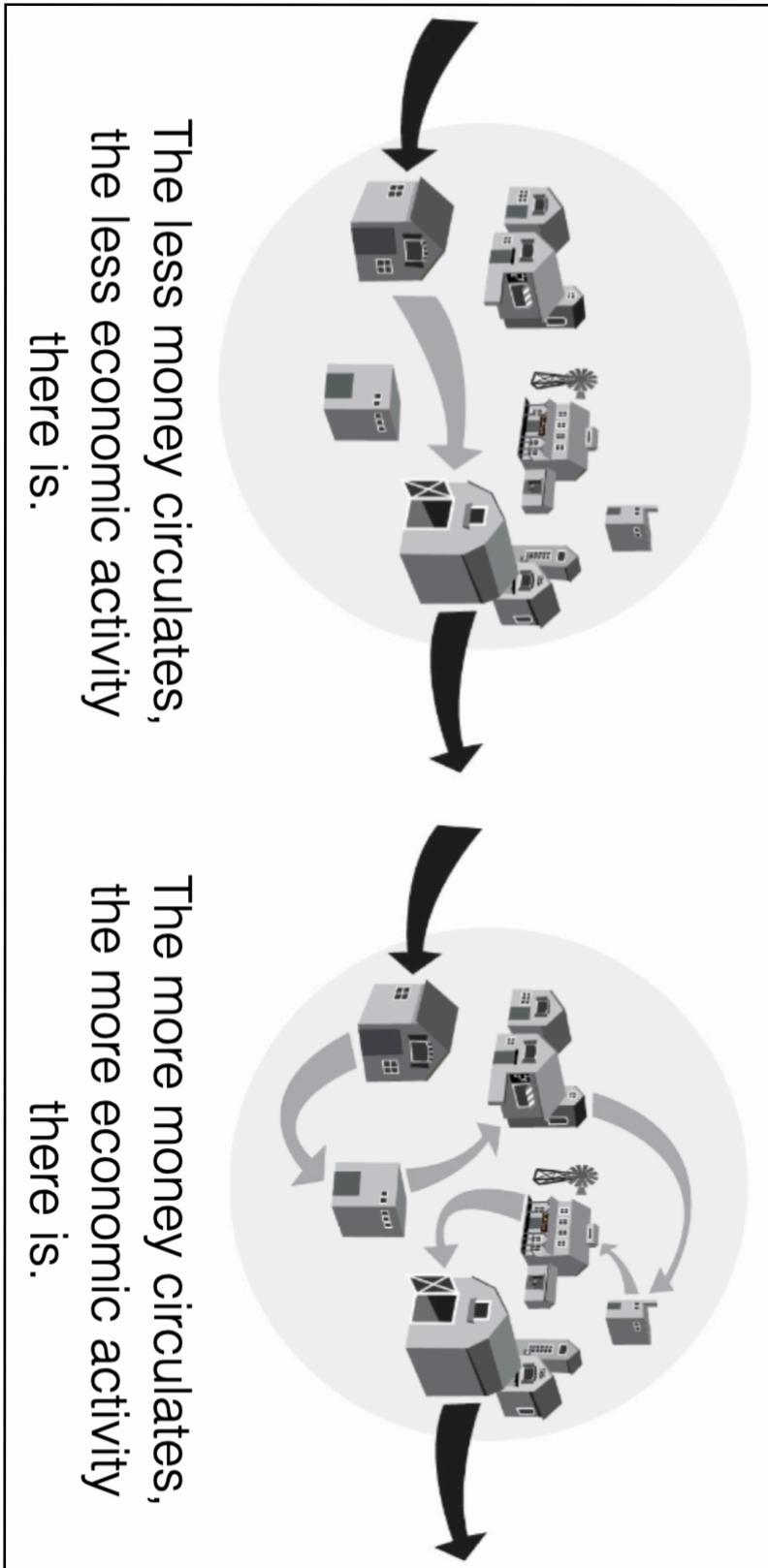


EXHIBIT 5

FICTIONAL EXAMPLE OF ACCOUNT BALANCES IN A MUTUAL CREDIT SYSTEM

At time 0, members' account balances record a 0. Having just started, they had yet not spent nor earned any community currency. In a mutual credit currency system, however, members have the possibility to go overdraft, to buy on debt denominated in the specific currency. There is a limit to the level of debt allowed members. In Aboke, members had a debit (or overdraft) limit of -500, and a symmetrical credit limit of +500. This is to incentivise members to both buy and sell.

