About The MasterCard Foundation Program

IFC and the MasterCard Foundation (MCF) entered into a partnership focused on accelerating the growth and outreach of microfinance and mobile financial services in Sub-Saharan Africa. The partnership aims to leverage IFC’s expanding microfinance client network in the region and its emerging expertise in mobile financial services to catalyze innovative and low-cost approaches for expanding financial services to low-income populations.

The Partnership has three Primary Components

**Microfinance**
Through this partnership, IFC will implement a scaling program for microfinance in Africa. The primary purpose of the Program is to accelerate delivery of financial services in sub-Saharan Africa (SSA) through the significant scaling up of between eight and ten of IFC’s strongest microfinance partners in Africa. Interventions will include product and channel diversification into underserved areas.

**Mobile Financial Service**
IFC and The MasterCard Foundation see tremendous opportunity with mobile banking, particularly for those living in rural areas. Mobile phones result in lower transactions costs and reduce the cost of information. This partnership will (i) identify nascent markets to accelerate the uptake of branchless banking services, (ii) work with private sector players to build expertise and infrastructure to sustainably offer financial services to the unbanked using mobile technology and agent networks and (iii) build robust business models that grow to scale and demonstrate to the market that MFS can be used to profitably deliver financial services to the poor.

**Knowledge & Learning**
This partnership will include a major knowledge sharing component to ensure broader dissemination of results, impacts and lessons learned from both the microfinance and mobile financial services. These knowledge products will include...
IFC has undertaken six (6) scoping reports in Rwanda, South Sudan, Liberia, Ivory Coast, Nigeria and Sierra Leone. These countries were chosen for the study because MFS were nascent, markets were difficult to reach, or other factors presented unique challenges. From these scoping reports, IFC will identify two nascent markets to provide broad and deep support to accelerate the uptake of branchless banking services, particularly among underserved and rural customers.

This deck summarizes the non-confidential findings that were obtained by IFC and the UNDCF during the scoping mission. It provides a brief perspective on regulations, financial market, telecom market, and mobile financial service implementations.
Acronyms

- AML Anti-Money Laundering
- B2P Business-to-Person (transfer)
- CBL Central Bank of Liberia
- CDD Customer Due Diligence
- FATF Financial Action Task Force
- FI Financial Institutions
- FIU Financial Intelligence Unit
- G2P Government-to-Person (transfer)
- GDP Gross Domestic Product
- IMF International Monetary Fund
- KYC Know Your Customer
- LTA Liberia Telecom Authority
- MCW MasterCard Worldwide
- MFI Microfinance Institution
- MFS Mobile Financial Services
- MFSP Mobile Financial Services Provider
- MNO Mobile Network Operator
- P2P Person-to-Person (transfer)
- POS Point of Sale Terminal
- WAMI West Africa Monetary Institute
Liberia Executive Summary

Overall Mobile Money Readiness: 3 (medium on a 2-4 scale where 2 is low and 4 is high)

Current Mobile Money Solutions: 1

Population: 3.89 million (July 2012 est)

Mobile Penetration: Approx 1.3 m unique subscribers, or 63% of adult population

Banked Population: 5-7% has access to formal financial services

Remittance % of GDP: Inbound $19.2 million\(^1\), 1% of GDP

Percent under poverty line: 80% (2000 est.)

Economically Active population: 52.7% - ages 15 to 64

Adult Literacy: 57.5%

Banks with largest branch networks: Ecobank and IBLL

Mobile Network Operators: Lonestar (MTN), Cellcomm, and Libtelco

Additional Comments: The Liberian market has a very limited payments infrastructure. The IMF and UNCDF are working with the Central Bank to develop appropriate regulations and technologies to address this critical gap. Mobile money guidelines exist, but they lack clarity and limit the role of some key players. However, the market need for alternative financial service channels appears to be significant. This suggests an opportunity for mobile money and branchless banking.

