WSBI’s journey in making small-scale savings work

WSBI Doubling Savings Accounts Program
2008-2015

Final Program Report
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WSBI Doubling Savings Accounts Program
2008-2015

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This report has been produced by the World Savings and Retail Banking Institute (WSBI) in the framework of the WSBI Program “Working with savings banks in order to double the number of savings accounts in the hands of the poor”. It represents a reflection on lessons learnt during the six years of execution of the Program.

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WSBI

WSBI brings together savings and retail banks from about 80 countries, representing the interests of approximately 6,000 banks in all continents. As a global organization, WSBI focuses on issues of global importance affecting the banking industry. It supports the aims of the G20 in achieving sustainable, inclusive and balanced growth and job creation around the world, whether in industrialized or less developed countries. WSBI favors an inclusive form of globalization that is just and fair, supporting international efforts to advance financial access and financial usage for everyone. It supports a diversified range of financial services that responsibly meet customers’ transaction, saving and borrowing needs. To these ends, WSBI recognizes that there are always lessons to be learned from savings and retail banks from different environments and economic circumstances. It therefore fosters the exchange of experience and best practices among its members and supports their advancement as sound, well-governed and inclusive financial institutions.
INTRODUCTION

WSBI member research suggested back in 2003 that member banks are large providers of financial services to all socio-economic segments, even the very poor, with an estimated 1.1 billion out of 1.4 billion accessible (low cost/low average balance) global savings accounts managed by WSBI members. Throughout the early 2000s, WSBI continued supporting the crucial role that savings banks play in providing accessible financial services worldwide, and a concept was developed which led to the signature of a $20 million grant agreement with the Bill & Melinda Gates Foundation in 2008 with an ambitious target of providing 5-10 million people living on less than $2/day with a savings account by working with ten of WSBI's member banks.

When have we ever received such a significant external contribution to delivering our mandate? The members so generously funded under this program all made promises in exchange for the funding. These promises were broadly similar and focused on achieving a significant and sustained breakthrough in the provision of usable and affordable savings services for the poor. The promises stood above all the normal expectations that together we can deliver projects on time and within budget. Success had to be measured in terms of targeted outcomes – numbers of poor reached, usability, affordability, accessibility and sustainability – and not the project outputs.

The challenge for WSBI and participating members was widespread dormancy at the start of the program, which led to overestimation of the initial baseline figures. Also, some partners with large savings account volumes dropped out. The program's original ambitious quantitative targets are thus far from being met in terms of active accounts in the hands of the poor, although the goal of doubling the number of accounts for the poor has been achieved at the six banks that have sustained projects for the whole life of the program – ABB (Morocco), BTN (Indonesia), Sistema Fedecrédito (El Salvador), KPOSB (Kenya), PBU (Uganda), TPB (Tanzania) – with a wealth of experience and lessons learned and foundations laid for taking those lessons to scale.

Growth at the banks continues, having achieved overall an active customer base of 2 million by mid-2015 and having turned a highly dormant customer base into an active one (on a six-month definition) with almost all of the improvement coming from modest turnover, low-balance savings accounts and a real change in mindset at the participating banks.

Promoting financial inclusion has become an increasingly accepted goal for financial policymakers in general and WSBI members in particular in the past five to ten years and the program has helped shape and strengthen WSBI's commitment to achieving an account for everyone (WSBI Marrakech Declaration in 2012) and the Universal Financial Access (UFA) 2020 goals (announced at 2013 World Bank/IMF Annual Meeting).

The final program evaluation confirmed that the program has been a major source of learning and added value, far beyond what numbers and figures reveal. This has been achieved by taking the risk to implement this program and learning from mistakes. This added value is an asset to be proud of and will be lasting, since much of it has paved the way for what simply had not existed before.
1. THE INDIVIDUAL PROJECTS

Unexpectedly high WSBI member responses to the 2009 call for proposals showed how strongly the Foundation’s objectives resonated with WSBI member banks. Pro-poor was not a label that a significant strand of WSBI membership was frightened of acquiring. This was encouraging as only five years earlier, the initial WSBI work on access to finance had been greeted in parts of the network by the response: “We don’t want to be seen as banks for the poor”.

Out of 40 expressions of interest received, ten projects were selected for support in 2010 with two more following in 2013 and 2015, adding data analytics and application-based financial management tools as innovations to the mix, bringing the total number of beneficiary countries to 12. The selected projects came with varying unbanked potential and poverty levels in each of the 12 countries.

Figure 1: WSBI project countries

![Map of WSBI project countries](source: WSBI)

Figure 2: Varying unbanked potential and poverty levels in project countries

![Map showing varying unbanked potential and poverty levels](source: WSBI)
AFRICA

Burkina Faso, Sonapost

A project to lay the foundations for improved rural outreach by replacing an obsolete banking application with a new core banking system at the postal corporation SONAPOST, and developing the front-end doorstep savings service with top-up funding to penetrate rural villages within a 20-30-kilometre radius of post offices. The bank also trialed courier cyclists already conducting postal business to reach villages, but safety remained an issue. The project stalled in 2013 due to lack of previously promised donor funding for the front-end development of the new service.

Ghana, HFC Bank

A project to assess how GSM behavior data – typically extracted from a mobile operator's billing system – could be modeled to segment and target bank customers with specific financial services, focusing on savings products. The approach included data discovery: collecting and anonymizing raw data from both partners (HFC Bank and Airtel Ghana); model design: matching data sets and creating cross-samples (“closed user groups”); and implementation: creating scores for each customer and segmenting the customer base. A phase 2 proof of concept is ongoing.

