Digital Cash Transfers in Liberia

A case study from Save the Children's Emergency
Food Security Program (2015- 2016)

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Executive Summary

As unconditional cash transfer programs become a more common way of delivering aid in both rapid and slow onset emergencies, many organizations look to assess how these programs can take advantage of digital transfer mechanisms to help facilitate transparent, secure, and inclusive disbursements to beneficiary households. In Liberia, Save the Children (SC) decided to tap into a local mobile money product provided by Lonestar MTN (Lonestar) to facilitate payments to 5,000 beneficiaries who were selected to participate in the Emergency Food Assistance for Ebola Affected Families in Liberia Program (SC Program). The SC Program targeted populations in two counties, Bong and Margibi, and provided seven disbursements of Liberian Dollar (L) $4,400 each.

The GSMA State of the Industry Report on Mobile Money[1] stated that 30 out of 271 (11%) of mobile money services worldwide have over one million active customers[2] (a general threshold used to identify successful mobile money deployments). While these numbers have continually grown over the past five years, it is a reminder that mobile money products may not yet have fully developed ecosystems that can support cash transfer programs.

Sadly, Liberia does not have a mobile money provider that falls within the aforementioned 11%. Liberia ranks on the lower end of enabling environments for mobile financial services (#87 out of 104 countries), according to the *NetHope Market Viability Tool*. Liberia's underlying banking sector also provided some challenges, particularly when it came to providing regular cash liquidity in more rural areas. SC's decision to deliver funds through the Lonestar mobile money platform required them to think outside the box. While the delivery mechanism enabled SC to digitize their entire distribution process, there were still many issues they had to overcome to ensure cash was received by their beneficiaries.

Their experiences provide a valuable lesson learned for all humanitarian organizations (and bulk payers in general) who want to digitize cash disbursements in a difficult environment. This report will provide insight into those lessons as they pertain to all major stakeholders involved. The below key findings and recommendations are a summary of the broader learnings found through the development of this report.

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[1] http://www.gsma.com/mobilefordevelopment/programme/mobile-money/2015-state-of-the-industry-report-on-mobile-money-now-available

[2] GSMA defines active customers as those who make at least one transaction within a 90-day period

KEY FINDING 1
The capacity of mobile money products to deliver services to cash transfer programs is largely dependent on the health of the banking sector. Factors such as central bank money supply management and bank branch liquidity management should be assessed when considering the use of mobile money products in more rural settings. This underlying backbone for moving cash around the country is crucial in ensuring liquidity at the point of cash out, and needs to be heavily considered when deciding on aid delivery modalities and mechanisms alike. It is also important to understand how money is moved between mobile money and bank accounts; whether there are technical integrations that enable those funds to move digitally or if most of transfer procedures are still done by paper, which can cause delays in access to funds for mobile money agents.
RECOMMENDATION
Analysis and discussions with the central bank and mobile money bank partners who provide liquidity management services should be held during the decision-making phase of a program. Asking key questions about the way money supply is managed by the central bank and how banks manage liquidity for more rural branches will inform how cash supplies are moved around the country. Establishing a clear understanding of the roles and responsibilities bank partners of mobile money products have will also contribute to a broader sense of potential liquidity issues.

KEY FINDING 2
Lonestar does not currently have a wide variety of float and liquidity management points for agents in more rural areas. This meant agents, particularly in Bong, had to transfer the value they received from beneficiaries on their mobile money wallets to their bank accounts in order to withdraw more cash. This process was done manually, and sometimes took a week to complete. Due to his closer proximity to Monrovia, the agent in Margibi was able to make more direct trips to Lonestar headquarters, where they would provide liquidity management capabilities directly from his mobile money wallet.
RECOMMENDATION
It is imperative that more liquidity and float management partners outside of Monrovia, often times referred to as "Superagents," are put in place to avoid the need for funds to be removed from agents' mobile wallets and transferred to their bank accounts. This requires greater analysis of commercial activities in rural areas that can help identify additional partners who can provide liquidity and float rebalancing services. Lonestar can and should tap into spikes in demand created by cash transfer programs like SC's, which have the potential to inject enough commercial activity around mobile money to support the initial business case for Superagents.

KEY FINDING 3

In a typical mobile money cash out, commission structures are based on the agent receiving their clients within their place of business, minimizing the need for the agent to leave besides to manage their balance of e-money (float) and physical cash (liquidity). The SC cash transfer program in Liberia required managed cash out points, (i.e. beneficiaries are asked to gather at specific locations to ensure they receive their cash), and incurred additional operational requirements of mobile money agents (i.e. transportation, additional staff, cash management risk). This often times makes the original cash out commission structure insufficient for the costs associated with servicing managed cash out points.

RECOMMENDATION

Establishing well-defined expectations and scopes of work for agents at the onset of the program will help both the program and the mobile money provider to set realistic and clear roles that can be integrated into an agreement. Additional commission structures should be explored either through the mobile money provider or through direct agreements with participating agents in the areas where cash outs are needed (this is what SC did for this program). Key costs to consider are: 1) transportation, 2) agents expanded level of effort, 3) additional staff hired to manage the process, 4) withdrawal fees from banks, and 5) increased communication costs (airtime).

KEY FINDING 4

SC had to take a direct approach to managing the mobile money agents they worked with and assumed several duties, including: negotiating additional commission structures; communicating cash out schedules and locations; working with agents to get access to cash; and sometimes providing transportation to cash out points. Despite an increase in the commissions provided to the agent's facilitating program cash outs, there was still a significant investment on the part of SC to ensure the logistics of cashing out and coordination of agents.

RECOMMENDATION

Mobile money service providers should assume some direct management of the agent networks, particularly when a program is looking to facilitate managed cash outs. This scope of work should be incorporated into the agreement, and discussions should be held on how those management responsibilities are reflected in the pricing and overall scope of the contract. Approaching these negotiations as a partner vs. client may incite a more candid discussion with providers around the potential risks and ways to mitigate them.

KEY FINDING 5

The use of mobile money as a cash transfer mechanism had a direct impact on the purchase of mobile handsets by SC program beneficiaries. It was found that 18% of beneficiaries who did not have mobile handsets at the onset of the program purchased one during the program. That means this program was responsible for over 700 new customers for Lonestar. Beneficiaries purchased handsets to have a more secure place to keep the SIM cards the program issued to them, and also utilized the phones for more traditional voice and text messages.

RECOMMENDATION

This sort of data should be used to encourage greater participation from and stronger partnerships with mobile money providers. Mobile money is considered a value added service (VAS) for many mobile network operators (MNO), meant to incentivize customers to use their SIM over their competitors'. Data like this can be used to develop profiles for beneficiaries who are likely to become long-term customers of the MNO. These profiles can be used to predict potential long-term revenues the MNO will gain from partnering with a cash transfer program, which provides quantitative evidence towards a stronger business case.

KEY FINDING 6

SC's efforts to make sure the program was able to deliver on its promises to its 5,000 beneficiaries helped to introduce and strengthen the brand of Lonestar. Beneficiaries were very satisfied with the service, and would always refer to the transfers as "Lonestar Mobile Money." There was a 35% increase in mobile money product confidence from the beginning of the program to the end. Through SC's good work, they provided Lonestar below the line marketing around their product, producing more customers and higher confidence in the mobile money product that goes beyond typical corporate social responsibility goals typically thought of as benefits to the private sector partner in these contexts.

RECOMMENDATION

Better brand recognition and confidence are key performance indicators for any marketing division at an MNO. SC and other humanitarian organizations should recognize their value as brand ambassadors when implementing cash transfers through mobile money platforms. This value add should be recognized within the agreement, which adds to the concept of a partnership vs. client/provider relationship.

1. Project Background

Save the Children (SC) is the implementing partner of the USAID's Food for Peace Emergency Food Assistance for Ebola Affected Families Program ("program") launched in September 2015. The program's objective is to assist in the recovery of vulnerable communities and households in Bong and Margibi counties, both affected by Ebola in Liberia, by providing targeted food assistance through unconditional cash transfers. Through the program, SC provided assistance to 5,000 Ebola-affected families – 3,500 in Bong County and 1,500 in Margibi County – during the lean seasons in late 2015 through mid-2016. SC made six $4,400 Liberian Dollars (around US$ 50) in payments to each of the 5,000 targeted households (HH).[3]

SC elected to use the Lonestar mobile money system for the payment distribution. Lonestar is one of four MNOs in Liberia, and has an estimated 46.29% of the voice market share of subscribers.[4] Lonestar was founded in 2000 by Investcom, a Beirut based group. In 2006 Lonestar became a subsidiary of South African based telecom conglomerate, MTN. In addition to having a large share of the voice market, Lonestar also has the oldest mobile money product, which was launched in 2011. At the time of program design and start-up, Lonestar offered the only mobile money product in Liberia. In addition to partnering with Lonestar, SC also utilized the data collection, monitoring and management tools of Kobo Toolbox and Segovia. Combined, these products provided SC with a digital transfer system that lightened some of the operational challenges associated with large cash disbursements, while also improving the transparency of the program and the security of their staff.

2. Research Background

SC selected Strategic Impact Advisors (SIA), a global consulting firm with expertise in digital payments and data management systems, to conduct research to evaluate SC's experience using digital transfers in partnership with Lonestar to make these payments in Liberia. This research provides a better understanding of the aspects of mobile money that worked well and identifies aspects that posed challenges and failed to meet expectations. The study provides a holistic view of the engagement, assessing the perspective of not only SC, but also a variety of other key stakeholders including beneficiaries, participating mobile money agents, and Lonestar. The study provides insight and recommendations to both SC and Lonestar to improve on future cash transfer program implementations and partnerships.

3. Research Methodology

SIA initiated this research with a desk review of relevant project background documents including: information related to the program, Lonestar's mobile money products, and existing data or studies on the program including previous program monitoring reports and datasets.

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[3] After the assessment for this report, SC made an additional disbursement , which was not originally planned, making the total number of disbursements seven

[4] GSMA

This desk research was followed by the design and development of question sets for each stakeholder group. SIA designed data collection methods using proven structured household survey (HH survey) and Focus Group Discussion (FGD) guides tested in previous market research with rural users of mobile money, and sourced Key Informant Interview (KII) guides previously used with digital bulk payment service providers and their agent networks. The HH surveys and FGDs were conducted with SC beneficiaries in the two counties of payment distribution, Bong and Margibi.

Based on the payment recipient size (5,000 beneficiaries), SIA and Building Markets, a local NGO with survey experience in Liberia, conducted 256 HH surveys (181 in Bong and 78 in Margibi). Based on the 5,000 beneficiaries, 256 HH surveys would provide data with a 5.6% margin of error. SIA held two FGDs in each county (one exclusively with men and one with all women). The selection of specific respondents was random, however, SC identified specific locations of program participants and provided field support coordination, and communications with local leaders to enable the organized implementation of the HH surveys and FGDs.

KIIs with SC staff, community committee members and Lonestar mobile money agents were also conducted in both Bong and Margibi counties. Additional KIIs were held in Monrovia, with SC staff at headquarters and Lonestar mobile money corporate level staff involved in the digital transfer program. **Table 1** provides a complete summary of KIIs, survey participants, and FGD participants. A study protocol with more detail around the methodology can be found in **Annex 2**.

Table 1: Key Research Stakeholders and Data Collection Method

Stakeholder	Data Collection Method	Informational Outcomes
Beneficiary	HH Surveys and FGDs	Insight into user experience from beneficiary perspective (complemented by post distribution monitoring data)
Lonestar	KII	Understanding of Lonestar's perspectives on partnership with SC and business case for participation in digital transfer programming
SC	KII	Understanding around the procedures for digital transfers, challenges, and opportunities during the program's experience
Agents	KII	Understanding around the key challenges and opportunities for agents, particularly around liquidity management issues, and incentive structures

4. Digital Financial Services Market Landscape in Liberia

This section provides a summary of the key market factors impacting the success of mobile money in Liberia. It should be noted that the United Nations Capital Development Fund (UNCDF) recently conducted a financial diagnostic of Liberia that goes into much more depth

around these topic areas.[3] The purpose of this summary is to provide evidence and context for working with digital financial services (DFS) products (i.e. mobile money) in Liberia, particularly in rural areas. Its purpose is not to provide an in-depth analysis of the financial sector in Liberia. The UNCDF report does a very good job of providing that sort of detail, and it is a recommended read for those interested in deeper analysis of the Liberian financial sector landscape.

4.1 Banking Sector

Liberia is a small country, with an estimated population of 4.3 million people (2013), 43% of whom are 14 years old or younger.[4] Coupled with one of the lowest GDP per capita in the world, US$ 455.00, Liberia's small size and lack of economic productivity make it difficult for the financial services sector to thrive. Liberia has 87 bank branches in total, providing 3.6 bank branches per 100,000 adults.[5] The majority of those branches (59%) are located within Montserrado County (Monrovia), where 30% of the country's population lives. Only five new bank branches have been opened in the last three years, as traditional banking services continue on a slow upward trajectory.[6] **Table 2** details the geographical distribution of bank branches in Liberia over the last three years.