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\(^1\) As calculated from CBL Key Economic Indicators over 4 months, then averaging and extending to 12 months
• Macro-economic Overview

• Regulations
• Financial Sector
• Telecom Sector
• Distribution Channel
• Mobile Financial Services Landscape
• Conclusions
• Appendixes
## Macro-Economic Overview

### Key Country Statistics

- Population: 3,887,000 (July 2012)
- Age distribution: 44.3% (0-14 years), 52.7% (15-64 years), 2.9% (over 65 years)
- Urban/rural split: 48% urban
- GDP (PPP): 1.836 billion, 190th globally
- GDP per capita (PPP): $400
- Population below poverty line: 80% (2000 est)
- Economically active: 1.37 m in labor force (2007), 85% unemployed (2003 est)
- Literacy rate: 57.5%
- Banking penetration: 5-7% of population have access to formal financial services#
- Mobile phone penetration: Approx 1.3 m unique subscribers, 33% penetration
- Remittance (% of GDP): 1%, $19.2 million

### Insights

- Country rebuilding from a 14-year civil war that ended in 2003, most infrastructure destroyed
- Only 5,500 customers in Monrovia have access to publicly provided electricity. Generators power most of the country at huge cost
- Post Office has a limited number of branches and interviewees suggest it is inefficient and not considered effective
- Many organizations and businesses are relatively newly formed or newly recreated
- Several financial pain points identified - electricity payment (200K people), rainy season, limited bank infrastructures, high cost of moving cash
- Early analysis suggests strong market demand for more efficient financial services indicating growth opportunity for mobile money

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*Sources: Primary - CIA Factbook Website July 2012; July 2012 conversation with Central Bank of Liberia, Payment Systems Unit*
Mobile Financial Services Opportunity

Potentially high customer demand needs to be balanced against limited bank engagement

1. Poor infrastructure, security risks, and high cost of cash, particularly during the rainy season, are serious challenges that create demand for alternatives.

2. In a small country, sustainability requires each customer to transact frequently, suggesting need for high adoption rates and multiple product offerings.

3. Banks are flush with liquidity and do not need to capture more funds, which is counter to the MFS value proposition for banks.

4. Yet, regulations require a bank-led model, forcing growth to depend in part on banks that do not see enough value in getting more deposits.

5. One MNO’s solution enables multiple banks to participate, but they have little incentive to.

Source: www.pictureliberia.com
• Macro-economic Overview

• Regulations
  • Financial Sector
  • Telecom Sector
  • Distribution Channel
  • Mobile Financial Services Landscape
  • Conclusions
  • Appendix
Roles & Responsibilities

- Payment Systems Unit (PSU) newest part of CBL, established in 2010. Drafted Payment Systems Act
- Mobile Money Guidelines were drafted by the Supervision Department within CBL
- PSU under Central Bank authority, but also clear that MNOs are overseen by LTA
- Capacity in organizations across the country is a major challenge

- Three arms of government telecom. (1) Ministry of Post & Telecom, which sets policy, (2) LTA, the telecom regulator, and (3) Libtelco, the implementing arm and national telecom provider
- Required MNOs to get additional registration information from all SIM owners by July 1, 2012
- When developing Mobile Money Guidelines, CBL visited LTA to understand their role and share drafts

Additional Information

- President Sirleaf-Johnson is calling for 50% of the population to be banked by 2017.
- In August 2011, the CBL released Mobile Money Guidelines, with support of UNCDF
- Key considerations included: promote financial inclusion, link into formal financial services, ensure customer protection, and limit money laundering
- In March 2012, CBL released a Payments Systems Act, providing a framework for e-payments and provisions for mobile money. IMF and UNCDF provided support.
- When the Payment Systems Act becomes law, it will supersede the MM guidelines. Final MM regulations will then be released.
- Completion of the Act and MM regulations are expected by the end of 2012
- MFS are very important to CBL strategy, but there is a lack of clarity about how to implement and who regulates
- CBL Governor in 2nd of consecutive 5 yr term, former IMF official
# Regulatory Framework - Mobile Money Models