Kenya Post Office Savings Bank

A project to follow through on a self-generated pilot of an agent network by using card and PoS technology and mobile phones. The aim was to reverse the slide in customer numbers due to increased competition (other banks displaced KPOSB as Kenya’s leading mass access bank partly by poaching KPOSB customers away with loans KPOSB is not yet allowed to provide). The bulk of expenditure support covered equipment and limited systems modification, allowing for higher profile launches and better agent branding. To open up the market space the bank started entering into linkage banking with (mainly CARE) savings groups in the late project stage. Further, improvement of an existing youth savings product followed intense research and co-creation activities.

Lesotho Post Bank

A project aimed at providing product and process engineering plus risk and project management to a donor-funded banking platform to make it more useful to the poor. The bank launched a modern PoS and card platform for pro-poor savings and was thought to be well positioned to pilot agent banking. Change in management and a mission shift away from the low-income to high-income market with high customer costs resulting from the procured systems brought the project to a halt.

Morocco, Al Barid Bank

A project with the aim of improving market segmentation to make the bank more sensitive to the needs of the less well-off, following through with new products, communication strategies and channel formats. Particular target groups included women, informal sector entrepreneurs and youth. The main product initiative is still ongoing and aims at rolling out nationally a successful mobile banking pilot which reaches beyond Barid Cash Points and post offices through agent networks.

Postbank South Africa

A project aimed at supporting negotiations of fair and reasonable charges for access via post offices, and re-engineering selected key products (including Bagkotsi group accounts) to become entry points for savings among low-income groups. The support included workflow measurement exercises and international benchmarking. It had been hoped that SAPB would become the default option for social security grant recipients (SASSA), but the business was granted to another player. The project was deprioritized and came to a halt due to SAPB’s corporatization process which started in 2011 and remains incomplete as of now.

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1 This project did not form part of the originally selected ten projects. A phase 1 feasibility study performed during 2013-2014 was supported under a separate Foundation grant with similar high level objectives to the main grant. The project was consolidated with the others at the beginning of 2015 in order to conduct a phase 2 proof of concept, which will continue until 30 November 2015.
**Tanzania Postal Bank**

A project to add card and PoS alongside mobile phone banking accessible through all 300 post offices across Tanzania and a few selected SACCOs. The aim was to get beyond district main towns to the next level of settlement (urban villages). Separate Foundation funding has allowed the development of a technical solution for mobile banking topped up with marketing resources and training for agents. The surprise has been how much properly setting up an agent actually costs (about twice the cost of a PoS terminal) and the bank reacted by adding VSLA, Vicoba and football club partnerships to the service offer. It is now working with Catholic Relief Service, Norwegian Church Aid and CARE.

**PostBank Uganda**

A project with initial sustainability modeling and marketing support turned from a very high-cost outsourced payments platform to adding a mobile interface and Java script-enabled platform in a country where the regulator is still resisting deposit-taking agents. The regulator agreed to pilot withdrawal-only agents which led to the bank establishing both a switch and a mobile phone interface. PBU piloted operating as the mobile money agent for women's village-level savings and loans groups which turned out to be a success story on linkage banking with now nearly 20,000 VSLAs linked up with the bank. The program supported the engagement of individual group members with the bank and undertook profound research on how youth and women manage money at household level.

**ASIA**

**Indonesia, Bank BTN**

A project to equip all post offices in Central Java with PoS terminals and introduce a new low-cost card savings product and market it via a state-sponsored women’s group initiative (PKK) to ensure that the poor are reached. Some re-engineering of back office systems supported the rollout of PoS terminals and some work was done to assess what the expansion in access would impose on the strategic partnership between the Post and WSBI member BTN Bank, a financial entity with roots in postal savings but now primarily a housing-oriented savings and loan bank. A major element of the work included staff training and sensitization to the savings needs of the poor. A late element included four major grants with the government to engage with youth through the disbursement of nearly 900,000 student grants and the incentivization of use thereafter.

**Sri Lanka, National Savings Bank**

The project entailed a proof of concept for a mobile money management application used by school banks as part of the country’s financial education agenda with the aim of increasing financial education and mobile usage of savings accounts held by students and their parents with the bank, and with the potential to go to scale.

**Vietnam, LienViet Postbank**

A project to repackage an existing low-cost product range that could deliver down to the very lowest level of the postal network with the original service provider VPSC (Vietnam Postal Savings Corporation). Due to a limited number of post offices through which it could operate online, a small pilot was implemented to prove that risk can be managed with single person outlets offering savings and remittance services deep down to commune level in rural Vietnam. Using mobile phones, a separate cash box, daily cash collection and cash book reconciliation at the nearest supervised post office made it possible for villagers to access the service. The merger of VPSC with LienViet Postbank effectively brought the project to a halt as more immediate issues were addressed, such as the upgrade of the postal network to a new core banking system.

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2 This project did not form part of the originally selected ten projects and was added in 2015 to include cross-regional experience and to complement a similar proof of concept run in El Salvador.
LATIN AMERICA

El Salvador, Sistema Fedecrédito

The project of the country’s leading financial institution was to establish an agent network in more than half of the unbanked municipalities across the country, almost all of which display heightened levels of poverty. Support covered market research on the needs of the poor, revamped communications, providing PoS terminals and software modification and a mobile banking start-up, plus a limited number of ATMs in areas where they really do enhance accessibility. Later, advice on sustainability for a new pro-poor savings product was provided and a proof of concept was implemented to trial increased usage of mobile banking through the use of a money management tool for parents and students.