Table 2: Distribution of Bank Branches in Liberia by County

County	Population	Bank Branches		
		2015	2014	2013
Bomi	84,119	1	1	1
Bong	333,481	3	3	2
Gbarpolu	83,388	0	0	0
Grand Bassa	221,639	6	6	6
Grand Cape Mount	127,076	1	1	1
Grand Gedeh	125,258	1	1	1
Grand Kru	57,913	0	0	0
Lofa	276,863	2	2	2
Margibi	209,923	10	9	9
Maryland	135,938	4	4	4
Montserrado	1,118,241	51	50	48
Nimba	462,026	7	7	7
River Cess	71,509	0	0	0
River Gee	66,789	0	0	0
Sinoe	102,391	1	1	1
Total	3,476,608	87	85	82

Source: Central Bank of Liberia

The banking sector's delivery of more traditional digital access points such as ATMs and Point-of-Sale (POS) terminals has grown, but continues to be limited by basic infrastructure related constraints such as sporadic power supply and connectivity. Liberia currently has only 61 ATMs and 117 POS terminals.[7] As evidenced by the low ATM and POS penetration data, the infrastructure related issues have made the required investment to support digital banking channels too expensive outside of Monrovia or primary urban centers in other counties.

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[3] http://uncdf.org/sites/default/files/Documents/liberia_financial_diagnostic_and_feasibility_study.pdf
[4] World Bank Population, http://data.worldbank.org/indicator/SP.POP.TOTL
[5] World Bank Findex, http://www.worldbank.org/en/programs/globalfindex
[6] UNCDF (Pg 5) http://uncdf.org/sites/default/files/Documents/liberia_financial_diagnostic_and_feasibility_study.pdf
[7] UNCDF (Pg 6) http://uncdf.org/sites/default/files/Documents/liberia_financial_diagnostic_and_feasibility_study.pdf

In addition to weak energy and telecommunications infrastructure, Liberia's national payments system does not provide a competent backbone for banks to facilitate and process interoperable transactions. At the moment, most bank transfers are done through back-office paper processes. There are no central switches that enable interoperability amongst ATMs or POS terminals. This creates friction in the movement of money around the country and slows the banking sector's ability to process transactions. The Central Bank of Liberia (CBL), in charge of establishing national payment systems, is currently implementing the Payment Systems Modernization Project. This project includes the development of a real time gross settlement (RTGS) system, automated check clearing, and establishment of an automated clearing house to facilitate faster settlements.[8] Even with these systems in place, the banking sector will still find it challenging to service more rural, less populated areas.

Finally, maintaining cash on hand in branches outside of Monrovia has been a major challenge for banks in Liberia. The responsibility of regulating the supply of money throughout the country falls on the CBL, yet the CBL only has branches that manage this process in Monrovia. Without presence in other counties, the management of money supply falls on the banks themselves. Maintaining cash stocks in counties outside of Monrovia is a challenge and very costly due to security risks and the fact that only an estimated 6% of the roads in Liberia are paved.[9] In addition to high costs, the CBL's cash reserves decreased during and after the Ebola crisis, which compounds the problem even more. Liquidity shortages at branches outside the capital city pose major issues for cash transfer programs, as they result in higher demand for cash than is projected by banks for their typical clients.

4.2 Telecommunications Sector

There are an estimated 1.6 million unique mobile subscribers in Liberia, which translates to a market penetration (total population) of around 37%.[10] There are four MNOs in Liberia: Lonestar, Cellcom, Novafone, and LIBTELCO. Of the four, Cellcom and Lonestar hold the greatest market share with 47.01% and 46.29% of the market, respectively. In 2014, the World Bank reported that 60% of Liberia's population had network coverage.[11] Lonestar claims to have over 90% of the population covered by its mobile network. Regardless of the actual figure, it is safe to say that 10% to 30% of Liberians do not have access to MNOs' coverage. The primary inhibitors to network coverage are the same infrastructure problems the banking sector encounters. The cost of operating a cell tower in rural areas is significantly higher due to the basic energy, security, and transportation expenses incurred to keep the towers operational.

GSMA estimates Liberia will see a projected annual growth of 9.12 % in unique mobile subscribers for 2016,[12] which is slightly lower than that of Sierra Leone, but significantly higher than the more mature markets in the region (e.g. Ghana, Nigeria, and Senegal). As the sector

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[8] Central Bank of Liberia, https://cbl.org.lr/2content.php?main=35&related=35&pg=mp
[9] UNCDF (Pg 4) http://uncdf.org/sites/default/files/Documents/liberia_financial_diagnostic_and_feasibility_study.pdf
[10] GSMA and CIA Factbook (adult population estimates, with adults defined as those over 14 years of age)
[11] http://wdi.worldbank.org/table/5.11
[12] GSMA, average of Q1, Q2, Q3 estimates, and Q4 projection of unique subscriber growth in Liberia

continues to attract new users, investment in base stations and cell towers will help improve access to basic network and mobile broadband services.

Prices for basic mobile handsets sit at around US$ 10.00, which is 1.3% of the Gross National Income per capita. This is still a significant cost for many Liberians and is one reason mobile penetration is still relatively low. High operational costs for MNOs and high costs for Liberians to acquire mobile handsets are barriers that must be overcome in order to connect the poorer more rural populations to mobile services.

4.3 Mobile Money Sector

There are currently two mobile money services in Liberia, each operated by MNOs Cellcom and Lonestar. Cellcom only recently launched its mobile money services in March 2016, and little is known about the uptake and adoption of their product. Lonestar's mobile money service, known as Lonestar Mobile Money, has been around since 2011 and has reported 700,000 registered wallets, less than 10% of which are active.[13] According to the CBL, Lonestar Mobile Money transacted 485.8 million Liberian dollars (around US$ 5.3 million) in 2015 through October. Lonestar reports having approximately 1,600 agents across the country, though only 750 of these agents are active on a 30-day basis. Lonestar separates its agents into three different levels based on their transaction activity. The table below reflects capital requirements and average commissions for performing agents at each level.

Table 3: Lonestar Agent Network Performance Level Breakdown

Agent Level	Capital Requirements	Avg. Commission/Mo.	% of Active Agents
Level 1	US$ 100	US$ 90	70%
Level 2	US$ 250	US$ 400	25%
Level 3	US$ 500	US$ 700	5%

When assessing where active Lonestar agents are, 80% of the aforementioned 750 performing agents are located in Monrovia. In Bong and Margibi, Lonestar mobile money agents are sparse, with only 7% of agents located in Bong and 4% of agents located in Margibi.[14] These Lonestar agent numbers in both counties will go down even further when considering the percentage of active agents, but this research was unable to secure such details. In general, these agent numbers indicate that mobile money in Liberia has yet to become a highly used product, and that it is facing many of the same challenges as the banking sector in serving rural communities.

Managing the liquidity needs of mobile money agents is a key challenge in Liberia. Lonestar mobile money agents are fully responsible for the management of their own cash liquidity and electronic float (float).[15] Lonestar has regional offices where they provide agents with liquidity and float management, but these have only a limited amount of cash on hand, mainly due to

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[13] Active in this case means at least one transaction every 90 days

[14] UNCDF (Pg 26) http://uncdf.org/sites/default/files/Documents/liberia_financial_diagnostic_and_feasibility_study.pdf

[15] Float is the electronic value held on a mobile money wallet

Lonestar's internal control policies. Afriland First Bank is the only bank currently helping Lonestar mobile money agents manage their liquidity and float. Yet, Afriland First Bank does not have branches in Bong or Margibi counties. Since the banking sector is the primary source of liquidity for mobile money agents and Lonestar regional offices, the liquidity shortages facing the banks also trickle down to impact agents. This makes having enough cash on hand for normal mobile money business costly and challenging for agents, and usually results in agents only operating in urban centers where they can access bank branches. In KIIs, Lonestar indicated that it is developing a master agent management structure that will seek to engage commercial traders and large retailers who may have bigger cash reserves to help manage agent liquidity overall. This agent management scheme is used in a variety of different mobile money offerings around the world, and is meant to decentralize management of agents and incentivize master agents to ensure their network of agents are active and managing their float and liquidity in the most optimal ways.

4.4 Market Landscape Summary Conclusions

In Liberia, using digital payments, including mobile money, is a challenging endeavor. Even in urban centers, physical cash is still the payment mechanism of choice. Liberia's mobile money market viability, while improving, still faces challenges in effectively facilitating cash transfers. The *NetHope Market Viability Tool*,[16] a tool used to indicate the viability of utilizing DFS in a country, has Liberia ranked at 87th out of the 104 countries the tool analyzes. In order to operate within the Liberian market context, SC had to readjust to account for failures occurring in the service and innovate around their approach for digitally transferring funds to beneficiaries.

5. Save the Children Cash Transfer Procedures

This report will primarily focus on the experiences of four key program stakeholders:

1) Payment Beneficiaries
2) SC Staff
3) Lonestar
4) Participating Lonestar Mobile Money Agents

Yet, before diving into those experiences, it's important to review how SC came to partner with Lonestar and the overall distribution process for the program. Below is a summary of:

1) Servicer Provider Selection
2) Registration
3) Payment Distribution
4) Monitoring

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[16] http://solutionscenter.nethope.org/products/view/1638

5.1 Service Provider Selection

SC's main incentives for utilizing a digital delivery mechanism within their program instead of disbursing cash in an envelope revolved around operational efficiency, security, and transparency. They felt that, despite difficult market conditions, utilizing a digital transfer mechanism would contribute to a better overall cash transfer program. In addition to the aforementioned reasons, SC felt that pursuing a digital delivery mechanism would also bring other benefits to both themselves and their beneficiaries.

Table 4: Benefits of Digital Cash Transfers

Organization Benefits	Recipient Benefits
✓ **Reduced security risks of cash handling and transport** ✓ **Improved transparency and accountability of payments** ✓ **Reduced leakage to ensure recipients receive full amount** ✓ **Improved efficiency** ✓ **Quicker delivery** ✓ **Donor priority**	✓ Reduced security risks ✓ Reduced travel time at cash out points

It should be noted that the USAID Food for Peace grant for this program encouraged the use of mobile money as a delivery mechanism, which also helped contribute to SC's decision to pursue the use of digital delivery channels. Mobile money, although still very nascent in Liberia, provided SC with a digital solution that could work in the program implementation areas of Bong and Margibi counties. SC utilized a typical procurement process to engage multiple providers in the market to understand their product's ability to meet the needs of the program's disbursements. Lonestar, being the only mobile money provider in the market at the time of procurement, was able to provide SC with a solution that used the mobile delivery channel.

It took SC several weeks to sign off on the Lonestar terms of the agreement. The agreement included a scope of work outlining the responsibilities and services Lonestar would provide to SC. **Table 5** highlights both parties' primary functions under the agreement.

Table 5: Contractual Responsibilities for Both Parties

Save the Children Responsibilities	Lonestar Responsibilities
Deposit money equivalent to the amount of e-money SC wants to remit at least two days before the planned disbursement	Create an SC mobile money wallet in the system
Submit bulk payment sheet to Lonestar through the online portal provided, following format advised by Lonestar	Provide SC with mobile money web portal for performing bulk payments
Authorize the credit and transfer of e-money to the beneficiary wallets through the web portal provided	Train SC staff to independently perform transactions over the web portal

Provide Lonestar and agents with beneficiary pay dates in advance so as to ensure coordinated cash out process	Conduct all sensitization, registration, and activation of SIM cards
Provide Lonestar with a list of 5,000 phone numbers for verification of ownership	Issue e-money equivalent into the beneficiary accounts within 24 hours of SC's approval
Ensure that beneficiaries are aware of pay out dates and times	Inform beneficiaries by text message about the e-money transferred to their wallets
Provide an orientation to beneficiaries on entitlement and ID policies	Generate a report to SC on the web portal reflecting whether or not the transactions have been completed within thirty minutes of the transfer
	Ensure appropriate systems are in place to prevent the unauthorized access of and/or use of or tampering with information
	Provide SC with a list of viable agents to ensure timely and efficient cash out during agreed upon cash out dates and times
	Provide SC with a list of names registered to the 5,000 SIM cards
	Lonestar will agree, to the extent possible, that local agents are used in both counties so to ensure continued financial support
	In areas where there is little network, Lonestar shall provide staff members to accompany a representative from SC to conduct payments offline
	Lonestar and its agents will report to SC any evidence of fraud, terrorism financing, or breach of SC certifications

5.2 Program and Mobile Money Registration of Beneficiaries

While SC and Lonestar were finalizing the terms of their agreement, SC worked with local community committees to target households that fit the program's criteria for participation. Once the targeting of the beneficiary households was complete and the agreement was in place with Lonestar, the registration process began. During the registration process, SC collected baseline information on each head of household using the *Kobo Toolbox*, a digital data collection product. Information was entered through forms on tablets. The collected data was then uploaded to SC's database in the Segovia platform. Using this information, SC produced beneficiary IDs, which contained the beneficiary's unique ID number, the beneficiary's picture, and a QR code.