<table>
<thead>
<tr>
<th>Payments System Act</th>
<th>Current Regulations</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents refer to transfers, settlements, and clearing of payments primarily</td>
<td>Provides CBL with authority to oversee MM providers, but unclear about types of orgs</td>
<td></td>
</tr>
<tr>
<td>Defines “payment instrument” as both electronic and mobile payments, but this is only reference to mobile services</td>
<td>Creates some confusion with MM guidelines</td>
<td></td>
</tr>
<tr>
<td>Working with WAMI* to achieve regional consistency across payment systems</td>
<td>IMF has raised a number of issues with Act, so CBL is seeking additional assistance</td>
<td></td>
</tr>
</tbody>
</table>

| Mobile Money Guidelines | | Law may be passed in late 2012/early 2013 |
|-------------------------| | |
| Defines two models: (1) financial institution (FI) led and (2) many-to-many | Guidelines were developed for banks, anticipate a separate set of guidelines for other mobile payment service providers |
| Prefers many-to-many model to support interoperability but wants banks to lead | Also working on guidelines for e-payments, see value in linking various guidelines |
| Deposit-taking FIs or their agents must apply for the mobile money license | |

| Mobile Network Operators | | |
|--------------------------| | |
| Regulated to be agent of the banks in both FI and many-to-many models | Inability for MNO to be seen as a partner slows down product innovation, agent network build-out, and customer uptake |
| MNO cannot meet CBL to discuss needs or opportunities, bank partner must take on this role which is not always in their best interest | Banks make decisions in the interest of their traditional business, which may not be MM-business interest |
| | Discussion btw CBL and LTA have started |
| | Leads to a confusion of brands in the market and at agent locations |

* WAMI - West African Monetary Institute
# Regulatory Framework - Agents & Customers

<table>
<thead>
<tr>
<th>Services Allowed</th>
<th>Current Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Money transfer of both USD and Liberian dollars (LBD) within domestic market</td>
</tr>
<tr>
<td></td>
<td>Cash-in/cash-out</td>
</tr>
<tr>
<td></td>
<td>Bill payments</td>
</tr>
<tr>
<td></td>
<td>Merchant purchases</td>
</tr>
<tr>
<td></td>
<td>Loan disbursements/repayments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retail Agents</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dual-currency country. USD are preferred by middle and higher income, while LBD are common with poor and rural populations</td>
</tr>
<tr>
<td></td>
<td>Although both currencies allowed, creates problems for customers at cash-in/out</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Master Agents</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Banks have to license all agents, causing delays and potential conflict if new agent near a branch the banks wants to protect</td>
</tr>
<tr>
<td></td>
<td>Agent bank accounts costing them more than they are making through transaction fees</td>
</tr>
<tr>
<td></td>
<td>Requirement for agent registration and tax ID does not appear onerous</td>
</tr>
</tbody>
</table>

- Although not clear in guidelines, CBL discussion suggests that Master Agents have to be approved by the Central Bank  
- May be valuable to distinguish between agent and merchant roles so vetting requirements can be reduced  
- Section 16 needs to be addressed as it could give banks right to stop agents from leaving
### Additional Regulatory Considerations

<table>
<thead>
<tr>
<th><strong>Anticipated Regulations</strong></th>
<th><strong>Implications</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KYC/AML</strong></td>
<td>• Both the MoF and the CB are on FIU Board</td>
</tr>
<tr>
<td>▪ MM Guidelines refer to KYC, AML, and Customer Due Diligence (CDD)</td>
<td>• Transactions over $10,000 need to be reported to FIU</td>
</tr>
<tr>
<td>▪ Separate group working on a new AML Law, will follow FATF standards</td>
<td></td>
</tr>
<tr>
<td>▪ Major change is addition of proportionality</td>
<td></td>
</tr>
<tr>
<td><strong>Customer Protection</strong></td>
<td>• Guidelines are fairly simple, short, and focused primarily on the models and agent related issues</td>
</tr>
<tr>
<td>▪ Although customer protection listed as one of four criteria for guidelines, no references to customers in documents</td>
<td></td>
</tr>
<tr>
<td><strong>National ID</strong></td>
<td>• National ID does not seem to be a high priority right now. However, it is an issue from perspective of KYC and AML legislation</td>
</tr>
<tr>
<td>▪ There is currently no National ID in Liberia</td>
<td></td>
</tr>
<tr>
<td>▪ Civil Service started a database to verify who is on their payroll, which may eventually evolve into a National ID system</td>
<td></td>
</tr>
</tbody>
</table>
Implications of current and proposed regulations