T=0	Previous balance	Change	Current balance
Alice	0	0	0
William	0	0	0
Phillyster	0	0	0
Total	0	0	0

On time 1, Alice buys two chapattis from Phillyster for a total of 40 Aboke-pesa. Their account balances are debited and credited respectively. Alice does not owe any money to Phillyster, but she has a compromise with the community to offer services or products equivalent to the community debt she has incurred.

T=1	Previous balance	Change	Current balance
Alice	0	-40	-40
William	0	0	0
Phillyster	0	+40	40
Total	0	0	0

At time 2, William sells beans to Alice for 60 Aboke-pesa.

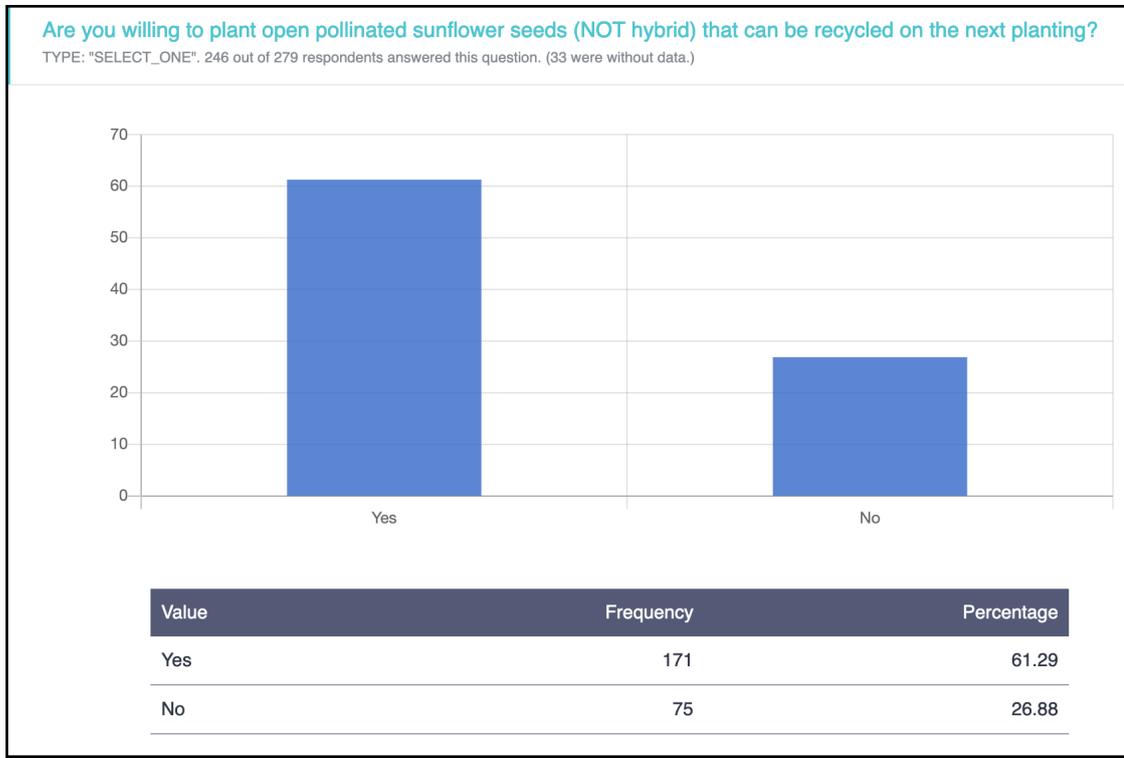
T=2	Previous balance	Change	Current balance
Alice	-40	-60	-100
William	0	+60	60
Phillyster	40	0	40
Total	0	0	0

At time 3, Alice sells farm weeding services to William for 250 Aboke-pesa.