2. OUR APPROACH

The program followed four major activities. After the initial call for proposals phase (activity 1), implementation (activity 2) took over with first projects gradually starting in 2010 and continuing until the end of the program in November 2015. During the implementation the two major support areas provided were technical assistance and capital expenditure support.

Figure 3: Areas of WSBI Program support

Source: WSBI
A third component (activity 3) was dedicated to monitoring and evaluation. The program was guided by a Steering Committee comprised of several stakeholders and financial inclusion experts (from Bath University, the Bill & Melinda Gates Foundation, CGAP, ex-FMO, GSMA, WSBI) and advised by a Program Technical Advisor and Micro-savings Expert. In addition, two evaluations at mid-term and conclusion helped to measure progress and steer the program towards achievement of objectives. Last but not least, sharing lessons (activity 4) comprised a key part of the support offer and included regular workshops, peer review exchange, best practice exchange events, conferences as well as a program website, blog and several LinkedIn discussion groups. The program website\(^3\) makes best practice material available to project and external stakeholders.

### Table 1: Key Program data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total funding</strong></td>
<td>$20 million</td>
</tr>
<tr>
<td><strong>Baseline total accounts</strong></td>
<td></td>
</tr>
<tr>
<td>of which - in hands of the poor (est.)</td>
<td>14.2 million</td>
</tr>
<tr>
<td><strong>Baseline active poor savers</strong></td>
<td>Baseline 2.8 million</td>
</tr>
<tr>
<td>(original ten banks only)</td>
<td></td>
</tr>
<tr>
<td><strong>Active poor savers reached (mid 2015)</strong></td>
<td>5+ million</td>
</tr>
<tr>
<td><strong>Original ten selected partner banks</strong></td>
<td>Kenya Post Office Savings Bank, Lesotho Postbank, PostBank Uganda, Al Barid Bank, Bank BTN, SONAPost, Fedecrédito, Postbank South Africa, Tanzania Postal Bank, LienViet Postbank</td>
</tr>
<tr>
<td><strong>Live six partner banks</strong></td>
<td>Kenya Post Office Savings Bank, PostBank Uganda, Al Barid Bank, Bank BTN, Fedecrédito, Tanzania Postal Bank</td>
</tr>
<tr>
<td><strong>New incubator partner banks</strong></td>
<td>HFC Bank Ghana, National Savings Bank Sri Lanka</td>
</tr>
</tbody>
</table>

### Chart 1: Numbers reached at six live projects

\(^3\) [www.wsbi-esbg.org/Services/consultancy/bmgf/Pages/About-the-programme-.aspx](http://www.wsbi-esbg.org/Services/consultancy/bmgf/Pages/About-the-programme-.aspx)

\(^4\) With active poor savers we refer to active accounts with at least one transaction within six months with turnover compatible with being a proportion of household income of less than PPP-$2.5 per day and balances below $100.
3. FIRST COMPARATIVE REVIEW

Our learning process began in 2010 from the project start-ups, cross-cutting discussions at the program mid-term workshop, and following WSBI’s attendance at the Global Savings Forum (Seattle, November 2010) and revealed that a nuanced marketing mix is needed to push take-up.

3.1. Key lessons from the Comparative Review

We summarized our first lessons in a comparative review highlighting the Services Marketing Mix known as the “7 Ps”, which contribute to a nuanced approach:

1. a **product** combination which contributes more to saving than just a bank account at the end of a mobile phone is needed now and it really has to address the full range of savings and payments needs of poor people and has to do this in more convenient ways than mobile money and informal savings accumulators are doing for the customer;
2. the only **pricing** proposition for significant breakthrough is to offer a superior product at no more or less than the mobile money tariff. Ledger fees are a definite no-go and moving to transaction fees instead was thought to be the solution;
3. getting the **process** right is absolutely vital to achieving sustainability within a tight pricing constraint and we need much more risk-based process engineering capacity that can minimize cost and risk so that small balance deposits can be serviced at the very tight margins that typify them;
4. **place**: the wrong outlet in a location that either cannot sustain it or that needs more investment is the quickest route to failing to deliver on promises made, and in some places avoiding unsustainable outlets means we cannot have a physical presence without a partner;
5. the more we stretch the **physical link** between us and the customer (by using agents or partner platforms rather than our own outlets), the harder banks will need to work to create an alternative presence in the customer's mind that links the bank to the service it is actually providing;
6. our **people** become more, not less, important the further we stretch the physical link with the customer because we cannot passively rely on agents (either our own or those of our partners) to promote our relevance to the needs of the poor; this message has to be passed on from the top throughout all levels of an institution;
7. the **promotional messages** used to reach the poor really must start using language and imagery that neither talks down to them nor reflects lives they cannot lead, and the marketing agencies that participating banks were using in 2010 clearly needed more guidance.

3.2. Our Challenge

A lot of the early work at the banks looked into improvements of processes and products. The introduction of completely new or re-engineered savings products, reconfiguring or augmenting existing delivery channels, improving accessibility of savings to stretch the physical link and define the right place and re-engineer processes through complex IT-driven projects, provided fewer opportunities for demand-driven initiatives with a focus on people and messages. Although all of the banks had done some sort of market research and awareness-raising campaigns amongst poor people to promote the availability of specifically designed savings services and encourage people to open accounts, the complexity of procurement processes gained priority for a period over solving poor people’s problems through product design and channel improvements in many cases.