These multiple levels of verification on each beneficiary's identity provided Lonestar with sufficient information to meet the Know Your Customer (KYC) requirements to open a mobile money account as proof of identity. With KYC conditions satisfied, Lonestar was able to register SIM cards and activate mobile money wallets for each participant in tandem with the general registration and issuance of SC IDs. Both Lonestar and SC were present during registration to ensure this process ran smoothly.

5.3 Payment Distribution

The payment distribution process strictly adhered to standard operating procedures implemented by SC for the release of funds. **Table 6** provides a general overview of the payment process, including the responsible entity and identifying parts of the process that were completed digitally.

Table 6: Save the Children Payment Procedures

Task	Responsible	Digital?
Print list of beneficiaries for each community	SC Program Staff	No
Verify lists with community committee heads	Community	No
Adjust lists in database, verify SIM registration vs. names and numbers provided	SC Program Staff	Yes
Prepare payment lists/batches, prepare payment schedules	SC Program Staff	Yes
Payment lists/batches uploaded to Lonestar platform, and payment schedules followed	SC Finance Staff/Lonestar	Yes
Notify beneficiaries of payment (those without phone)	Community	No
Notify beneficiaries of payment (those with phone) through text	SC Finance Staff	Yes
Agent receives payment schedules and lists	Agent	No
Agent withdraws necessary cash for disbursement	Agent	Yes
Beneficiaries' photo IDs with bar code scanned to verify and record in the system	SC Program Staff	Yes
Beneficiaries cash out	Agent/Community	Yes
Cash transfer reporting sent	Lonestar	Yes
Transfer reporting uploaded to Segovia	SC Program Staff/Segovia	Yes
Monitoring of cash programming	SC Program Staff/Segovia	Yes
Agents get reimbursed from Lonestar		

As shown above, the disbursement process for SC is almost entirely digital. Most of the aspects of the process that are not digital fall under the responsibilities of the community and the agents. SC has found a way to almost entirely digitize their payment procedures for this program.

Digitizing the payment process also helped improve internal controls, with the finance director being the only person in the office who has authority to finalize and send payments to the

beneficiary wallets through the Lonestar bulk payment system. The Segovia system, which manages the beneficiary data and exports pay out schedules, has different user authorities for program and finance staff involved in the payment process. The system can also track the activities of each user, enabling a digital trail of each payment process.

5.4 Monitoring

SC has integrated digital data collection and management into their baselines and post distribution monitoring (PDM) procedures. During the point of cash disbursement, SC uses tablets to scan the QR code on each beneficiary's ID card and answer a quick survey question that indicates whether the beneficiary has received his or her cash. If there was any issue with receiving cash, SC enters in a reason. This data is then used to feed the dashboard in Segovia, which helps track the percentage of cash delivered.

The tablets used for beneficiary registration and verification in the disbursement process are also utilized in the data collection efforts after each payment distribution. These post distribution surveys are performed using a randomized panel sample of beneficiaries surveyed after each distribution has been completed. All data is uploaded into the Segovia platform, and can be augmented to produce monitoring reports and track program impact. Similar to much of the distribution process, SC has also almost entirely digitized their program data collection and monitoring efforts.

6. Stakeholder Experiences and Learnings: Save the Children Staff

SC staff faced an extremely steep learning curve on the use of digital payments in an underdeveloped ecosystem throughout the life of this project. Utilizing mobile money in a market where it has yet to become a sustainable and viable product demanded new creative approaches to making the product work for the project's purposes. The disbursement procedures mentioned earlier are a key indicator of the need for customization, pricing adjustments, and alternative management practices SC had to implement during this project. There were several key challenges that SC had to overcome to ensure cash was delivered in a timely and geographically appropriate manner to the beneficiaries. SC staff experiences shared and discussed here revolve around four main issues:

1) Managed Cash Outs
2) Agent Management
3) Cash Liquidity
4) Technical Issues

6.1 Managing Cash Out

As discussed earlier, mobile money agents and mobile network coverage often did not exist in many of the communities and districts where the project's beneficiaries live. This meant SC needed to provide a managed cash out point that ensured access. These points needed to meet

two primary criteria: 1) they did not require beneficiaries to travel more than five kilometers, and 2) they were within range of Lonestar mobile network connectivity so the mobile money transactions could be performed. As a result of this, SC ended up with 140 distribution points across six districts in the two focus counties of Bong and Margibi.

Map 1: Distribution Points by County
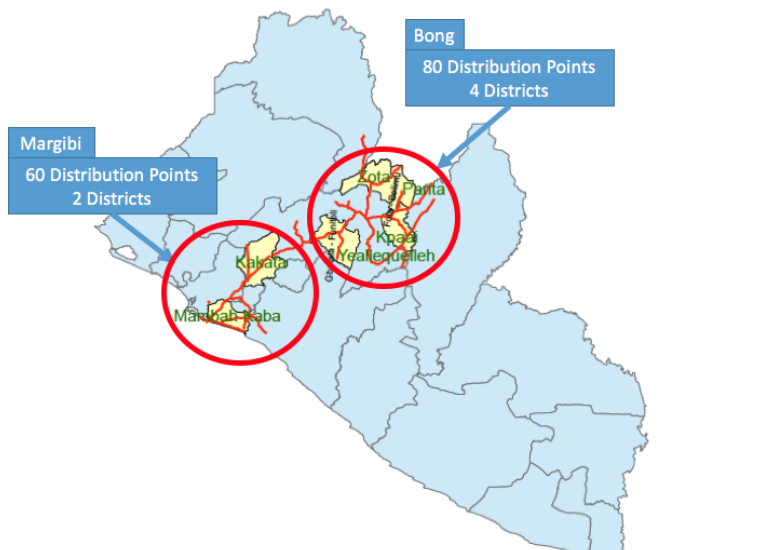
In addition to the issue of limited mobile network and mobile money agent reach, SC also faced the issue of mobile phone ownership by the payment beneficiaries. Only 21% of payment beneficiaries owned mobile phones at the start of this program, and most of them elected to store their registered SIM cards in the original paper pouches they received during registration.

Picture 1: SIM Card Packaging

This meant that cashing out required the agent to insert each SIM card into their phone and perform the cash out by using the agent's own phone, strikingly similar to over-the-counter

services. This process differs from typical mobile money transactions where both the agent and the person cashing out use their activated mobile phones. SC communicates cash out disbursement through text message (for people with phones) and through community committee member networks (for people who do not have phones).

The nascent state of the mobile money ecosystem in Liberia made managed cash out points necessary for SC in Liberia, but there are some scenarios where these managed cash out points may not be required. Some mobile money ecosystems may provide sufficient services and enough product confidence that NGOs don't have to be present to guarantee cash is accessible to recipients. **Table 7** below provides a summary of the pros and cons for managed cash out points.

In addition to ensuring beneficiaries are able to receive their cash, SC had a responsibility to confirm not only that the money had arrived in each beneficiary's mobile wallet but also that the beneficiary was able to, and did, cash out. Because of the limitations of the services discussed above (limited agents, inconsistent and sometimes insufficient liquidity, limited network coverage), SC organized managed distributions to ensure cash reached the hands of beneficiaries. As mobile money providers do not typically give cash out information to organizations sending money, SC's staff presence at managed cash out points made it possible for them to confirm the cash was received by scanning QR codes on beneficiary ID cards. This information was then automatically uploaded into the Segovia platform for reporting purposes. For clarity, definitions of both managed and non-managed cash out scenarios are below.

Figure 1: Managed Cash Out Definitions

Managed cash out: When a cash transfer program arranges specific locations and dates when cash will be distributed to beneficiaries.

Non-managed cash out: When a cash transfer program simply sends funds to a beneficiary digitally, and the beneficiary is responsible for how and where they cash out.

Table 7: Managed Cash Out Pros and Cons

Managed Cash Out	
Pros	**Cons**
Increases liquidity projections, so agents can better prepare	Decreased number of participating agents, which increases overall liquidity needs for participating agents
Increased control over tracking beneficiaries cash receipt	Increased cost to agents (transport, security, risk, etc.)
Increased protection of beneficiaries from agent fraud	Increased scope of work for mobile money provider
Increased control around the distance beneficiaries have to travel to cash out	Increased NGO staff time to manage process
Increased support to beneficiaries (i.e. established face-to-face help desk on site)	Increased staff risk (as they are around cash)
Increased probability that beneficiaries receive cash	Decreased customer experience with mobile money product

Ultimately, managed cash outs provide additional assurances for the implementing organization, while also offering an opportunity to collect more quality data on beneficiaries. Yet, as can be seen in the table above, there are some major draw-backs to managed cash outs. SC made the correct decision not to depend on the weak agent infrastructure in Liberia to handle the cash outs for beneficiaries. However, in an environment with more robust networks of agents, there could be an opportunity to increase the level of dependence on the existing infrastructures while not losing out on some of the stated benefits that managed cash outs have. For example, SC's need to ensure that beneficiaries are able to cash out makes SC staff presence at cash out necessary, but SC's role at distributions could have been reduced with stronger mobile money services. Yet, Lonestar did state they could provide details around beneficiary cash outs through their platform. In order to access this information, SC would need to get informed consent from each beneficiary to access his or her mobile money account in such detail. This would be a heavy lift once the program has already started, but baking it into registration at the beginning of programs could provide a potential solution. In a more robust mobile money environment, doing this would save a lot of staff time and risk in deploying managed cash outs.

6.2 Agent Management

As a result of the managed cash out distribution points, SC required an expanded scope of work for Lonestar mobile money agents. Mobile money agents typically have other primary businesses and provide mobile money services out of their place of business, with mobile money customers coming to them for services. The commission structure agreement that Lonestar has with its agents reflects this operating model. With the limited numbers of mobile money agents within Bong and Margibi counties and the agents clustered in towns with more significant economic activity, this model would not support cash distributions to SC's targeted beneficiaries – highly vulnerable populations – many of whom lived between 20-90 kilometers away from larger town centers and lacked access to or resources for transportation to these areas. The managed cash out points organized for distributions to SC beneficiaries required that agents leave their daily business responsibilities and travel to provide service at the managed cash out point.

While the two agents working with the program did have staff to fill in for them at their normal places of business, managing the cash out process took up a significant amount of their time. The agent's travel to cash out points created additional operational costs, on top of the costs to hire additional laborers to support with the cash payments. Under normal mobile money operating models, agent management falls under the responsibility of the mobile money provider. Providers are meant to ensure the agent network's health and provide liquidity management and float rebalancing services through a variety of channels (beyond just bank branches and regional offices). Due to the additional operational requirements for agents brought on by the SC program, SC staff had to step in and become heavily involved in the agent management process to ensure agents and cash were available at the managed cash out points.

The primary challenge SC staff had to overcome was establishing the proper financial incentive structures for agents within the expanded operating model. After the initial distribution, many of the agents decided that the combination of additional operational expenses plus pressures on

their time for their primary business activities were too much to continue providing cash out services for the project. As a result, SC staff negotiated a more beneficial pricing structure with agents in each county. Costs relating to things such as vehicles, gasoline, security, staff (people working for the agent), and cash management risk were considered in calculating the new transaction pricing. SC signed agreements with two mobile money agents, one in Margibi and the other in Bong. These mobile money agents ended up being responsible for the majority of the cash distributions in their respective counties.
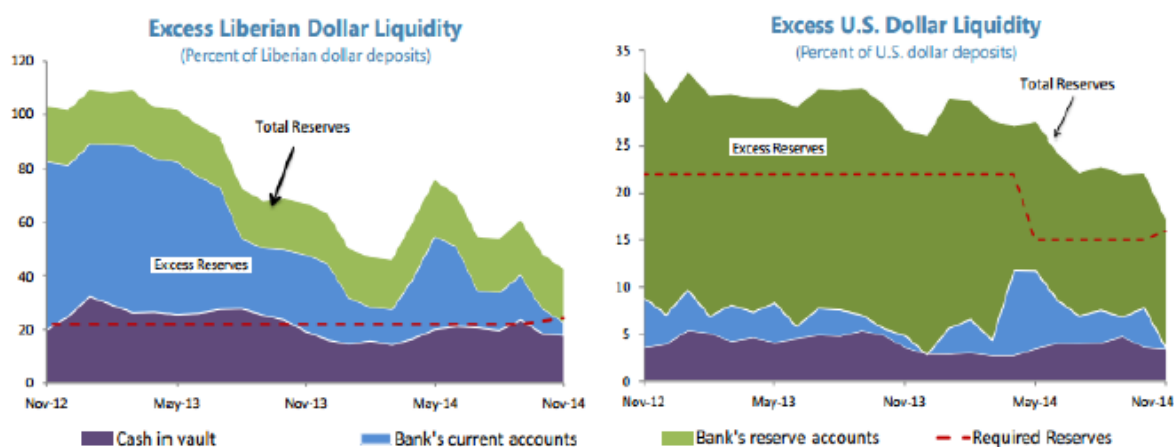
Without a lot of prior knowledge around mobile money systems, it was difficult for SC to accurately predict how difficult managing agents around cashing out activities would be. Based on their experiences in Liberia, SC now has a clearer understanding of agents' operational expectations in cash transfer programming contexts. This knowledge can be used to help to set more realistic expectations for the service provider from the onset, which includes pushing for firmer commitments around agent management from Lonestar within the terms of the agreement. In the context of Liberia, the approach taken by SC was absolutely the best way forward given the circumstances and need to find a solution quickly. More details on this process and the economics behind this expanded commission structure can be found in **section 8** on the mobile money agent experience.