T=2	Previous balance	Change	Current balance
Alice	-100	+250	150
William	60	-250	-190
Phillyster	40	0	40
Total	0	0	0

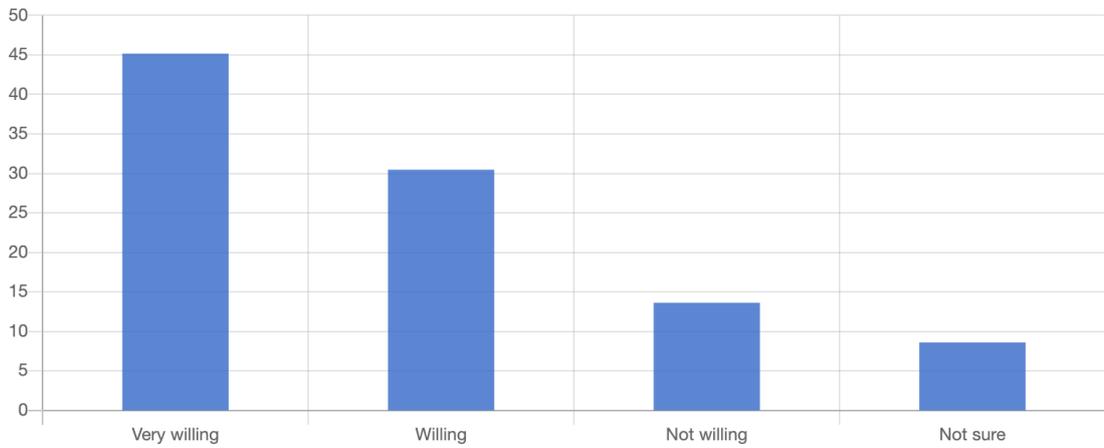
EXHIBIT 6

RESULTS FROM SURVEY OF FARMERS



Willingness to sell your harvested sunflower seeds to your community group for processing and be paid in MTCr. (Aboke Pesa)

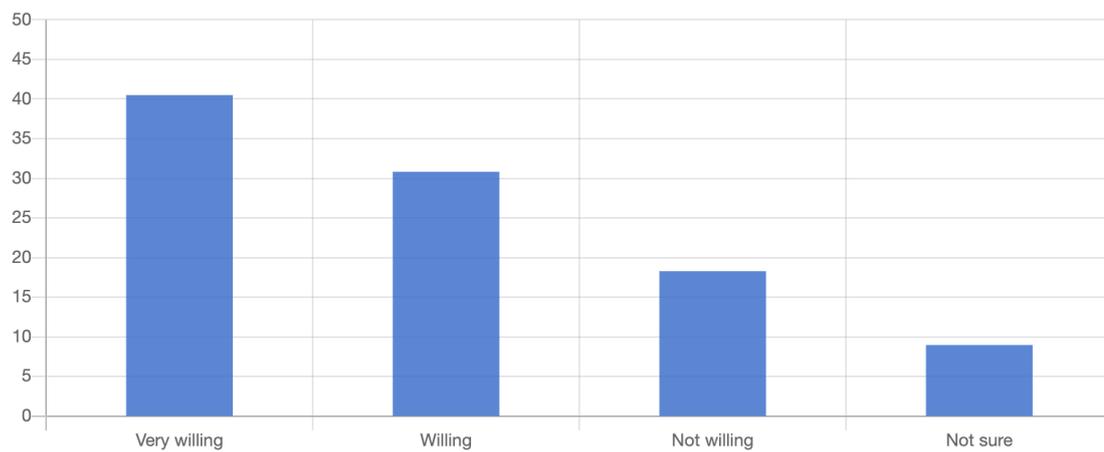
TYPE: "SELECT_ONE". 273 out of 279 respondents answered this question. (6 were without data.)



Value	Frequency	Percentage
Very willing	126	45.16
Willing	85	30.47
Not willing	38	13.62
Not sure	24	8.6

Willingness to work in a group sunflower farm and be paid in MTCr. (Aboke Pesa)