The biggest elephant in the room has been and still is for most of the partner banks a lack of profitability and free capital. The deposit-taking part of savings banks’ business has to run at very fine margins because average balances are low and interest margins increasingly tight. Because of this, existing capital has to be used to fund a high loading of non-earning assets (branch networks, new IT systems, high cash reserves, deposits stuck in post offices, etc.). Therefore, even where a member has ample capital adequacy, they might not have much free capital to fund new non-earning assets. Going to the shareholder for more capital is usually not an option either, as for many postal banks this means asking for state budget resources or going to a postal parent that faces its own acute challenges with profitability. These banks certainly cannot afford any marketing investment that reduces their net profit, which explains their desperation for every drop of grant funds.
3.3. Our analytical work

From 2011 and through 2013, the program supported the above messages with deeper research into affordable product pricing, the right e-channel mix, a sustainable business case and its limits to proximity. The research also aimed at sensitizing the banks more for the needs of the poor: Who are the poor? Where do they live, i.e. what is the open market space? How much money do the poor have available to spend on financial services? How many kilometers are they willing to walk for a payment?

4. UNDERSTANDING THE POOR: WHO ARE THE POOR AND HOW MUCH MONEY DO THEY HAVE AVAILABLE?

The financial diaries described in *The Poor and their Money*\(^5\) and its follow-up *Portfolios of the Poor*\(^6\) have been a key source of inspiration from the early days of the program. Knowing who spends what has turned out to be crucial for scoping and scaling the program’s target market.

Whilst we started with the assumption that the program should serve people living on roughly $2/day, we realized that in poorer countries (East Africa/Burkina Faso) this meant just +/- $0.75/day, taking purchasing power parity into account. What seems poor according to international definitions in a low-income country actually means mass middle market, whereas towards the top end of a middle-income country the poor represent a long bottom end extension below the mass market. Each of these clearly requires completely different strategies.

![Chart 2: Population banded by daily expenditure in project countries](image)

Source: WSBI

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4.1. The affordability envelope: pro-poor product pricing and the implications on usability

What does this mean for our target market and the banks if they want poor people to really use their accounts? What might look like a perfectly competitive fee in the served top end of the market almost certainly looks completely unaffordable to the unserved poor. Assuming that around five transactions per month constitute usability of a savings account (based on the number of transactions conducted via informal sectors), the challenge is how to cover the cost of around five transactions per month within an envelope – the “affordability envelope” – of a maximum dollar amount that a poor person has available to pay for both formal and informal financial services.

Table 2: Affordability envelope

<table>
<thead>
<tr>
<th>WSBI PROGRAM COUNTRIES</th>
<th>POOREST FOUR</th>
<th>MIDDLE THREE</th>
<th>BEST OFF THREE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MOD/NEAR-POOR HOUSEHOLDERS</td>
<td>MIX OF UNBANKED HOUSEHOLDERS AND THIRD ADULTS</td>
<td>SECONDARY HOUSEHOLDERS/THIRD ADULTS</td>
</tr>
<tr>
<td>Daily household consumption in target market</td>
<td>± $1.25</td>
<td>$2–$3</td>
<td>$3–$6</td>
</tr>
<tr>
<td>Likely monthly financial flow</td>
<td>± $25</td>
<td>± $60</td>
<td>± $80</td>
</tr>
<tr>
<td>Max. available to pay for financial services</td>
<td>± $1.00</td>
<td>± $1.50</td>
<td>± $2</td>
</tr>
</tbody>
</table>

Source: WSBI

4.2. Our toolkit for scoping and scaling the target market

To help banks to scope and scale their market and understand how many bankable cash dollars poor people might have available, we developed toolkits that can estimate:

a) how many poor people are in the country and how poor they are;
b) how many adults are there and whether they live in urban or rural areas;
c) how people cluster as households;
d) how many poor households are there and whether they live in urban or rural areas;
e) the likely daily average cash flows at whole household level (urban and rural), some of which could pass through a pro-poor savings account.

Toolkit 1: Daily cashflow and bankable cash dollars in rural and urban households

Identifying daily cash flow and likely cash savings in unserved households below PPP-$2.50 international poverty line

RURAL 66 CASH CENTS PER PERSON PER DAY

LESS 25% FOR NON-CASH CONSUMPTION IN RURAL AREAS

RURAL 86 CENTS/DAY

RATIO URBAN: RURAL PRICES = 110%

URBAN 97 CASH CENTS PER PERSON PER DAY

PPP - $2.05 PER DAY

ACTUAL 91US¢ / DAY

Source: WSBI
4.3. Key lessons on what determines the affordability envelope

We learned that population profiles and spending power really do determine affordability and that there is a gap between what people have available in urban and in rural areas.

In poorer countries:
- What the target poor/near-poor might have to spend on bank fees or charges per month is equivalent to what they need to live for a day.
- In many cases this is going to have to be shared with other financial service suppliers (mobile operators, informal, etc.).
- A safe assumption would be to think of around $0.60 per month being available to conduct two or three transactions, and to build on this.

In better off countries:
- The affordability envelope eases and the experience of paying for formal financial services grows.
- The key point is to load charges onto transactions that the client expects to pay for, and avoid setting charges on saving.
- A safe assumption in terms of the affordability envelope would be $1 per month.