**Current KYC (Oct 2005)**

1. Valid passport or
2. Two passport photos along with one of the following:
   - Signed employer ID card
   - Current driver’s license
   - National ID card
   - Other ID acceptable to bank for students and housewives who may not have one of the above

**NOTES:**
- National ID not pervasive
- Information used to register clients for MM not sufficient for financial KYC

**Mobile Money Guidelines refer to KYC, AML, and Customer Due Diligence (CDD)**

- CDD is another name for KYC, not additional set of requirements
- Separate group working on a new AML Law, which will follow FATF standards
- Major change is expected to be the addition of proportionality clauses
- The new act will also establish a Financial Intelligence Unit to oversee AML
  - Both the Ministry of Finance and the Central Bank are on FIU Board
- Transactions over $10,000 need to be reported to FIU

Source: Central Bank of Liberia October 2005 KYC and April 2012 revised regulations
- Macro-economic Overview
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- Appendixes
## Financial Sector Overview

<table>
<thead>
<tr>
<th>Liberia Financial Inclusion Players</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory Body</td>
<td>1</td>
</tr>
<tr>
<td>Apex Organizations</td>
<td>2</td>
</tr>
<tr>
<td>Commercial Banks</td>
<td>9</td>
</tr>
<tr>
<td>Microfinance Institutions</td>
<td>10</td>
</tr>
<tr>
<td>Credit Unions</td>
<td>60</td>
</tr>
<tr>
<td>Village Savings &amp; Loan Associations</td>
<td>36</td>
</tr>
<tr>
<td>Service Providers</td>
<td>18</td>
</tr>
</tbody>
</table>

### Apex Organizations: LCUNA and Liberia MFI Network

### Service Providers:
- Cuttington University
- University of Liberia
- United Methodist University
- Lonestar (MTN)
- Cellcom
- Comium
- Libercell
- Bently, Kantor & Company
- PFK
- MGI, Mombo & Co.
- VOSCON

## Branches vs Population Distribution

<table>
<thead>
<tr>
<th>Counties</th>
<th>Branches</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montserrado (Monrovia)</td>
<td>45</td>
<td>1,118,241</td>
</tr>
<tr>
<td>Margibi</td>
<td>9</td>
<td>209,923</td>
</tr>
<tr>
<td>Grand Bassa</td>
<td>3</td>
<td>221,693</td>
</tr>
<tr>
<td>Lofa</td>
<td>2</td>
<td>276,863</td>
</tr>
<tr>
<td>Nimba</td>
<td>7</td>
<td>462,026</td>
</tr>
<tr>
<td>Grand Geddeh</td>
<td>1</td>
<td>125,258</td>
</tr>
<tr>
<td>Grand Cape Mount</td>
<td>1</td>
<td>127,076</td>
</tr>
<tr>
<td>Maryland</td>
<td>4</td>
<td>135,938</td>
</tr>
<tr>
<td>Bong</td>
<td>2</td>
<td>333,481</td>
</tr>
<tr>
<td>Sinoe</td>
<td>1</td>
<td>102,391</td>
</tr>
</tbody>
</table>

**Totals**
- 75 branches
- 3,112,890 population

| Total population  | 3,476,608 |
| Pop w/ no county branch | 363,718 |

5 of Liberia’s 15 counties do not have even one branch, but these are sparsely populated centers.