6.3 Cash Liquidity Issues

Another unique aspect of cash transfer programs that expands the typical operational model is the level of cash liquidity required. Cash liquidity became a significant challenge for the Lonestar mobile money agents, and was another reason SC negotiated an additional commission structure with certain agents. SC staff had to become heavily involved in the management of cash liquidity in addition to their other duties.

Each disbursement required a total of 22,000,000 LD in cash (around US$ 250,000) disbursed over a 30-day period. Although agents carried the primary responsibility of ensuring cash availability, SC quickly found that liquidity issues were resulting in program delays, and, in response, SC staff assumed an integral role in communicating and coordinating liquidity needs with the Lonestar mobile money agents. SC sometimes provided transportation, and in some cases used their relationships with banks to ensure cash was available for the agents to withdraw to support the cash out process.

Figure 2: Liberian Dollar and US Dollar Reserves

This type of support on the part of SC was necessary in the Liberian context in order to ensure the beneficiaries received their cash. As mentioned in the market landscape summary, Liberia's supply of cash is managed entirely from Monrovia. Coupled with a decline in cash reserves after the Ebola Crisis, cash liquidity is a challenge not only for the agents, but also for any bank branches outside of Monrovia (see **Figure 2** above). SC had to assume more of a role in facilitating the management of each agent's access to liquidity. This expanded role on the part of SC changed the dynamic of the relationship between SC and the Lonestar mobile money agents to more of a partnership model rather than the service provider/client model reflected in SC's agreement with Lonestar.

6.4 Technical Issues (SIM/PIN)

SC encountered additional challenges in ensuring active mobile money accounts during the program period and concerning the reliability of the mobile money platform and mobile network. Due to the lack of phone ownership amongst beneficiaries (70% did not own a mobile phone), many of the SIM cards used to register payment beneficiaries for mobile money wallets went unused for other traditional GSM services such as text and voice in between distributions. As a result of this dormancy of use, Lonestar deactivated many of the SIMs and SC would then have to call Lonestar for support on in their reactivation. In addition, at the beginning of this program, Lonestar's GSM platform was not integrated with their mobile money platform. This resulted in SIMs that were active on mobile money, but not active on voice and text, rendering them inactive or dormant. SC staff had to negotiate with Lonestar to resolve this issue, so the SIM cards issued to its payment beneficiaries for mobile money wallets would remain active. This issue should be resolved now for all mobile money wallets, as Lonestar has converted over to a converged wallet that places everything under one platform.

PIN codes were another technical issue that led to beneficiary mobile money accounts being blocked. Many beneficiaries were not familiar with their PIN codes, and would sometimes enter in the wrong set of numbers too many times. This would lock their wallets and then require SC communication with Lonestar to reset the PIN. SC originally decided to assign everyone from the same community identical PIN codes, but security concerns caused SC to adjust their PIN code strategy. They provided new pin codes for each beneficiary wallet that coincided with the last five digits of the ID card. This enabled a certain level of secrecy, while also maintaining an easy way for the agents to perform the cash out without requiring beneficiaries to know their PIN.

7. Stakeholder Experiences and Learnings: Beneficiaries

This research is not meant to assess the program's impact on the livelihoods of its beneficiaries, so this section will not contain any analysis on that aspect of beneficiaries' experiences. What this section *will* do is establish a better understanding of how beneficiaries interacted with and were impacted by the use of mobile money as a delivery mechanism. It is important to bear in mind that many of these beneficiaries (49%) did not have any sort of access to mobile phones during this entire program. Without a personal phone or access to one through family members, it is difficult for beneficiaries to have any level of significant digital interaction. This led to a general absence of understanding around how the digital delivery mechanism worked or the other types of services that could be offered through mobile money (or even simple voice and text). In addition to general beneficiary satisfaction with the mobile money product and its use within the program, this section will also examine the impacts the digital transfers had on phone ownership, brand recognition, and potential continued use of mobile money after the program ends.

As stated on the section on the methodology, the data used during this section was produced by a mixed research approach of both quantitative HH surveys and FGDs. These questions revolved primarily around different aspects of the cash transfer program. The below analysis of the beneficiary experiences will follow the same order as those specific program components.

1) Overall Beneficiary Satisfaction
2) Mobile Phone Ownership and SIM Card Usage
3) Registration and Training
4) Product Confidence
5) Cashing Out and Agent Interactions

7.1 Overall Beneficiary Satisfaction

Most beneficiaries who participated in the focus groups had positive things to say about their experiences with receiving cash through mobile money. Many of the reasons were very simple, in that they had received each disbursement and it was the right amount. Those who owned mobile phones within the group had additional insights into reasons they liked receiving funds through mobile money. Some of their insights can be found in the text box below.

The HH surveys held up this positive sentiment around mobile money, as only 5% of respondents cited issues around receiving their funds. When looking at data from the SC PDM surveys, the primary issue experienced by most beneficiaries in the cash out experience itself was the long lines for getting cash. Based on data from the latest PDM survey, 65% of respondents cited long lines as a primary delay and inconvenience. The latest PDM surveys (PDM 4 and PDM 5) also reflect those opinions by tracking average wait times as stated by beneficiaries. Sixty-six percent of beneficiaries had to wait for some period of time, as seen in the graph below.

Graph 1: Average Wait Cash Out Wait Times[17]

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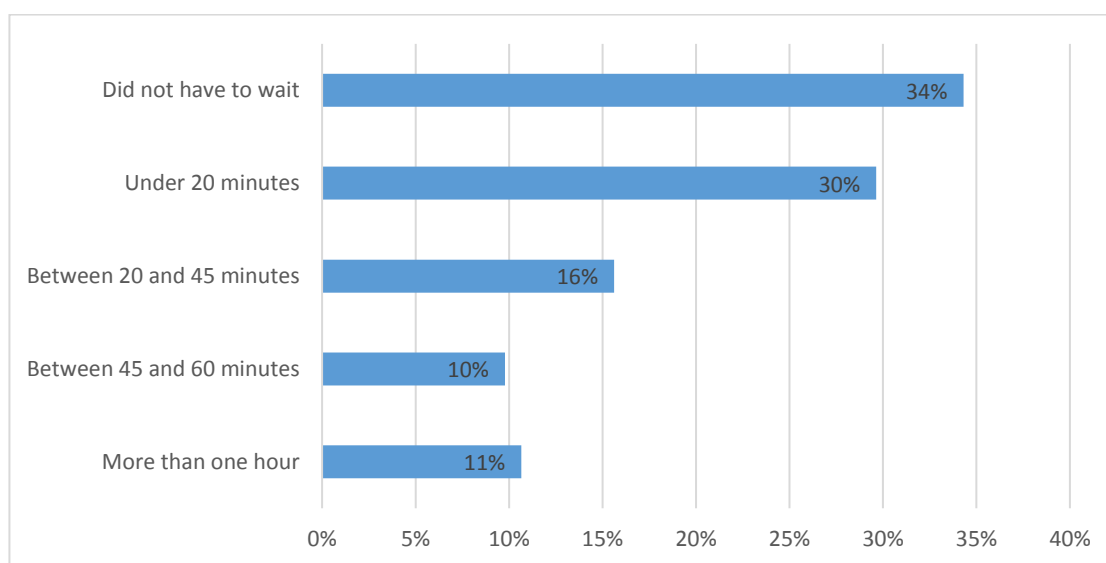
[17] Total results for PDM 4 and 5

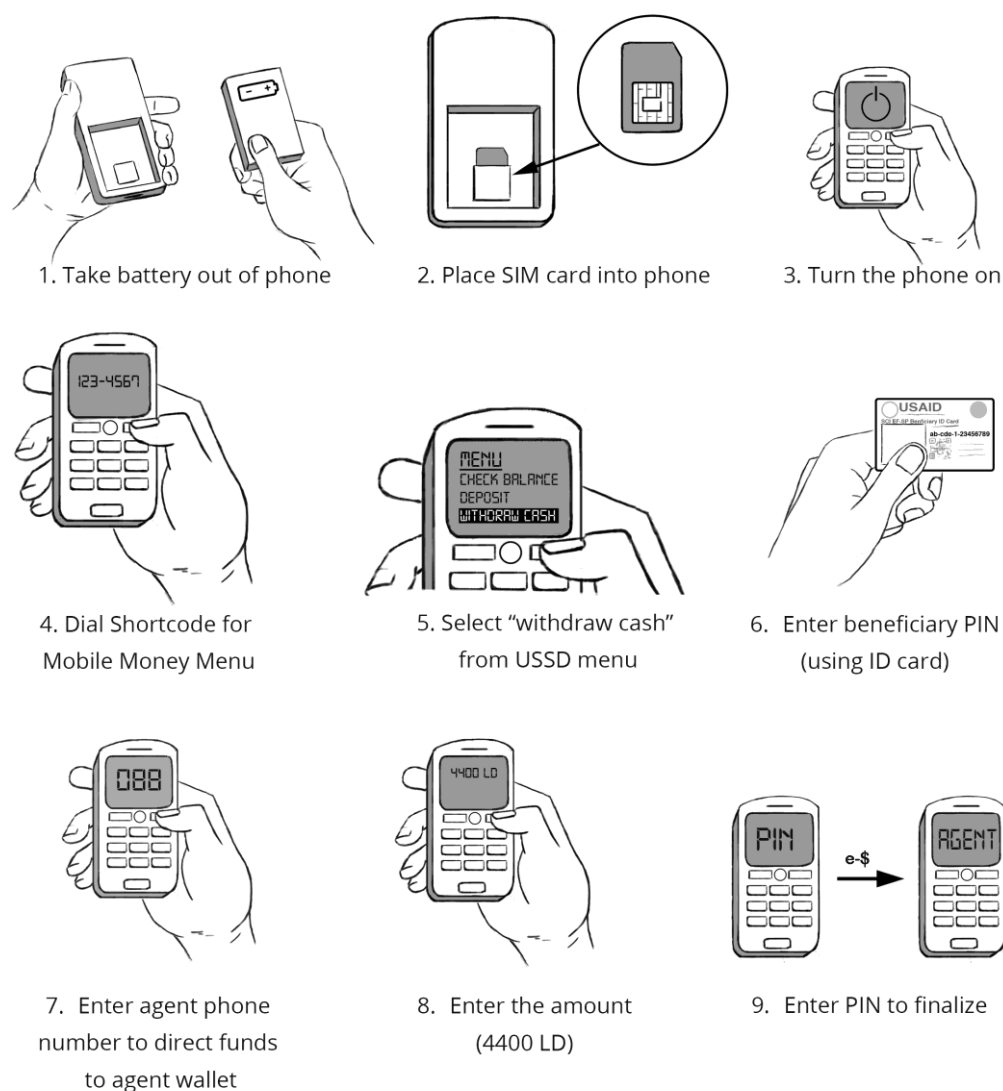Wait times were a result of the need for a managed cash out by SC, which required agents to travel between cash out points. The process was also compounded by the mobile money cash out procedures the agents had to perform for each individual wallet, particularly when they were dealing with beneficiaries who only had SIM cards and no mobile phone. In order to perform a cash out, the agents would have to take multiple steps, which added time to the transaction.

Figure 3: Mobile Money Agent Cash Out Process (without beneficiary phone)

1. Take battery out of phone   2. Place SIM card into phone   3. Turn the phone on

4. Dial Shortcode for Mobile Money Menu   5. Select "withdraw cash" from USSD menu   6. Enter beneficiary PIN (using ID card)

7. Enter agent phone number to direct funds to agent wallet   8. Enter the amount (4400 LD)   9. Enter PIN to finalize

While most agents had the process memorized and would sometimes process two transactions at once (see **Picture 2** below), a mobile money transaction, when all went well, still took between one to two minutes per SIM card. As managed cash out was required due to lack of agent presence within communities outside of organized distribution days, beneficiaries needed

to be patient as they waited for their funds. SC was able to cut these wait times down by utilizing 140 different cash out points throughout the two counties. If they would have lowered the number of cash out points, there would have been even longer lines for the beneficiaries.