5. FROM BETTER UNDERSTANDING TO SMARTER PLANNING – THE LIMITS TO AGENT NETWORKS AS A WAY OF CLOSING THE PROXIMITY GAP

It is all too easy to sell someone an account that s/he really wants without really thinking about the practicalities of how it might be used. In 2010 we believed that by closing the proximity gap by setting up agent networks it would be possible to reach out to almost anywhere. We thought about this in terms of how far would people be able to walk just to deposit a spare dollar or two and came up with a threshold of 2 km to reach a financial outlet if there were no other alternatives available, which is equivalent to a time commitment of about one hour. We therefore needed to understand how many people in practice actually live in that close proximity to where we might locate a new financial outlet so that channels may operate sustainably, and the variety of channels needed to meet the proximity challenge.
5.1. Our key lessons on how many locations needed for poor people to walk to make a transfer and a deposit

We calculated that by aiming for an account in every second household, branches and vans need catchment areas of around 50,000-100,000 people depending on the level of competition. Single teller kiosks work in smaller towns with populations of about 10,000. Agents need a customer base of 700 and a catchment area of about 5,000-6,000 people and this is because the agent model is not costless for the bank to run, with own costs (IT, control, marketing, etc.) added to what must be paid to agents. The key question we then tried to answer for East Africa was how many locations in reality exist with these sorts of population within a 2-km walking distance for people to make deposits that typically equal a day or two of household living and within 5 km to pick up/send a mobile money transfer that typically equals a week’s living.

5.2. Our analytical work

Geographic Information System (GIS) data analysis allowed us to see where and how people cluster and how many locations there are at scale. It quickly became clear how settlement density falls below the level needed to find a minimum of 5,000 people living within 2 km of a possible agent location.
When we started to look at exactly how many known locations we could link to the GIS data underpinning the maps shown above we found that in Kenya the cut-off where clusters stop having the scale to take a bank agency comes after approximately 1,000 locations containing about half the total population.

In Tanzania, where even more of the rural population lives in very dispersed settlements, the cut-off comes after only 200-300 locations that capture only a quarter of the whole population. The rest can be served by mobile only. Uganda (not shown) comes somewhere between the two.

5.3. The proximity challenge: urban and rural clusters and the implications for fitting resources to banks’ outlet and outreach strategy

About two years later our analysis was confirmed by the release of Financial Service Location (FSP) Maps, which allowed the calculation of population within different distances of GIS-located financial access points. Similar work by FSD-Tanzania allowed the same to be done there. These exercises showed how essentially urban and peri-urban both the agency model and mobile money are. To the extent that mobile money does reach the rural poor it is only because villagers will walk much further to collect/send a transfer typically worth a week’s household living (5 km easily maybe even 10 km) compared to the very limited distances that are feasible when we are thinking about a villager with a spare dollar or two that they would like to get out of their pocket and saved for later use.

In Kenya, when we use the FSP Maps data just to look at access outside the urban centers, mobile money is within a 5-km walk for three-quarters of peri-urban and rural populations. Agent networks can get as close to nine out of ten of these “reachable” poor areas. On the tighter definition of walking no more than 2 km to deposit a spare dollar or two, however, barely 40% of the population outside major urban centers are reached.

For Tanzania the reach is even less – even at 5 km not even half the peri-urban and rural population are reached and on the 2-km definition access is a doorstep reality for barely 20% of rural/peri-urban Tanzanians.

This explains why just adding mobile has not opened up pro-poor savings to rural areas in any of the program projects.

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7 See website http://fspmaps.org
5.4. Toolkit to assess the optimum possible outreach with Google Maps

To help banks conduct an exercise in assessing the maximum possible outreach of agent outlets in a country without having to go to the expense of purchasing special GIS software, we developed a toolkit based on national population statistics. The challenge we then found was: what is classed officially as a location does not map to visible clusters of population using widely available satellite image mapping (Google Earth, Bing, CEISIN, etc.). Although it is labor intensive it is possible to marry the two together and WSBI has already worked with a local consultant and KPOSB to locate the entire agent network – active and dormant – and map this against the latest census data down to sub-location level. This has made it possible to identify clusters of unsuccessful agent sign-ups (probably linked to problems with cash/float rebalancing) and clusters that are not being reached.

5.5. Key lesson on genuine rural outreach

Understanding the above meant a shift in mind-set and in turn strategy compared to the original assumptions for our partner banks who traditionally thought they could sustainably reach out to the majority of their population with postal outlets and bridge the missing gap with PoS agents. The key take-aways in terms of genuinely rural outreach were:

- In countries with dispersed rural populations there is no sustainable “own-agent” solution to reach the rural poor.
- The immediate response was to open up channels for people to move value between mobile money and a bank account at their own expense, but this has not mobilized savings, so clearly something else was needed.
- Paying mobile money operators to collect rural deposits and not charging the customer for this might help, but in very rural countries linking up with village groups is probably the only way to reach more than a quarter of the unbanked population.
6. FROM BETTER UNDERSTANDING TO BETTER PLANNING – FINDING A SUSTAINABLE BUSINESS CASE FOR SMALL-SCALE SAVINGS

By mid-2012, most elements of a pro-poor service offer had been embedded in the product range of members participating in the WSBI program. The challenge all projects struggled with was to make that service both affordable and sustainable. Initially, it was either/or, but hardly both. We argued that sustainability should be possible at the sub-$25 monthly savings balance typical of the poor and at a really low monthly fee the poor can afford to pay out of household budgets that may be as low as $50 per month in rural Africa, but only if the service is provided at the scale of a million-plus active clients. At this level the amortization of core systems drops below $0.10 per month per user and charges can then be focused on the variable cost of supporting more transaction activity – messaging, agent fees, teller-time, etc.

The last element – deployment of tellers – opened up the most contentious area of debate. We repeatedly stressed that the dramatic growth in customer numbers and tellers starting to work at their capacity limit is vital to success. One consequence of the hidden dormancy embedded at the start of the projects was most participating members’ customer interfaces were operating way below the productivity limits of the underpinning systems and staff that worked in them. In some cases we found historic configurations of people and systems that only deployed 20% of their time at full capacity serving the customer.