## Liberia’s 9 Commercial Banks

<table>
<thead>
<tr>
<th>Bank Name</th>
<th>Date Established</th>
<th>Owners</th>
<th>Customer Base Customer Target</th>
<th>No. branches No. ATMs &amp; POS</th>
<th>Gross MFI Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecobank Liberia**</td>
<td>August 1999</td>
<td>Ecobank Transitional Inc (100%)</td>
<td>250,000 customer Under- and unbanked</td>
<td>23 (17 in Monrovia) 24 ATMs, 39 POS</td>
<td></td>
</tr>
<tr>
<td>LBDI**</td>
<td>1965</td>
<td>Foreign (44.47%) - including IFC Local (55.53%) - government</td>
<td>150,000 accounts &gt;90% retail, MFI</td>
<td>16 (8 in Monrovia) No ATMs or POS</td>
<td></td>
</tr>
<tr>
<td>United Bank of Africa**</td>
<td>July 2008</td>
<td>Continental Trust Limited Nigeria</td>
<td>&gt; 35,000 customers Corporate, retail</td>
<td>4 (3 in Monrovia) 9 ATMs, 5 POS</td>
<td></td>
</tr>
<tr>
<td>Access Bank**</td>
<td>January 2009</td>
<td>Access MFI Holding (52%) International Finance Corp (18%) European Investment Bank (15%) African Development Bank (15%)</td>
<td>~35,000 depositors and 7,000 borrowers Microfinance &amp; SMEs</td>
<td>5 (all in Monrovia) No ATMs or POS</td>
<td>$4,849.325</td>
</tr>
<tr>
<td>IBL**</td>
<td>Since 1948, Jan 2000 (as stand-alone bank)</td>
<td>Trust Bank of the Gambia Data Bank Financial Services Ghana Pan African Capital Group</td>
<td>30,000 Corporate focus, some retail</td>
<td>8 (4 in Monrovia) 4 ATMs or POS</td>
<td></td>
</tr>
<tr>
<td>Guarantee Trust Bank**</td>
<td>March 2009 (licensed)</td>
<td>Afriland First Bank Group SA (65%) FMO (18%), Other private investors</td>
<td>12,500 Corporate and retail</td>
<td>5 (3 in Monrovia) No ATMs or POS</td>
<td></td>
</tr>
<tr>
<td>Afriland First Bank**</td>
<td>March 2011</td>
<td>Afriland First Bank Group SA (65%) FMO (18%), Other private investors</td>
<td>4,000 - 5,000 customers Rural SMEs and ag</td>
<td>1 in Monrovia No ATMs or POS</td>
<td></td>
</tr>
<tr>
<td>First International**</td>
<td>March 2005</td>
<td>Bank PHB Nigeria (100%)</td>
<td>NA Retail, some corporate</td>
<td>8 (5 in Monrovia) No ATMs or POS</td>
<td>$158,950</td>
</tr>
<tr>
<td>Global Bank PHB**</td>
<td>2009 (PHB ownership)</td>
<td>Platinum Habib Bank (PHB) Nigeria (100%)</td>
<td>NA NA</td>
<td>6 (4 in Monrovia) No ATMs or POS</td>
<td>$12,074,988</td>
</tr>
</tbody>
</table>

Sources: CBL. Directory of Financial Inclusion Players in Liberia 2012, ** Bank interviews during IFC & UNCDF Scoping Mission, June 2012, and GT Bank website/News
<table>
<thead>
<tr>
<th>MFI Name</th>
<th>Owners/Funders</th>
<th>Customer Base</th>
<th>No. branches</th>
<th>Gross MFI Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRAC Liberia**</td>
<td>BRAC International (51%) Soros Econ Dev Fund (24.5%) Omidyar Inc (24.5%)</td>
<td>26,900 active borrowers 32,870 active customers</td>
<td>39 (18 rural) No ATMs or POS</td>
<td>$2.27 million</td>
</tr>
<tr>
<td>LEAP</td>
<td>Association of Evangelical of Liberia World Relief</td>
<td>8,394 - 7,350 women</td>
<td>11 (3 in Monrovia) NA</td>
<td>$592,817</td>
</tr>
<tr>
<td>Liberty Finance**</td>
<td>American Refugee Committee</td>
<td>3,455 borrowers, cannot mobilize savings</td>
<td>6 (3 in Monrovia) No ATMs, no POS</td>
<td>$406,999</td>
</tr>
<tr>
<td>Foundation for Women October 2007</td>
<td>Rotary International, FFW-USA, Dalphine Foundation, Calgary Intl</td>
<td>2,157 - 2,145 women</td>
<td>No branches, use loan centers</td>
<td>$384,643</td>
</tr>
<tr>
<td>Combined Efforts to Aid Liberians (Est 2004)</td>
<td>$75,000 funding from UNDP, UNCDF, and Ministry of Gender</td>
<td>350 - 340 women</td>
<td>2 (0 in Monrovia) NA</td>
<td>$35,512</td>
</tr>
<tr>
<td>APAM-Excel April 2011</td>
<td>NA</td>
<td>125 - 71 women</td>
<td>1 in Monrovia NA</td>
<td>$60,000</td>
</tr>
<tr>
<td>Action Greater Harvest</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Community Livelihood Assistance Program</td>
<td>Universal Empowerment Missions LIFE, Liberia Project New Outlook</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>LEAD</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Making Enterprise</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Sources: CBL. Directory of Financial Inclusion Players in Liberia 2012 - and - ** Bank interviews during IFC & UNCDF Scoping Mission, June 2012
Liberia Payments System Summary