Picture 2: Mobile Money Agents Cashing Out

The number of cash out points was also meant to ensure beneficiaries did not have to travel over five kilometers to cash out. Data from the last PDM survey performed suggests this methodology was working, as only 1% of respondents stated they had to travel between 45-60 minutes to get to the cash out point. The majority, 58%, traveled less than 20 minutes. See **Graph 2** for details.

Graph 2: Beneficiary Travel Times
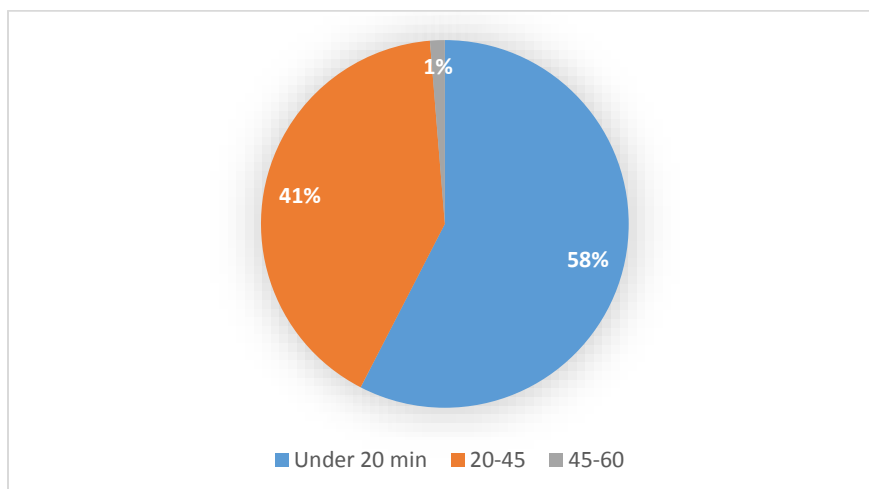
Twenty percent (20%) of the latest survey respondents also complained of tardiness on the part of the mobile money agent. As will be discussed in **section 8**, delays were often the result of long waiting times on the part of the agent for cash at bank branches, or the need to travel into Monrovia where there was enough cash liquidity. Respondents of the survey performed for this research had an overwhelmingly positive response regarding their agent interactions, with 99% stating they were very happy with the mobile money agents. These overall positive experiences were carried over to those beneficiaries who did seek out agents outside of the managed cash out points. Eight percent (8%) of survey respondents reported they had utilized a mobile money agent outside of the managed cash out points, with a 95% rate of satisfaction.

Based on the survey data and FGDs, it is clear that beneficiaries had an overwhelmingly positive experience with receiving their funds through mobile money. Many of the primary complaints around lines and waiting for agents are issues that would most likely occur regardless of the delivery mechanism used.
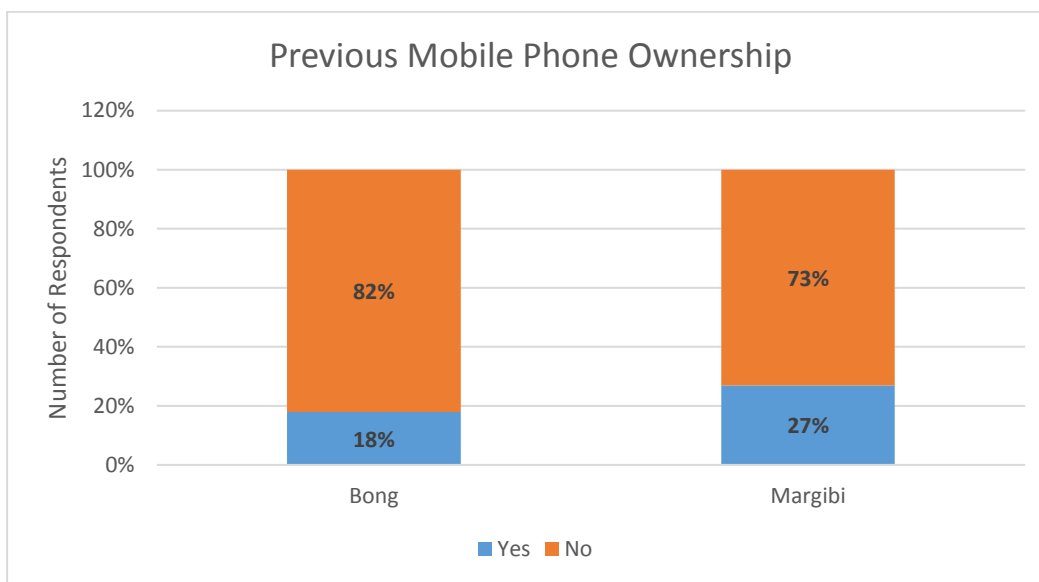
7.2 Mobile Phone Ownership

Mobile money is a product that is best utilized when its users manage their accounts through their own mobile handsets. Yet, this was not the case for the majority of beneficiaries in the SC program. According to the HH survey, only 21% of beneficiaries owned a mobile phone at the beginning of the program. When examining the data by each county's respondents, Bong had a lower overall percentage of ownership at the beginning of the program, with 32 out of 178 respondents (18%) stating they owned a mobile phone, while beneficiaries in Margibi had higher ownership, with 21 out of 78 respondents (27%) stating they owned a mobile phone at the beginning of the program. The difference in phone ownership in the two counties is consistent with the respective poverty rates in Bong and Margibi. In Bong, 71.7% of the population lives in absolute poverty; in Margibi, the poverty rate is 47.7%.[18]

An additional factor contributing to lower phone ownership in Bong is population density. Margibi's population density is nearly double that of Bong, making it easier and more viable for MNOs to construct and maintain network infrastructure. Bong's size, low population density, and poverty levels are some primary contributing factors to their low phone ownership numbers. See **Graph 3**.

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[18] LISGIS Household Income Economic Survey, 2014

Graph 3: Mobile Phone Ownership Before Program

Previous Mobile Phone Ownership

Bong	Margibi
No: 82%	No: 73%
Yes: 18%	Yes: 27%

Y-axis: Number of Respondents (0% – 120%)

Legend: ■ Yes ■ No

For beneficiaries without phones, a variety of storage methods were used to ensure the safety and viability of SIM cards. More often times than not, SIM cards were stored in their original packaging **(**refer back to **Picture 1)** for safe-keeping in various locations within the beneficiary homes or on their person. Ninety-five (95%) of survey respondents stated they either kept it in their home (22%) or in their handbag/on their person (73%). The same was found during the FGDs, where beneficiaries shared they usually kept SIM cards in a safe place at home or on their person. The vast majority of focus group participants had the original SIM card packaging with them during the interviews (as FGD occurred at cash out points).

*Picture 3: Focus Group Participants in Bong*

Focus group participants displayed the value their SIM cards held for them by stating they would check on their hiding place every day. This directly reflects a central reason MNOs offer mobile money as a VAS. When an individual depends on their SIM card not only for making and receiving calls, but also for sending and receiving money, it reduces the chances that individual will switch out for a rival MNO's SIM card. The positive beneficiary experiences and high satisfaction levels with mobile money present a significant opportunity for Lonestar to capitalize on the positive brand recognition within these areas.

Although mobile phone ownership was low at the start of the program, the act of opening mobile money accounts and providing SIM cards catalyzed the beneficiaries' purchase mobile phones as the program progressed. Of those survey respondents who did not own a phone before the program, 18% of them decided to purchase a phone during the program, among whom 78% stated the reason for the purchase was specifically because of the cash transfers. The trend continues when looking at this data by county, with 23 out of 57 (40%) of survey respondents in Margibi purchasing phones during the program, and 14 out of 146 (10%) respondents in Bong stating they purchased phones during the program.

Graph 4: Mobile Phone Purchases During the Program
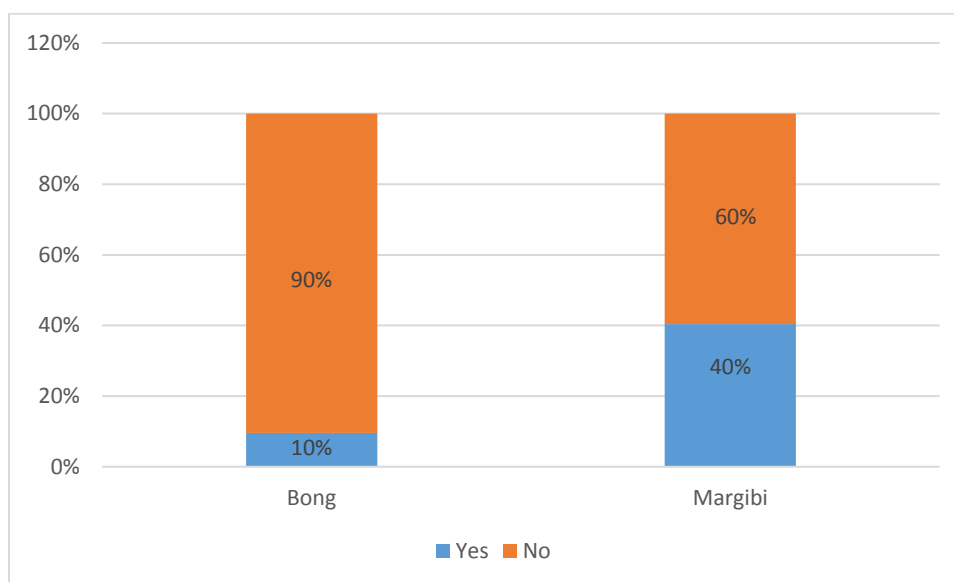
The project's influence on mobile phone ownership in Margibi, where there is better network coverage and a lower poverty rate, is significant. As seen in the graph above, 40% of the survey respondents in Margibi who did not own mobile phones at the start of the program, purchased them while the program was happening. Among those, 91% of the respondents from Margibi stated they purchased phones because of their experience with the SC program.

Graph 5: # of Beneficiaries Who Purchased Phone Because of Program
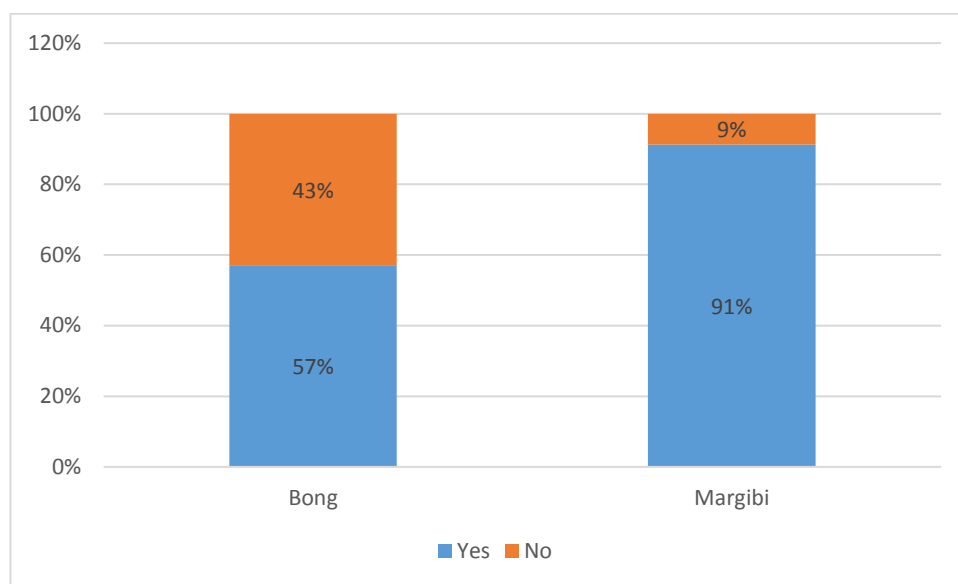
If these findings are expanded out to all 5,000 beneficiaries, it is fair to say the SC program potentially influenced the purchase of over 850 mobile phones. Further surveying would be required to better understand the usage of phones by beneficiaries outside of receiving their funds from the SC program. Yet, the latest round of PDM data (PDM 5) showed that 90% of beneficiaries who do own a mobile handset use them to talk with family members, while 10% also use the phone to send texts. The SC program provides incentives for customer acquisition on the part of Lonestar, which provides the foundation for continued use of the issued SIM cards after the program ends.

Mobile phone ownership is something that is not only important for the MNOs, but also for SC and other humanitarian organizations. A population with greater mobile penetration is better prepared to receive information and even future cash transfer payments. Mobile phones offer a pathway for beneficiaries onto a broader digital platform that can offer a variety of additional financial services previously inaccessible to them. Mobile handsets can play an integral role in preparing populations for other emergency or disaster situations they may face in the future by providing them with the tools they need to become more active participants of the formal economy.