Table 3: Average teller minutes available per transaction

<table>
<thead>
<tr>
<th>Systems Limit</th>
<th>Typical Europe</th>
<th>Morocco</th>
<th>Kenya/Uganda</th>
<th>Tanzania</th>
</tr>
</thead>
<tbody>
<tr>
<td>± 1 minute</td>
<td>± 1-2 minutes</td>
<td>± 3 minutes</td>
<td>± 5 minutes</td>
<td>± 7,5 minutes</td>
</tr>
</tbody>
</table>

Source: WSBI

Table 4: Fixed and variable cost denominators by outlet type

<table>
<thead>
<tr>
<th>Cost Mix for Own Outlets</th>
<th>Cost Mix for Agency Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Costs</td>
<td>Variable/Semi-Variable</td>
</tr>
<tr>
<td>Up-front investment</td>
<td>Some telecoms</td>
</tr>
<tr>
<td>Location rental</td>
<td>Core IT systems</td>
</tr>
<tr>
<td>Staff deployed</td>
<td>Stationary</td>
</tr>
<tr>
<td>Security/Cash/Transport</td>
<td>Ongoing marketing</td>
</tr>
<tr>
<td>Typically 85%-90%</td>
<td>Typically 10%-15%</td>
</tr>
</tbody>
</table>

Source: WSBI

6.1. Our analytical work on outlet costs

We looked into actual agent/teller costs, the number of minutes of tellers’ time available per transaction and then played mind games with what a fully deployed traditional brick-and-mortar network would look like compared to what newer alternatives – mobile vans visiting weekly markets, single teller kiosks in daily markets, agents, etc. – might look like.
Our most interesting finding was that agents are no less costly to a bank than a fully deployed single teller kiosk would be if we were allowed to deploy smart business models that stripped out traditional overheads (electronic second eyes rather than human, splitting cash-in from cash-out, removable tills rather than overnight security, etc.). To actually do this has proved a step too far within current compliance frameworks, but it moved the sustainability debate into an entirely different area:

- If our proximity analysis suggests agent networks are only a platform for relatively clustered populations, then they could be used to extend urban/peri-urban reach but also act as the backbone for other entities that do get out into the villages.
- Linking to mobile money strengthens the backbone and in some cases where a bank agent is not feasible the bank should carry the cost of using mobile money to rebalance between cash float and their bank account for those who do take the bank’s savings services further out into the villages than the bank can itself through agent networks and direct linking of customer accounts to mobile money.
- Focus on getting the variable transaction cost for face-to-face activity out in the villages as close to zero (working with groups, smart use of data-driven instead of menu-driven mobile, group phones as secure gateways to access individual accounts, etc.).
- Taking risks with pricing to see if the extra volume going over largely fixed-cost infrastructure (branches, core systems, switches, etc.) increases by more than the reduction in unit prices because there is enough unused capacity for costs not to increase.

The first four findings led WSBI to focus the last stages of its program support on linking with village groups (see below for more detail) and all the banks rolling this out have transformed or are beginning to transform both their active customer bases and their retail balance sheets in ways that are improving their bottom line. One member even found that dropping the fee for balance enquiries by 95% actually increased total revenues!

We then took the mind games a stage further and modeled a revenue-neutral repricing of all branch and agent activity for a post bank that had got itself trapped into 80% under deployment of people and systems. The stylized modeling of what the flip in pricing from a high ledger fee with hardly any activity and virtually no transaction pricing to no ledger fee with pure transaction pricing and people/systems 80% deployed suggested the bank could make the same profit and cover its costs just as much as it had been doing with pricing well below that of mobile money. It has not gone this far but it has dramatically reduced ledger fees and eliminated them in some cases. It also now offers some free face-to-face transactions in villages.
6.2. The challenge of sustainable planning

At fee rates of $0.50 in a low-income country and up to $1 in a middle-income country just to move or get your own money back from the bank, plus branches and agents that are too far away to reach on a day-to-day basis – all of these lock banks into high unit costs, low volumes and low productivity models of doing business. These work for high-end private banks but not for mass-market retail banks – the sort of core banking systems and payments interfaces that are required of a modern retail bank do not work economically with less than a million active users.

We tested what would be possible if branch staff and infrastructure were working much closer to capacity and half the current notional customer base started using the branches once a month and the other half accessed the bank via agents or by phone. The spare capacity in the branches suggested that a huge but calculated risk can be taken with pricing ($0.06-0.07 average per transaction but deposits free and $0.10-0.15 /withdrawal) and with P2P transfers and retail payments provided at cost profit can be sustained as long as the extra clients are recruited and stay active.

6.3. Key lesson on required transaction volumes

Getting tellers to operate at their maximum capacity can only be done through high volume transaction business, and where the catchment areas and affordable pricing do not allow to operate own agent network models, banks have to look out for (mobile) alternatives and partnerships. That also applies to where a bank cannot offer a local branch hub to rebalance agents’ cash float and should pay an MNO to offer the service.

In terms of a more affordable and sustainable service and the degree of capacity utilization at the bank outlet level, this means:

- An affordable $0.60 of client fees per month in poorer countries (twice that in an upper-middle income countries) pays for IT and five minutes of teller time for two or three counter operations. Here, risks with pricing can be taken to encourage take-up as business can be run off existing fixed costs.
- $0.60 of client business a month pays for two or three agent/m-money operations. Here, risks with pricing can be taken to make savings banking a genuinely doorstep service in urban and peri-urban areas.
- At a million active customers a fully automated core with all the switching capacity to support card/PoS plus mobile costs $0.10-0.12 per month per active user, which still leaves $0.20 to support a teller transaction and another +/- $0.15 to support a couple of mobile network or agent operations. This is affordable in the poorest countries where we are working.