- **Dual currency:** USD and Liberian Dollar (LRD)
  - CBL wants to de-dollarize, pushback from market where USD dominates (60% circulation)
  - Wealthier use USD and poorer, more rural use LRD, resulting in issues for MFS providers
  - Need for two payments systems also an inhibiting factor for MFS

- **Retail Payment System Infrastructure**
  - CBL is driving toward a central payments switch, with the assistance of the IMF, proposal developed and funding sought, banks are not agreeing to partially finance
  - Some discussion about the introduction of a mobile banking switch that would link into the central switch, proposal introduced by Wizzit
  - Fewer than 40 ATMs in the entire country, majority deployed by Ecobank
  - Only 44 POS terminals in the country, 39 deployed by Ecobank and 5 by UBA
  - Limited number of debit cards and virtually no credit cards, as banks reluctant to take risk
  - Cost of POS ownership is limiting e-payment growth as merchants not willing to pay fees
  - Free ATM cards distributed because bank customers would not pay a $0.25 fee for the card

- **Credit Bureau**
  - Skeleton, mainly manual credit reference service housed in CBL's Supervision department
  - IFC helped develop policy statement; banks & CBL keen to implement more robust solution

- **Liberian Bankers’ Association:** strong group that meets monthly
## Retail Payment System Development Plan

### CURRENT SITUATION
- Clearing system entirely manual
- Requires physical presentment and exchange, thus checks are little used outside of Monrovia
- 3 separate clearing streams
  - USD checks
  - LBD checks
  - Government salary payments
- Government primary check issuer, bulk of which are for civil servant salaries

### PROPOSAL
- Implement a Central Switch to facilitate interoperability
- Goal to include secure deposit system, check clearing and automation
- Initially housed at CBL, but ultimately privately held
- Working with West African Monetary Institute (WAMI)
  - Ensure compatibility across West African countries
  - Challenges within WAMI leadership have delayed progress

Total IT costs: $1.7 million

### STATUS
- Drafted Payments Act with help from IMF
- Retail Switch proposal & cost-benefit analysis prepared
- Switch funding requirements and options developed
- Proposal approved by Governor
- Banks seem reluctant to partially finance solution
- Funding request made to USAID June 2012
# Mobile Banking Interoperability Plan

## PROPOSAL

- WIZZIT to deploy EVEREST Mobile Commerce Solution to provide banks with mobile switch that links to their CBS
- EVEREST would link into CBL’s central switch, providing complete interoperability
- Assumes MNOs would not provide integration between their platforms and banks’ core banking systems
- Proposal submitted to UNCDF Feb 2011
- Current CBL Retail Payment Project scope includes WIZZIT proposal
- Total IT cost: $538,800