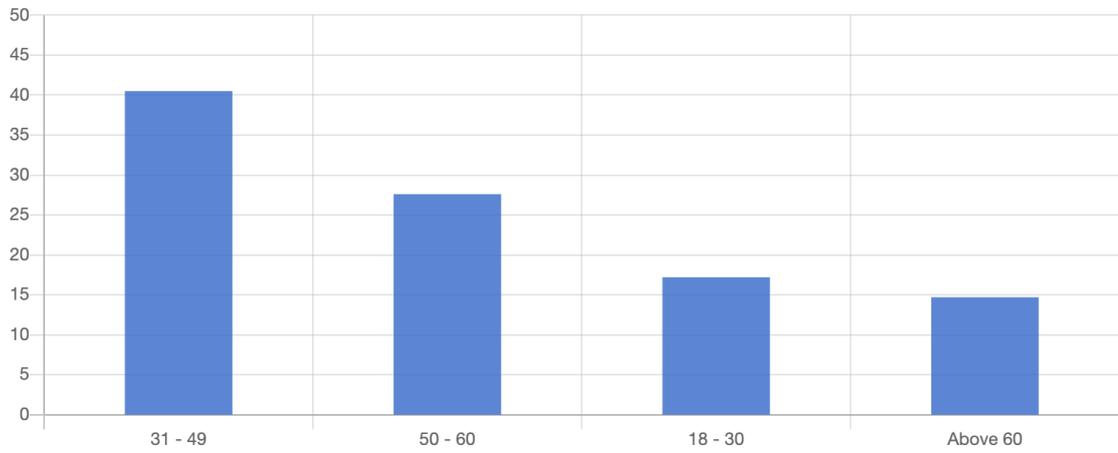
TYPE: "SELECT_ONE". 275 out of 279 respondents answered this question. (4 were without data.)



Value	Frequency	Percentage
Very willing	113	40.5
Willing	86	30.82
Not willing	51	18.28
Not sure	25	8.96

How old are you?

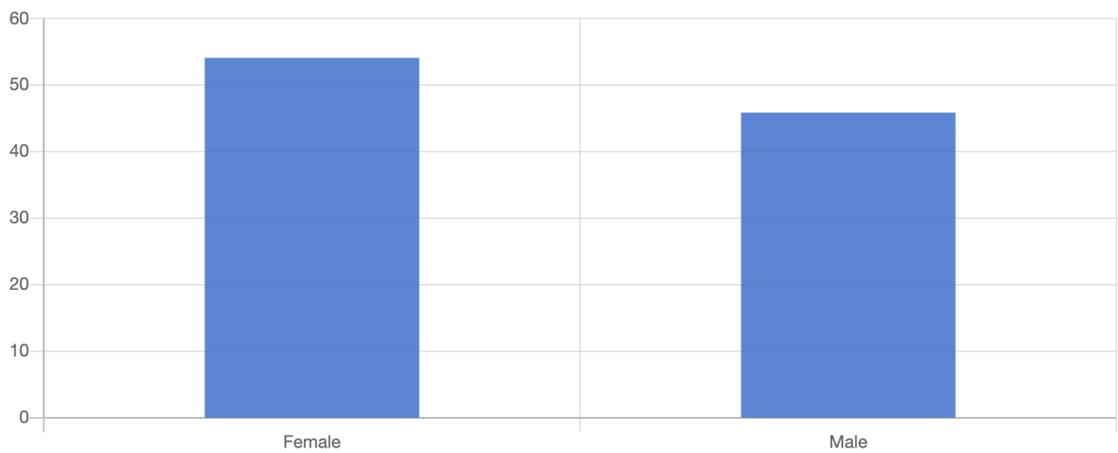
TYPE: "SELECT_ONE". 279 out of 279 respondents answered this question. (0 were without data.)



Value	Frequency	Percentage
31 - 49	113	40.5
50 - 60	77	27.6
18 - 30	48	17.2
Above 60	41	14.7

Gender of the respondent

TYPE: "SELECT_ONE". 279 out of 279 respondents answered this question. (0 were without data.)



Value	Frequency	Percentage
Female	151	54.12
Male	128	45.88

EXHIBIT 7

ALICE'S ABOKE-PESA TRADING BOOK

Source: picture by the author.