7. PARTNERSHIPS

Following the examples of other WSBI members, such as BANSEFI, Mexico, project partners (e.g. in El Salvador, Indonesia, Tanzania) we started to explore the potential of G2P payments through government subsidy business to trigger quickly high volumes of people entering into formal banking with them.

Accepting that where mobile money exists it might be better paying for MNOs to do rural cash-in/out to reduce bank operational costs was equally crucial, but most of the banks wanted or already had their own mobile banking platform set up. A big question remained of what we could do where mobile money did not have rural cash-in/out. We had tested communal libraries – so called Communal Cultural Points – in Vietnam, and piloted rural mayors’ offices – so called Caja Express Outlets – in El Salvador.

In 2013 program partners also started to recognize that partnerships with informal groups through their APEX organizations had considerable potential to close the proximity gap and deliver a true doorstep service. The program thus started supporting village group tie-ups in all three East African countries.
7.1. Partnerships with governments

Moving transactions from cash to electronic is understood as a quick and convenient entry point to engage customers with the formal financial system. The challenge that remains is to move from financial access to financial inclusion and incentivize people to really use the services offered to them. A diversified service offer that adds value, starting from e-payment, over to loans and insurance, as well as mobilizing retailers to accept non-cash payments and, for example, pre-filled transfer SMS for repeat payments, will add value and help to fully bank people. BTN Bank Indonesia and Tanzania Postal Bank pursued this route.

TPB was allowed by its government to participate in a pilot for the Tanzania Social Action Fund TASAF and offer G2P linked to a card product via post offices and agents to selected beneficiaries. The pilot identified a need for biometric solutions as people had difficulties remembering pin numbers. BTN Bank Indonesia was granted four contracts of government cash transfer programs for poor students, which allowed the bank to grow its customer base by nearly 1 million people over roughly a one-year period. However, converting these payments into a truly useful financial service turned out to be more difficult as costs for traveling to reach the nearest post office contact point turned out to be too high for the target group. Involving school teachers as the bank’s marketers to incentivize students to not withdraw all at once and to try encouraging family members to become account holders also in order to stimulate P2P payments were examples of attempts made by the bank to strengthen the link between G2P and financial services. Alternative, more remote payments channels such as MNO and retail agents and an extended service offer could help in the near future to close the gap.

7.2. Partnerships with Mobile Network Operators

Following the rise of M-pesa in Kenya, it was well understood that any mobile banking service offer of our partner banks had to be as good as a mobile money offer (lower fees, more customer-centric), if not even better. Payments were recognized as the more immediate need of low-income people, and a savings account at the end of a mobile phone only becomes interesting once trust in the new payment service has been established and the immediate need for receiving and sending remittances and paying bills has been met.

7.2.1. Building trust for savings

People will pay for what they see as the service of moving money through space and between people but they will not “pay” to move it through time, which is what saving really is in an economic context. Crucial to building trust is that the saver must get precious savings back in full when they need it; added interest would be nice but no net deductions because of ledger fees matters more. This means that just linking small balance savings accounts to mobile money is not economic under current MNO-pricing models. The cost to the bank of allowing a saver to build up a $25 balance in $5 tranches coming in via mobile money and then turning it back into the same amount of cash can easily be $1.50 or 6% of the amount saved combining transaction fees and messaging fees. If these costs were to be covered by the bank out of net interest margins, the timescale of this saving would have to be a staggering two years.

7.2.2. The challenge of becoming competitive with MNOs at village level

Five out of the ten projects (El Salvador, Kenya, Morocco, Tanzania, Uganda) had set up their own mobile banking platform. The key challenge, however, was these members could do little with mobile banking that a mobile network operator could not have replicated technically via mobile money. Competitive advantage could only ever be defended by understanding the customer better and presenting capacities that a mobile-banking platform can offer in a way that fits better with the way customers use money. It was always known that gaps in IT systems could be addressed; more challenging, however, were the business aspects of becoming competitive at a village level, which made us encourage our partner banks to partner with MNOs, mainly to use their existing agent networks.

It was also noted that government policies conducive to the expansion of distribution networks and the emergence of new technology-driven models are particularly important. The program faced a mix of environments ranging from non-existing to favorable where partners either: a) struggled with tough competition (favorable environment in Kenya); b) had been blocked for most of the duration of the project up to now (agent banking regulation was released and approval for non-deposit taking agents given in Indonesia early 2015, in Tanzania mid-2013, and in Uganda not yet given so far); or c) were allowed to run a pilot which helped to draft national regulation (El Salvador).
7.3. Partnerships with village groups and existing social networks

Indonesia was the first country where a pilot was attempted with existing women’s groups to help promote a new savings product and teach female group members to use the product. These groups conducted regular weekly meetings with the aim of sharing personal achievements and organizing joint activities for the well-being of their communities. Managing people’s cash together was not part of the DNA of these groups and whilst the new product was perceived very positively it failed to become a natural part of group members’ financial activities. Separately, the first main evidence on cash management in villages came from Kenya and included diary studies from 2010-11 (“Cash In, Cash Out Kenya: The Role of MPesa in the Lives of Low Income People” by Microfinance Opportunities) and the 2011-12 FSD-Kenya work that culminated in “Time for Cash to Cash Out?” Scoping Kenya’s Path to a Cash-lite Society” by Bankable Frontiers Associates. Both publications shaped our thinking about the monetary processes behind any business banks might be able to do out in the villages.