## CHALLENGES/CONCERNS

- Funding covers technology for switch and integration of 1-2 banks only
- No consideration for ongoing management, agent network, brand, agreement on fee structures, or other key success factors
- No consideration for switch sustainability
- Long-term costs likely to exceed multiple millions of dollars
- Eliminates value proposition for emergent MNO-bank model that also provides switch
- New regulations required to license MNOs to operate without bank partners
- Recognition that deployment and bank agreement likely to take 3+ years effort
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Mobile Network Overview

Mobile Profile

<table>
<thead>
<tr>
<th>Mobile Operators</th>
<th>4 GSMA &amp; 1 CDMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Coverage</td>
<td>Over 90%</td>
</tr>
<tr>
<td>Mobile Subscribers</td>
<td>1.6 million SIMS, 20% overlap</td>
</tr>
<tr>
<td></td>
<td>Approx 1.3 m unique customers</td>
</tr>
<tr>
<td></td>
<td>33% of total population</td>
</tr>
<tr>
<td></td>
<td>63% of adult population</td>
</tr>
</tbody>
</table>

Mobile Market Share

<table>
<thead>
<tr>
<th>Mobile Players</th>
<th>% Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Libtelco</td>
<td>Liberia Telecommunications Company CDMA Supplier</td>
</tr>
<tr>
<td>Lonestar Cell</td>
<td>(62%)</td>
</tr>
<tr>
<td>Cellcom</td>
<td>(32%)</td>
</tr>
<tr>
<td>Other</td>
<td>(6%)</td>
</tr>
</tbody>
</table>
Mobile Network Operators

Lonestar (MTN)
- MTN Group
- IFC investee
- Operates in 21 African countries
- 16 deployments in Sub-Saharan Africa, remainder in MENA
- 62% of market share
- Cellcom second largest MNO
- Other market players hold very small shares
- Launched mobile money Sept 2011 with Ecobank
- Offering top-up, money transfer, and bill payments (MTN and DSTV)
- Want to serve as an MFSP, providing platform and agent network

Cellcom
- Israeli company
- Deployments in Israel, Liberia and Ghana
- Advertised 1 millionth customer in May 2012
- Top priorities are rolling out 4G network and tower growth
- Believe regulations limit MNO participation
- Not clear if MM is a priority at this time
• Macro-economic Overview
• Regulations
• Financial Sector
• Telecom Sector
• **Distribution Channel**
• Mobile Financial Services Landscape
• Conclusions
• Appendix
Distribution Channel Overview

- Infrastructure across Liberia is limited, no large-scale distribution partners identified

- Banks queried could not think of any companies that are moving goods and money back and forth from urban to rural areas. Traders come to Monrovia to purchase their own goods and then return to the villages.

- Roads become very difficult to navigate during rainy season, which runs for six months from May to October

- Postal service is going through a renovation and has very limited infrastructure. Unlike other countries, the Post Office does not provide money transfer services due to their limited capacity.

- LCUNA (Liberia Credit Union National Association) was re-established in May 2012, interested in leveraging 105 member organizations and 17,560 customers

- Limited potential partners suggest that agent networks will require more direct build-out and management by MFSP
• Macro-economic Overview
• Regulations
• Financial Sector
• Telecom Sector
• Distribution Channel
• Mobile Financial Services Landscape
• Conclusions
• Appendix
Current Implementations
Lonestar launched its mobile money solution with Ecobank in Sept 2011

- Lonestar is providing Fundamo platform, agent network, and mobile wallet. Bank partners leverage MTN “rails” to obtain float, agent accounts, and new deposit accounts.
- One of the key value propositions for banks, i.e., attracting funds, not present because banks are not aggressively seeking additional deposits.
- Using a team of “foot soldiers” to register customers and build transactions.
- Believe that bank-led model does not allow them to move as quickly as they would like, because all innovation and agent licensing must be managed by bank partners.
- Hopeful that new bank entrants will provide competitive pressure.