7.3 Registration and Training

Many cash transfer programs take advantage of the registration process to also provide training around program objectives and cash distribution procedures. In the case of this program, however, much of the training during registration revolved around how beneficiaries would receive their funds in addition to advice around ways to spend it. When asked about the trainings that took place during registration, many of the focus group participants could not recall whether they received training around how to use the mobile money wallets. As this was not necessarily a key objective for SC with mobile handset ownership being so low, it should be no surprise that they did not offer a lot of training around them; deeper training around the

variety of use cases for mobile money, pin numbers, and other aspects of mobile money wallets was not provided.

That being said, the registration process was still well received by the majority of beneficiaries (96%). This high satisfaction rate may very well be due to the fact that registration did not require a lot of training, and the process for cashing out was kept very simple. Yet, it seems Lonestar and SC may have missed out on key opportunities to improve product recognition and understanding of the mobile money product among beneficiaries.

Graph 6: Satisfaction with Registration Process
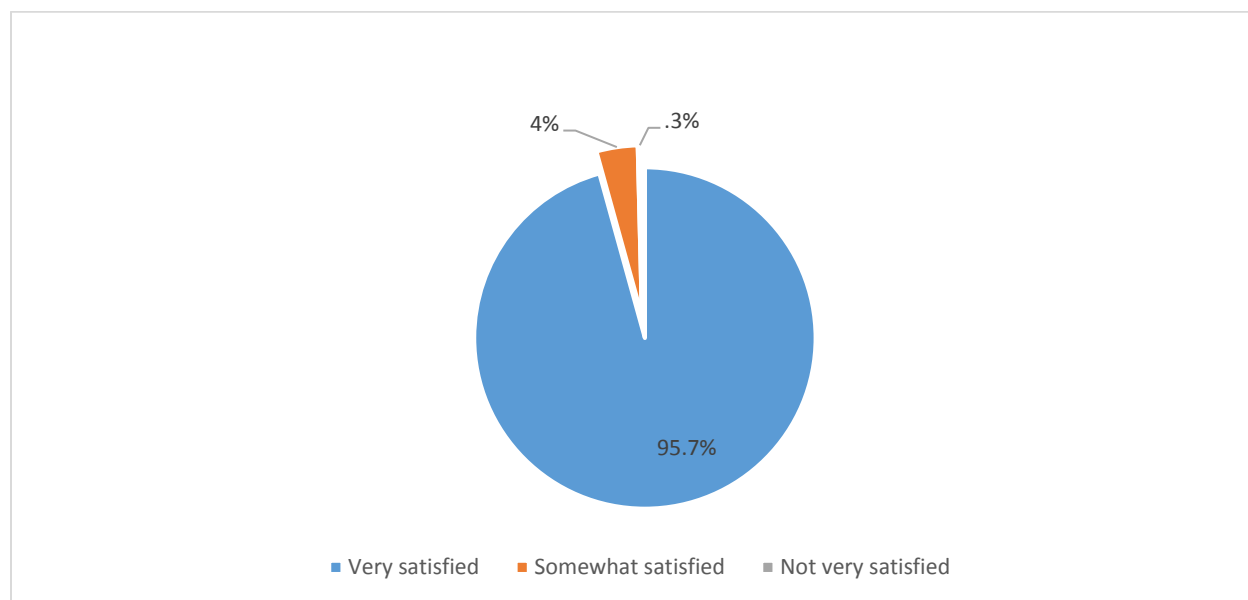
Survey respondents' answers reflect similar sentiments to what came out of the FGD, with only 53% of those surveyed reporting they remember receiving training on mobile money. An additional indicator that training around the mobile money product itself was not a focus was the way in which beneficiaries interacted with their PIN codes during registration. In a normal mobile money registration scenario, the PIN code is something the registering individual picks out and keeps secret. In the case of registration for the SC program beneficiaries, 100% of the survey respondents stated they were given their PINs and did not select their own. This was done mainly to mitigate future complications around pins. Low digital literacy amongst beneficiaries made it difficult for them to grasp the overall concept of a pin number. It is unclear whether a more concerted effort to train beneficiaries on the specifics of mobile money would have resulted in a population more capable of using the services outside of the program.

The lack of training around mobile money at registration was understandable considering the context of SC's primary goals for the program and the lack of mobile phone ownership. Yet, perhaps encouraging Lonestar at the beginning of the relationship to put more focus on training beneficiaries on the uses of their mobile wallets could have potentially equipped them to be more independent mobile money users. Training potential customers around the use of their

products and services could be something Lonestar provides a more concrete commitment to within the agreement.[19]

7.4 Product Confidence

As mobile money was a relatively new concept for most beneficiaries, there were signs of lower trust levels at the beginning of the project. At the start, 65% of HH survey respondents stated they had high confidence in the mobile money product. Although a majority percentage, there were still many beneficiaries who had doubts or questions around whether mobile money would impede them from receiving their funds.

Graph 7: Beneficiary Confidence in Mobile Money at Beginning of Program
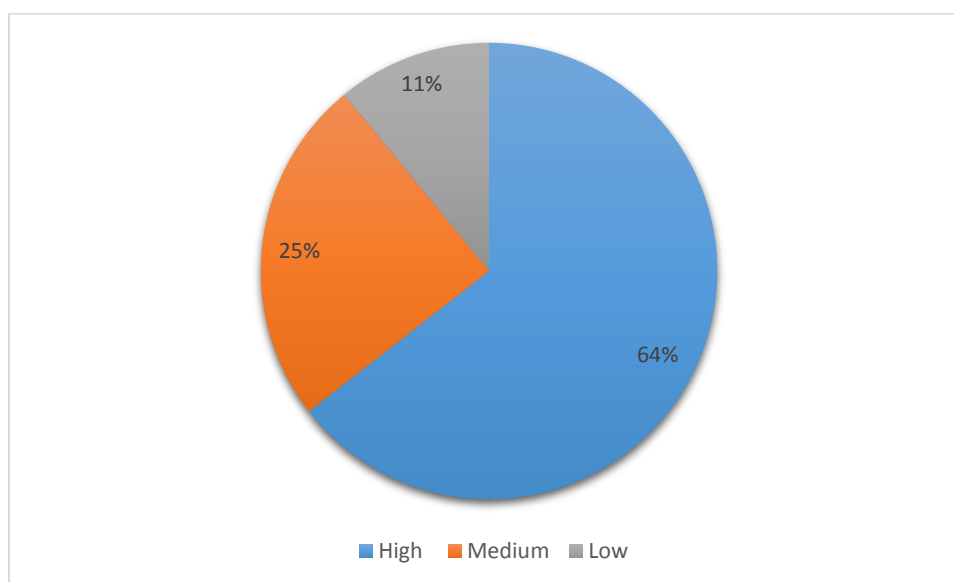
After the fifth distribution of funds through mobile money, confidence levels rose from 35% to 99% of beneficiaries stating they had high confidence in mobile money's ability to deliver their money. Such trust in the product is the result of hard work by SC to manage the process, and the efforts made by agents to ensure that cash arrived to cash out points. There is real value for Lonestar in this increase in confidence, as it shows cash transfer programs have the ability to not only introduce people to mobile money products, but also to increase their trust and confidence in the product working for them.

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[19] Lonestar committed to conducting "all sensitization, registration, and activation of SIM cards" within the agreement's scope of work

Graph 8: Beneficiary Confidence in Mobile Money: End of Program

99%

■ High ■ Medium ■ Low
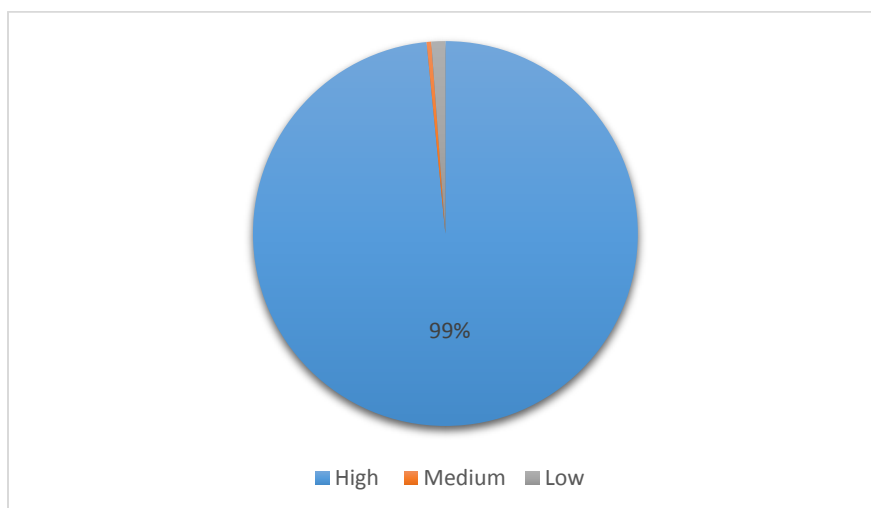
8. Stakeholder Experiences and Learnings: Mobile Money Agent

A robust and active mobile money agent network helps mobile money providers build brand awareness, build capacity amongst customers, and manage liquidity. As discussed in **section 4,** Liberia does not currently have a thriving mobile money market due in large part to the lack of agent infrastructure, poor liquidity balancing support and inadequate agent management strategies. In order to ensure accessibility and timeliness of the delivery of cash to beneficiaries, the SC program also required additional service level features that expanded on a typical scope of work for mobile money agents by requiring agents to travel to and provide service at controlled-cash out points. This changed the business model and cost structures for agents disbursing payments for the program. The additional costs required caused many participating agents to opt out of the disbursement program, including Lonestar's own mobile money ambassadors who traveled from Monrovia to participate in the first cash outs. In the end, SC relied on one Lonestar mobile money agent from Bong and one agent from Margibi to provide the cash out services for the duration of the program and specialized commission structures and agreements were required to interest these agents.

Inadequate agent capacity issues were evident during disbursements but managed through select agent efforts and commission structures enhanced by SC. This section of the report examines in detail the program's work with mobile money agents and provide insights into what improvements were made and can still be made around commission structures, float and liquidity management.

8.1 Commission Structure Analysis

Lonestar's established mobile money commission structure for its mobile money agents was insufficient in compensating agents for the expanded scope of work payment disbursements that the SC program required, particularly the additional travel expenses and time and logistics

of withdrawing large sums of cash. For the agent in Bong, there were 80 cash out points to cover. These points ranged from 25 kilometers (20-30-minute drive) to 90 kilometers (wet season 3 hours, dry season 1.5 hours). For the agent in Margibi, the points ranged from 4.4 kilometers (15-minute drive) to 106 kilometers (1 hour and 45-minute drive).

Lonestar splits transaction fees with its agents 60/40. Its payment disbursement fee structure is tiered with a range of fee values; the mobile money tariff sheet is set forth in **Table 8** below:

Table 8: Lonestar Mobile Money Transaction Fees

Transaction Size (L$)	Fee/transaction
50-1,000	75
1,005-6,000	150
6,005-15,000	250
15,005-35,000	400

Based on this fee structure, SC was paying Lonestar L$ 150 (approximately US $1.67) per transaction. Under the 60/40 split, agents received L$ 60 (approximately US $0.67). The SC program's disbursement volume provided the agents in Bong with a possible commission earnings of L$ 210,000 (around US $2,300), and the agents in Margibi L$ 90,000 (around US 1,000) per disbursement period, collectively. When shared across multiple agents, these amounts did not cover the operational costs for facilitating cash outs and opportunity costs for leaving their normal businesses to do so.

Apart from significant downward pressure on profit margins, the agents were faced with a high level of cash management risk/loss, as they were transporting a significant amount of their business' cash assets to provide adequate liquidity at the managed cash out points. Based on conversations with the two agents, transporting 3 million LD in cash represented 30%-60% of their grocery store's monthly revenue, depending on the time of year. The potential for a robbery and loss of the funds posed a devastating threat to their ability to run other parts of their business, which the commission structure did not overcome.

Finally, the liquidity shortage in the counties made the logistics of sourcing cash a huge challenge and imposed an opportunity cost of lost time spent on their primary businesses, as facilitating cash outs for the SC program was practically a full time job. Most agents simply did not want to be bothered with the logistical strains that would detract from their everyday business activities.

SC and the remaining agents worked to figure out a complementary commission structure that took into account the additional operational costs and the risks to agents that participated in the cash transfer program, including:

1. Airtime for increased communication with SC staff around cash out schedules
2. Transportation costs to obtain cash and travel to and from distribution points
3. Escalated risk of carrying cash off the premises of their place of business

4. Need to hire additional people to handle the cash out volumes
5. Bank withdrawal fees to obtain cash for distributions
6. Agent's time dedicated to logistics around this cash out process away from their primary businesses

As these additional costs are almost entirely variable and dependent on the amount of transactions the agent would be managing, the additional commission was also based on the number of transactions processed, similar to Lonestar's agreement with the agents. After analysis of the additional costs, SC decided to offer an additional L$ 130 (approximately US $1.44) in addition to the L$ 60 they receive through their fee sharing agreement with Lonestar. There was another incentive payment of US$ 150 (around L$ 13,500) if agents paid 250 people or more in a day. At the time this report was written, agents had only reached that payment goal once.