Date	Names Buyers Name	Product	Sellers	Buyer's Balance	Seller's Balance
3/6/23	William	Buy's bag	Shadrack	William -200	Shadrack +200
3/6/23	Henry	" Aler	mathilda	Henry -100	mathilda +100
3/6/23	Evaline	" Asali	Bitec	Evaline -50	Evaline Bitec +50
5/6/23	me Shack	" Asbag	Freadric	me Shack -300	Fread +300
5/6/23	vincent	" Thudho	philisha	vincent j. -100	philish +100
13/6/23	Raphilax	" aloaf	vincent j.	Raphilax -300	vincent j. +300
13/6/23	Mary	" qbook powder	Raphilax	Mary -400	Raphilax +400
13/6/23	millant	" flour	Alice	millant -150	Alice +150
18/6/23	Alice	" apail	Lukas	Alice -200	Alice Lukas +200
15/6/23	Josephin *	" sisal	Selline	Josephin -30	Selline +30
15/6/23	Charles	" Kitday stool	paed.	Charles -300	paed +300
20/6/23	monica	" penbit	SLeron	monica -20	Sharon +20
20/6/23	Selling	" chapit	meslock	Selline -20	meslara +20
20/6/23	Charles	" low rope	Stephane	Charles -200	Siphine were +200
21/6/27	Alice	" soya Beans	Rosemary	Alice -400	Rose +400
29/6/23	Rhoda	" powder flour	Alice	Rhoda -80	Alice +80
2/7/23	philisha	" soya Tea	Alice	philisha -100	Alice +100
2/7/23	Alice	" Iron Sleet	William	Alice -500	William +500
2/2/23	Alice	" elkhudo Salt	philisha	Alice -100	philisha +100
14/8/23	philisha	" Card board	Raphilax	philisha -150	Raphilax +150
14/8/23	Raphilax	" arope	Nelly	Raphilax -100	Nelly +100
14/8/23	Nelly	" ak adress zip	Lavend	Nelly -15	Lavenda +15
21/9/23	Alice	" cloth	veronica	Alice -150	verona +150
21/9/23	veroni	" soya Tea	Alice	veronica -80	Alice +80
25/9/23	Alice	" Macane vas	Lavenda	Alice -250	Lavend +250
25/9/23	Alice	" charge plant	Raphilax	Alice -150	Raphilax +150
25/9/23	Raphilax	" powder flour	Alice	Raphilax -300	Alice +300
25/9/23	William	" powder flour	Alice	William -500	Alice +500

You may delay, but time will not.

EXHIBIT 8

WAZEE HUKUMBUKA'S SEEDS STORAGE BOOK

Source: pictures by the author.

2023

Contact 0746264174
 Cluster Uyundo
 MARY OPENDO

	SEED	Bulla	SEED	NW
	GIVEN	Trade	RETURN	
Total 17kg	1 kg	16kg	2 kg	14
15kg				Bal
				15kg
Paid all 75% 70000 50micr.				

PHONE 0706740355
0720448294

2 CHARLIS OIENO OYUDA I.D. 0639486

DATE: SUNFLOWER LISINGO CLUSTER

DATE	SEED TAKEN	RETURN KG	NET KG
20-7-2023	1.1 KG	36 KG	36 KG
	48 KG	46 KG	46 KG
paid shs 500/-	26/7/2023		82 KG
		NTICE	X 500/-
		1	4100/-
			- 500/-
	26/7/2023	Blance	3600/-

EXHIBIT 9

TEMPLATES FOR NEW INDIVIDUAL PASSBOOKS AND GROUP LEDGER

<p style="text-align: center;">NOTE</p> <ol style="list-style-type: none">1. This passbook remains the property of Wazee Ukumbuka Ugenya Self Help Group and should be reported to the treasurer upon misplacement.2. No alterations whatsoever should be made on this passbook unless by the treasurer3. All passbooks to remain with the secretary unless requested by the member <p style="text-align: center;">BE WISE SAVE & PROSPER</p>	<p style="text-align: center;">WAZEE HUKUMBUKA UGENYA SELF HELP GROUP</p> <div style="text-align: center;"><p style="text-align: center;">W U S H G</p></div> <p style="text-align: center;">INDIVIDUAL MEMBER PASSBOOK</p> <p>MEMBER'S NAME: _____</p> <p>ADDRESS: _____</p> <p>TEL. NO.: _____</p>
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Image: Back and front cover of Individual Member Passbook. Source: Silas Otieno

EXHIBIT 10

TRAINING ON HOW TO RECORD TRANSACTIONS IN THE NEW PASSBOOKS



Images: Training Wazee Hukumbuka members, Aboke. Source: the author.





Image: Training Wazee Hukumbuka members, Kodeny. Source: the author.



Image: Training the Trainers, Aboke. Source: the author.