- Ecobank is present in 32 countries in SSA. The bank has a global partnership with MTN to deliver mobile banking services across the region.
- View money banking as a vehicle to drive growth.
- No concerns with CBL’s mobile money guidelines.
• Macro-economic Overview
• Regulations
• Financial Sector
• Telecom Sector
• Distribution Channel
• Mobile Financial Services Landscape

• Conclusions
• Appendix
Potential Risks

1. One of the results of the long war in Liberia is a dearth of skilled talent, human capacity issues were raised by nearly all people interviewed.
2. Limited capacity is also an issue at the CBL, which has very ambitious plans to upgrade regulation & supervision, financial infrastructure, capacity at MFIs and credit unions, and social strategies.
   ✓ While interested in MFS, there may be limited capacity to adequately address the issues.
3. Electrical power is limited to 10% of the market in Monrovia, diesel generators are extremely expensive and have a major impact on operational costs.
4. Security is a major challenge related to cash movement, as there are no armored cars or police escorts for moving money due to an arms embargo. Only the army has guns and they can only protect the Central Bank of Liberia.
5. The legal system does not adequately punish individuals that steal from the banking system, and it provides more protection to debtors than to creditors.
6. Banks are awash with liquidity, but there is little to be done with the extra capital.
   ✓ CBL set price controls on deposit accounts, allows flat fee for all accts regardless of value.
   ✓ Lending is one option, but non-performing rates are very high (20%).
   ✓ As a result, lending is slowing and banks have few incentives to acquire new depositors.
7. CBL is talking about de-dollarizing the economy, but USD are needed to function across borders and the CB does not have the room to store the equivalent in LBD.
Summary

Given the nascent state of payments infrastructure in the country, the Central Bank’s proposal for a central switch should be supported. However, it is important to ensure that the financial considerations include on-going support, maintenance, and other cost considerations. The Mobile Money Guidelines would also benefit from a greater level of clarity and more alignment with market realities.

The Liberian market would benefit from additional knowledge about best practices in mobile financial services. A series of workshops that engage all interested stakeholders would be a valuable contribution. Regulations, business strategies, financial models, and operational approaches could all be discussed.

It appears that customer demand for alternative financial delivery channels is high. It would be prudent to perform market research to better understand customer “pain points” and to assist in the development of products that will result in substantial customers uptake.

The active players in the market, as well as those that are piloting mobile financial services, would benefit from technical assistance with business models, collaboration models, and operations.
• Macro-economic Overview
• Regulations
• Financial Sector
• Telecom Sector
• Distribution Channel
• Mobile Financial Services Landscape
• Conclusions

• Appendix
## Interviews Conducted

<table>
<thead>
<tr>
<th>Organization</th>
<th>Contacts</th>
<th>Organization</th>
<th>Contacts</th>
</tr>
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<tbody>
<tr>
<td>AccessBank</td>
<td>Banking Services &amp; Operations Manager</td>
<td>LBDI</td>
<td>General Manager/EVP Operations</td>
</tr>
<tr>
<td>Afriland First Bank</td>
<td>CEO</td>
<td>LCUNA</td>
<td>President</td>
</tr>
<tr>
<td>BRAC</td>
<td>General Manager, Asst. Manager</td>
<td>Liberty Finance</td>
<td>CEO</td>
</tr>
<tr>
<td>Central Bank of Liberia</td>
<td>Dir, Supervision Head, Payment Systems</td>
<td>Libetelco</td>
<td>Deputy Managing Director</td>
</tr>
<tr>
<td>Cellcom</td>
<td></td>
<td>Ministry of Finance</td>
<td>Senior Economist</td>
</tr>
<tr>
<td>Ecobank</td>
<td>Managing Director, Head Branches, Sales Officer, Txns, Head, Treasury</td>
<td>Lonestar (MTN)</td>
<td>CMO, MM Sales Coordinator</td>
</tr>
<tr>
<td>First international Bank</td>
<td>General Manager, Managing Director</td>
<td>United Bank of Africa (UBA)</td>
<td>MD/CEO, Head, Corp Banking</td>
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<td>Global Bank PHB</td>
<td>Country Head of Operations</td>
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<tr>
<td>Guarantee Trust Bank (GT Bank)</td>
<td>Managing Director</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Bank (Liberia) Limited</td>
<td>General Manager, Deputy Corp Manager, Manager Corp Banking</td>
<td></td>
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<td>IBLI</td>
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