Table 9: Enhanced Agent Commissions per Disbursement

County	Total Value Transferred	Total Lonestar Commission	Total SC Commission	Grand Total L$	Grand Total US$
Bong	L$ 15.4 mil	L$ 210,000	L$ 455,000	L$ 665,000	US$ 7,300
Margibi	L$ 6.6 mil	L$ 90,000	L$ 195,000	L$ 285,000	US$ 3,130

Even at a total of L$ 190, a sum over three times the basic commission structure, SC was only able to secure agreements with one agent for each county. The two agents' main sources of income are their grocery businesses, located in the main urban centers of Gbarnga (in Bong) and Kakata (in Margibi). The agent in Bong was responsible for delivering 15.4 million LDs (around US$ 170,000) cash to all 3,500 beneficiaries in Bong per distribution period. The agent in Margibi was tasked with delivering 6.6 million LDs (around US$ 72,536) cash to all 1,500 beneficiaries in Margibi per distribution period. The agents stated they would be organizing and facilitating cash outs an average of 15-25 days per distribution period depending on delays caused by lack of liquidity or bad road conditions. The costs associated with managing this process, while high, were adequately met through the adjusted commission structures. It seems the high degree of difficulty around managing the logistics of servicing all the cash out points was the main deterrent for many, and the primary complaint from the agents participating in the program.

8.2 Float Management and Liquidity Issues

Mobile money agents need to replenish their inventory of either electronic money (float) or cash (liquidity) on a regular basis. Lonestar manages its agent network's float through a partner bank[20] and Lonestar regional offices, where agents visit the partner branches to either trade in their e-money for cash or vice-versa (cashing in, cashing out). Like many aspects of the SC program, the high level of cash demand made this process more challenging as the agents were exclusively asking for cash, exhausting bank liquidity without replenishing it at any stage in the transfer process.

This high level of demand meant agents had issues with access to cash when they needed it. As was discussed earlier, cash supply is an issue in the counties outside of Monrovia. To compound this issue, agents' choice of bank was limited to Lonestar designated banks. This meant the agent in Bong, for example, was only able to receive funds into his Ecobank account. In Bong, the Ecobank branch was not located in central Gbarnga but on a local university campus a 10-minute drive away. This was an additional inconvenience and also meant this branch was not participating in much of Gbarnga's daily commercial activity. The bank branch located in central Gbarnga belonged to LBDI, which was not an option for receiving a transfer from Lonestar. LBDI, being closer to the commercial activities of Gbarnga often times had higher levels of liquidity on hand, and would also provide a more convenient location for agents.

It was evident when speaking with both agents that their primary challenge was the lack of cash liquidity in their immediate locations. Ultimately for both agents managing liquidity meant making a trip to Monrovia. For the agent in Bong, the drive to Monrovia was a six-hour round trip. Even in the capital city, withdrawing the cash at the bank was an arduous process that could take several hours, meaning the Bong agent would sometimes spend upwards of 8-10 hours withdrawing only a portion of the total cash he would need to disburse throughout the month. Counting three to four million LDs in cash takes a long time (the largest note in LD is 100),[21] and even with advanced notice, banks would not prepare cash beforehand. Sometimes banks would charge additional fees to the agent for the cash preparation, making the process even more costly.

A final and important pain point came around the agent's access to their float on their mobile money wallets. After a few days of disbursement, the agents had float balances in the L$ millions. This not only includes the cash transfer value of L$ 4,400 transferred to their wallets from each beneficiary's wallet, but also the commissions they earned from Lonestar, which were automatically credited to the agent's mobile money wallet.[22] The nascent state of mobile money severely limits what can be done with funds in the form of float. The agent cannot utilize the funds to purchase goods from his suppliers or push funds directly from his wallet to his personal bank account; consequently, agents should either quickly transition those funds back into cash, or quickly transfer them to their bank, which are interest bearing accounts.

In Bong, there were no direct float and liquidity management options for the agent outside of the Lonestar regional office. Regional Lonestar offices across Liberia have a cash out limit of L$ 350,000 per day, which was not sufficient for the agent's high level of cash demand. This meant the agent was forced to transfer funds from his mobile money wallet to his Ecobank account. This process took time, as the large amount of cash required additional signatories on the side of Lonestar and Ecobank. These delayed transfers also meant the agent had 30%-60% of his monthly income unavailable for a period of time, putting cash flow constraints on their primary business activities. Internal controls are necessary around large transfers, but the procedures are done manually, thus increasing the time it took for funds to land in the agent's account. In Margibi, it seemed the agent was able to go directly to Lonestar's office various times a week to

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[21] This year the Central Bank of Liberia announced they will be introducing a L$ 500 note, which will be worth around 5 dollars
[22] The additional commission from SC was paid directly into the agent's bank account at the end of the month

rebalance his float directly, meaning he would be able to transfer the funds in his wallet to Lonestar, which would then provide him with cash. This was possible because of the Margibi agent's proximity to Monrovia and his ability to visit the office to rebalance float often, which meant he rarely let his float balance get very high.

The below graphic maps how e-money and cash move through the system and indicates where delays are occurring within the process. It is important to keep in mind that e-money represents digital value held in a mobile money wallet. The delays displayed in **Figure 4** clearly show that any cash delivered to the agent had problems (whether it be physical cash or in the form of a bank transfer).

Figure 4: Agent Float Management Flow Chart After Disbursement
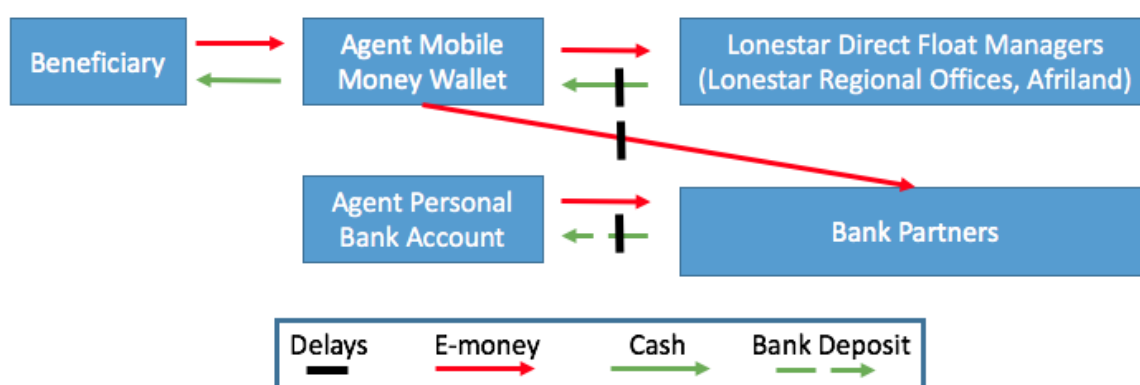
As will be discussed in the section to follow, Lonestar has plans in place that can help ease some of the barriers agents have experienced in accessing physical cash or deposits in their bank accounts. The restrictions on agent cash flow that these delays cause is a major problem for any program that hopes to pay in bulk using the mobile money agent network to cash out. Lonestar should also consider stepping in as a liquidity provider in these cases vs. requiring that agents fund the cash out themselves. As the entity taking the majority of commission, Lonestar should assume greater responsibility and take on some of the risk associated with large cash transfer programs. Easing some of the agents' troubles will not only assuage the operational headaches encountered by the SC program, but also help promote the overall growth of the mobile money product in Liberia.

It should be noted that there was a clear distinction in the level of program satisfaction between the agent in Bong and the agent in Margibi. Margibi's agent was located nearly two hours closer to Monrovia and seemed to have a better relationship with Lonestar headquarters. The Margibi agent was often able to visit Lonestar's headquarters directly to manage float, while the Bong agent had more limited access. This disparity should be addressed, as Lonestar ideally would have been equally involved in the management of both agents.

9. Stakeholder Experiences and Learnings: Lonestar

The volume of transactions involved in the SC program was easily the largest volume Lonestar had dealt with since it launched in 2011. Since its inception, Lonestar mobile money was marketed as a Peer-to-Peer (P2P) product. Marketing efforts were never targeted at businesses trying to disburse funds to many people at once. Lonestar has had other bulk payment clients, such as FHI 360 (implementing a pilot to pay schoolteachers through mobile money), yet there was nothing to the scale of SC's program to date. Lonestar saw this program as an opportunity to understand best practices around bulk payments, which are projected to become a growing demand as the Liberian government aims to digitize many of its payment streams, including pension payments and tax collections.

P2P payments differ from bulk payments in a variety of ways that have been touched on earlier in this report. Bulk payments require a higher level of liquidity in certain areas where payments are coming in, while P2P payments are usually more spread out and less concentrated in one geographic area. Bulk payments also need to provide the payer with a greater level of control and reporting around the payment vs. simply typing in a pin and the recipient's number to send funds. This section will assess many issues that have already been discussed in previous sections (such as managing float and mobile phone ownership), but through the lens of Lonestar. Suggestions will be made on ways to improve upon existing processes.

9.1 Float and Liquidity Management

As mentioned in the previous section, there are two primary pain points for agents around the management of their e-money and cash: 1) accessing enough cash liquidity, and 2) receiving funds in their personal bank account. There are several factors contributing to these delays and most of them are not within Lonestar's sphere of control, but there are adjustments <u>Lonestar could make to its internal management structures that may help to mitigate them.</u>

Currently, in addition to its own regional offices, Lonestar depends on Afriland Bank as its only partner that can provide agents cash in exchange for the float on their mobile money wallets. Lonestar regional offices and Afriland Bank are the only "Superagents" Lonestar has to directly manage agent float and liquidity. Lonestar has other partner banks, but these banks can only receive transfers from Lonestar into personal agent bank accounts (Ecobank, GT Bank, UB), which takes a longer time for agents to have access to their funds. This means that the estimated 750 active agents[23] have a total of three bank branches nationwide that can directly manage their float, and 41 branches where they can have funds transferred to an account.

To make matters more difficult, 51% of all of these bank partners are located in Monrovia. For the agents participating in the program, there are even less choices, with only one bank partner having presence in Bong and two in Margibi. Each county also has a Lonestar office that would sometimes be able to provide float management support, but their cash availability was also dependent on the partner bank presence and had strict limits on the amounts they could provide.

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[23] Interview with Lonestar (August 2016)

Table 10: Liquidity and Float Management Partner Banks in Liberia

Bank	Total # of branches	# of branches in Bong	# of branches in Margibi
Afriland First Bank	3	0	0
Ecobank	24	1	3
GT Bank	8	0	1
UBA	7	0	0
Total	41	1	4

These limited points of management are dependent on bank branch liquidity, which has not been dependable, and limit access points for agents to manage their float. Lonestar understands the need to improve on its float management system and is considering assessing what other entities can serve as Superagents beyond existing bank partners. Lonestar stated they have already begun to scope commercial entities that turn over a lot of cash in their day to day business and would be able to provide liquidity and float management services to a sub group of agents. Lonestar will also need to work with both banks and their extended network of Superagents to improve upon the float rebalancing process for agents. The process itself, particularly for large amounts, is arduous and takes up valuable time on the part of the agent, making managing float an expensive process. Integrating alternatives to banks into the liquidity management value chain will enable Lonestar to: 1) expand access to service points for their agents, 2) diversify on the sources of cash for liquidity management, and 3) improve upon float rebalancing procedures.

In addition to expanding the Superagent structure beyond bank branches partners, Lonestar is seeking to integrate its mobile wallets with UBA and GT Bank (Ecobank is pending as well) to enable what is referred to as push/pull bank to wallet transactions. These transactions would enable an agent to avoid the long process currently required by Lonestar to convert e-money from agent wallets to deposits of funds in an agent's private account, and instead perform these transactions directly from their mobile money wallet. This change would allow agents to skip over the process of making a deposit request to headquarters, and they would no longer have to wait a week, sometimes longer, for funds to arrive into their bank account; the push/pull integration would, however, come with a fee to the agent, but it may help speed up the agents' access to funds.

Ultimately, float and liquidity management are linked to the supply of money in the regions where services are being performed. If Lonestar can identify key commercial entities that have cash surpluses, it would be able to tap into liquidity supplies that lie outside of bank deposits. This can help mitigate the product's dependence on banks for this service. These improvements also depend on Lonestar's willingness to invest in finding solutions to the liquidity issues in more rural settings. With the government of Liberia, a significant payer, looking to digitize its payment streams, there is a good incentive for Lonestar to learn from these lessons and adapt its product.

9.2 Mobile Phone Ownership

As discussed in **section 7**, the program had a significant influence on the purchase of mobile handsets amongst beneficiaries during the program. Mobile money is normally seen by most MNOs as a VAS that is meant to reduce churn amongst customers rather than function as a core business product.[24] Positive correlations between the use of mobile money and the use of airtime and text services are key indicators that VAS products like mobile money are working. The 18% increase in mobile phone ownership amongst beneficiaries indicates there is an even greater incentive beyond the transaction fees Lonestar collected from the cash transfers (L$ 450,000/distribution, $ 2.7 million total).

The data collected on mobile phone purchases during the cash transfer program indicates some useful information for Lonestar to consider when thinking about how to improve the benefits that result from participating in cash transfers.

1) The program beneficiaries who did purchase phones did so with very little marketing or training around mobile phone ownership. With increased attention to training, marketing efforts, and airtime promotions on the part of Lonestar, the number of beneficiaries purchasing phones could have been even higher.
2) While 18% of the beneficiaries purchased phones, a far greater percentage of beneficiaries in Margibi purchased phones (40%) than in Bong (10%).[25] This type of data, coupled with demographic information on beneficiaries from each county, can help to develop a profile of beneficiaries who are more likely to purchase a mobile phone as a result of participating in a cash transfer program.
3) Data from the last two PDM surveys shows the vast majority (94%) of beneficiaries who own mobile phone owners are using their phones to make calls and send texts. Although receiving cash via their SIM may have been a catalyst for the purchase of phones, data shows beneficiaries are using the phones for more than just receiving disbursements. This can provide longer term revenue streams for Lonestar as a result of the program.

9.3 Brand Awareness and Confidence

Lonestar benefitted from SC's efforts to ensure liquidity was available for the managed cash out points. After the first distribution, Lonestar no longer sent out their own ambassadors to facilitate cashing out. This, as discussed earlier, was a result of the expanded operational expenses required to service the SC managed cash out points. Despite this step back, the Lonestar brand name continued to be recognized by beneficiaries as a crucial part of the process. As was seen in **section 7**, the current levels of satisfaction and confidence with the mobile money product are very high. Lonestar has improved their brand awareness amongst a population that never had much interaction with the MNO before. This sort of confidence and

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[24] Churn can be defined as when a mobile customer rotates between different network sims on a regular basis
[25] These percentages represent the number of beneficiaries surveyed that purchased mobile phones during the program out of the total number of beneficiaries who did not own a phone at the beginning of the program

brand awareness is valuable below the line marketing for Lonestar, and SC should be recognized for supporting the positive image portrayed to beneficiaries.

9.4 Managed Cashing Out Alternatives

As discussed earlier, having managed cash outs deviates from typical mobile money operational procedures as it requires agents to travel out to cash out points and transport a higher concentration of physical cash. Besides the primary reasons for managed cash out which guarantees beneficiaries have close and fair access to their cash, SC also had reporting requirements set in place to confirm the beneficiary had in fact received their cash. Lonestar's system is able to provide the amount, agent location and time of any mobile wallet cash out, and therefore could provide key data around beneficiaries' ability to receive cash outside of the managed cash out points. Yet, each beneficiary's mobile money wallet is a private account, and Lonestar is unable to simply provide transactional details to SC without a beneficiary's consent. A suggestion would be for Lonestar to include an opt out section for future mobile money registrations in cash transfer scenarios where bulk payer clients may need access to account information for finite periods of time. This could help reduce the demand for managed cash out points, and ease some of the pressures put on the agents serving them.

10. Conclusion

There were several themes that arose across each stakeholder's experience with the use of mobile money during SC's cash program in Liberia. SC's work with Lonestar and mobile money agents holds many rich lessons learned for operating a digital delivery mechanism in a market that doesn't necessarily have the digital payments infrastructure in place to fully support the program's activities. While there were many challenges, SC was able to completely digitize their disbursement process, which provided advanced analytics and real time distribution monitoring tools. By utilizing a variety of digital tools for data collection (Kobo Toolbox), data management (Segovia), and electronic payment (Lonestar), SC provided a glimpse into what the future of digital cash transfer programs can be and the key risks that need to be mitigated.

Below are final thoughts on some of those risks and how humanitarian organizations can be best prepared to overcome them.

1)   Digital payments, regardless of the mechanism (card or mobile) or provider (MNO, bank or third party) always rely on the underlying banking infrastructure. Humanitarian organizations need to take a broader approach to their market analysis, not only examining the provider capabilities available, but details around things like a) money supply management by the central bank, b) how inter- and intra-bank transfers function, and c) digital integrations between the delivery mechanism (mobile or card) and banks.
2)   In markets where digital payment ecosystem infrastructure is not mature enough, managed cash out points can ensure beneficiaries have access to the funds they receive digitally and will more than likely be necessary. It is key for humanitarian organizations to communicate, to the greatest extent possible, the expected scope of work around these managed cash out points during the negotiation phase with providers.

Humanitarian organizations have the expertise to play expanded roles in the management of agents, like SC did, but those roles should be included and reflected in agreements with providers.

3) A lack of mobile phone ownership can make the use of mobile money more difficult, but it is not a delivery channel killer. In SC's case, many beneficiaries (79%) did not own mobile phones at the onset of the program. SIM cards were distributed and kept in their original packaging by beneficiaries and provided along with their program issued IDs during cash out. This work-around not only enabled SC to digitize every payment they made to beneficiaries, but it also played a key role in increasing mobile phone ownership amongst beneficiaries. Eighteen percent of beneficiaries who did not own a phone before the program, purchased mobile phones during the lifetime of the SC project, particularly those in Margibi where mobile networks are stronger and there is a lower poverty rate.

4) Weak digital payment ecosystems have a high risk of providing subpar customer support and product experience. This is especially true for populations living in more rural settings, where scaling services is more expensive for providers. MNOs are extremely brand conscious, and spend a lot of money ensuring their brand is recognized and respected. SC's additional support to mobile money agents to ensure the delivery of cash provided a significant boost in confidence around the Lonestar mobile money product amongst beneficiaries. Lonestar mobile money is now a recognized brand across the communities SC worked with. The level of confidence in the product is also sky high, with 99% of survey respondents reporting they were highly confident in the product.

Annex 1: Key Questions To Ask When Assessing Mobile Money Viability[26]

Payment Product Details: NGO User Experience
- What are the requirements the payment service provider has for organization to open an account? What are the "know your customer" standards for the payment service provider (e.g. photo identification, documentation, etc.)?
- How does the payment service provider track and confirm transactions?
- What is documented in the process?
- How does an organization verify that the funds transmitted reach the intended recipient?
- What are the maximum/minimum amounts of funds an organization can disburse in a day?
- How many transactions can an organization disburse in a day?
- What sort of customer confirmation, notification, or follow-up for transmittals of funds can the organization rely upon?
- What is the clearing and settlement process for payments from the organization's bank account to the wallet?
- Are the fees for both sending and withdrawing funds visible when preparing for disbursal?
- What is the pricing structure of your product?
- How stable are the service provider and power networks? May we see a copy of the uptime records (for mobile payments)?
- Can you provide a map of the network and agent coverage?
- Is the payment service provider's network interoperable with other payment service providers?
- If your product is not interoperable, how does your product handle transactions across two different networks (Off-Net Transactions)?
- What is the reconciliation process for off-net transactions?
- What is the provider's relationship to banks? Which banks are your partners? Please provide a list or map of branch locations and contacts at your partner banks for further questions.

Payment Product Details: Banks
- Do you as a bank provide direct float and liquidity management for agents?
- How do you determine liquidity needs in your rural branches?
- What communication channels do you have with the mobile money provider partner around their liquidity needs?
- Do you charge additional fees for handling large amounts of cash outs?
- Do retail clients of yours have the ability to pull and push funds between their bank account with you and their mobile money wallets?

Payment Product Details: Payee User Experience
- What are the requirements for a payee to opening an account? What are the "know your customer" standards for the payment service provider (e.g. photo identification, documentation, etc.)?
- What is the pricing structure for payees (Withdraw fees, etc.)? Does it vary for account and non-account holders?
- What is the minimum/maximum amount of funds a payee can receive in one day?

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[26] Many of these questions come from the NetHope Electronic Payments Toolkit

- How many transactions can an end user account receive in a day?
- How are payees notified when a payment is received? Does the payee get a message stating who the payment is from and the purpose?

Distribution: Agents
- How many cash in/cash out points does the payment service provider have in country? What is the breakdown for the region where the organization will make payments?
- How does the payment service provider sign up and train agents?
- How does the payment service provider manage and monitor cash in/cash out location activity, including liquidity? Are there audits?
- What are the reporting requirements for agents providing cash in/cash out services?
- How do agents get access to cash during times of high liquidity demand?
- What is the agent's maximum balance they can hold within their wallet?
- Are there different procedures for agents to cash out when the amount is over a certain threshold?
- What is the maximum amount of cash an agent can cash out at one time?

Customer Service/Training: NGO User
- How does the payment service provider settle disputes on transactions? For example, if funds do not arrive to recipient, how does one recuperate funds?
- What sort of customer support do corporate account holders receive?
- Will I have a dedicated customer service manager?
- Do you have a dedicated customer service team for bulk payment products?
- How many hours of training do you provide to corporate customer's immediate staff?
- Do you have any training curriculum/collateral available for organizations?

Customer Service/Training: Payee
- How does the payment service provider settle disputes on transactions reported by payees? Who is responsible for working with the payee to recuperate lost funds?
- What sort of customer support does the end user/payee account receive?
- How many hours of training do you provide end users?
- Do you have any training curriculum/collateral available that targets end users?

Data Privacy and Security/ Service Provider Internal Controls:
- What are the payment service provider's internal financial management systems?
- How long does the payment service provider keep accounting records of transactions?
- What internal controls and accountability processes are in place for the service provider's staff?
- What systems are in place to secure sensitive data?
- What are the payment service provider's fraud monitoring policies?
- How does the service provider ensure the privacy of the end user's (recipient) data?
- How does the service provider ensure the security of funds in the organization's account?

Annex 2: Study Protocol

Digital Cash Transfers in Liberia
Save The Children

Study Protocol

Research Team

Strategic Impact Advisors LLC.

Strategic Impact Advisors (SIA) is a global consulting firm with an enduring commitment to spreading the use of digital technology for financial inclusion and using economic analysis to drive decision making for the development of communities.

Building Markets Liberia

Building Markets Liberia has extensive experience in conducting surveys and in person interviews to understand MSME behavior and perceptions, and conducting market research nationally, on specific sectors, and how the Ebola Virus Disease has impacted MSMEs. They have a group of trained enumerators that will conduct the quantitative household surveys.

Study Design

SIA will use a mixed methodology of both qualitative and quantitative data collection methods to conduct this research. These will be complementary components of a unified research design. The survey questionnaire and the Focus Group Discussions (FGD)/Key informant interviews (KII) guidelines will be designed in advance. SIA will conduct FGDs and KIIs concurrently during the in country research trip to capture the more qualitative aspects of the study's research.

The quantitative survey questions will be tested by the Building Markets team during SIA's in country visit. Once piloting and adjustments to the questions are complete, Building Markets will conduct household surveys.

Survey data and texts from FGDs and KII will be analyzed independently. The goal is the mutual enhancement of the analysis, and use of the qualitative (thick data) to explain and help to uncover the meaning, social context and stories behind the quantitative (big data) analysis.

Sample Size

The EFSP program involves 5,000 households, a sample of 200 corresponds to a confidence interval of 95% with +/-6.79 percent margin of error. Bong county has 70% of the total number of beneficiaries, and therefore will have more household surveys (140) conducted there than in Margibi (60) to be proportional to the beneficiary numbers in each county. Building Markets has received a complete list of the beneficiaries, and they will randomize the households that will be interviewed in each county.

The qualitative FGDs and agent interviews will only be taking place in two out of the four participating districts in Bong, and both participating districts in Margibi. Each country will have two FGDs, one with a group of men and the other with a group of women. In addition, a minimum of two agents will be

interviewed as well as any relevant SC field staff. In Monrovia additional KIIs will be conducted with SC and Lonestar staff.

Duration

The total duration of this study will be eight weeks, which will be marked by a final report submitted for review by Lonestar and SC by the end of September.

Study Objectives

The primary objective of this study will be to analyze the successes and challenges associated with the use of mobile money as a means to deliver funds to beneficiaries of SC, and produce recommendations and suggestions for ways to improve the overall experience for all stakeholders involved in future interventions. This will be achieved by focusing on several sub-objectives listed below.

1) Better understand the beneficiary (end user) experience of using digital transfer mechanism, in this case mobile money.
2) Better understand the SC staff experience from both financial/operational and programmatic perspectives.
3) Better understand the experience of Lonestar as a partner to the cash transfer program.
4) Better understand the experience of the agents responsible for providing cash at cash out points throughout the two counties.