7.3.1. Key lessons on cash management in villages

The first insight came from a distance-purpose matrix that shows 75% of all Kenyans who live outside major urban areas transact 95% of their business and move 90% of their money locally and 70% of their money circulates within one kilometer of where they live and work.

Chart 8: Distances that money moves between households and businesses

<table>
<thead>
<tr>
<th>PURPOSE</th>
<th>LOCAL BUSINESS</th>
<th>LOCAL-DISTANCE BUSINESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NUMBER</td>
<td>AMOUNT</td>
</tr>
<tr>
<td>LOCAL BUSINESS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>2,248</td>
<td>$320,411</td>
</tr>
<tr>
<td>E-money</td>
<td>68</td>
<td>$5,179</td>
</tr>
<tr>
<td>LOCAL-DISTANCE BUSINESS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>44</td>
<td>$30,904</td>
</tr>
<tr>
<td>E-money</td>
<td>47</td>
<td>$7,048</td>
</tr>
<tr>
<td>LOCAL HOUSEHOLD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>13,065</td>
<td>$179,318</td>
</tr>
<tr>
<td>E-money</td>
<td>159</td>
<td>$3,474</td>
</tr>
<tr>
<td>LOCAL-DISTANCE HOUSEHOLD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>186</td>
<td>$11,720</td>
</tr>
<tr>
<td>E-money</td>
<td>362</td>
<td>$12,059</td>
</tr>
</tbody>
</table>


The second lesson came from profiling household transactions by size, frequency and purpose, which flagged a typical mobile money transfer firmly in the bracket of once a month special purchases (at around $20 remitted and a cost of $0.60-0.70 per transfer).
7.3.2. The challenge for service providers to complement cash activity in villages

Understanding the amounts of cash available and the frequency of transactions in villages really helped to frame the challenge, namely:

- being on the doorstep, literally, is vital because that is where the unbanked money is;
- a dollar is a non-trivial amount to transact in the village and a mobile money transfer is a once a month luxury purchase;
- a need to be cheaper than mobile money and to consider the provision of mobile payment services which do not require cooperation with a fee-driven MNO (e.g. Bluetooth technology-based).

7.3.3. Understanding what it takes to partner with village groups

Groups have a very specific, very visual way of managing how cash accumulates and is used (usually built around a multi-bowl model where different packets of cash get allocated to different activities) and this has to be replicated.

Groups have lean periods (when gathering savings contributions is not easy, the amounts that can be saved are limited and the need to borrow high), but these are followed by flush periods when money accumulates rapidly and borrowing runs down.

The group multi-bowl model is very visual and money allocated to each bowl by each member is visually witnessed by all members and counted in public – standard e-money transfers are invisible and cannot be split between bowls. The visual contribution to the bowls is an integral part of group discipline and anything that weakens it potentially disrupts group solidarity.
WSBI's East African members have positioned themselves to meet the needs of groups by trying to develop:

1. menu systems for members that capture the multi-bowl model that all village groups we know of use;
2. a menu system for group coordinators that captures the different nature of the payments they must make up the line to APEX organizations;
3. group-lending to handle the lean periods when groups cannot raise as much in savings as their members would like to borrow and provide this at non-usurious interest rates;
4. a modified group lending system to capture all group member activity in virtual accounts under a mobile-enabled group account.

In a purely technical sense all of the above can be replicated by an MNO in some way. That is why WSBI is supporting the fourth option: it allows members to offer services that would challenge competitors’ business models. The most obvious of these are very low-cost transfers that keep value in a closed loop (member to group, group to member and ideally member to member) because these keep money in the bank and earn the bank a margin.

7.3.4. The tipping point for affordable village banking

We are talking about an account for a group with tied individual accounts for 25-30 members where perhaps half the individual accounts transact weekly and the group transacts multiple times per week all for a combined charge of about one dollar per week. The mathematics of the business case are commercially sensitive and specific to each bank, but a number of issues for WSBI are common:

- a group banking offer should be so finely priced that competitors will find it insufficiently profitable to replicate;
- the profit objective is being limited to amortizing currently under-deployed IT systems over the sort of million-plus customer base for which they are designed;
- providing nearby cash-in/out facilities in partnership with retail and MNO agents if no bank agent network can be supported, and paying the fees incurred by the group coordinator to access the bank this way;
- traditional USSD messaging sessions cost too much, typically $0.10-0.20 per session, and are too expensive to make group banking affordable, hence:
  - menu adaptations must, for example, allow sending contributions to multiple bowls via one, not multiple, session;
  - messaging costs must decrease through the provision of smart phones, data packages and mobile-web banking as a way of getting round mobile operators’ grip on messaging;
  - groups must be encouraged to offer cash-in/out as a free service to members as it involves no extra work but strengthens their involvement in members’ finances.

The group model is a closed loop system where a member’s ability to borrow depends on how much he saves, so the very high cost of credit is in part going back to the borrower via the heightened return on his own savings. Injecting extra loan capital into the group model has to be done very carefully or the closed loop breaks and the quality of the resulting credit is much worse than in the closed loop.

Banks that want to work with groups must recognize that:

- there is nothing it adds to the basic savings model except for security in the critical last two to three months of a cycle when virtually all the savings and interest has been accumulated and loans are rapidly being repaid, which means that the cash float builds very rapidly (from $200 to perhaps $2,000 in two months);
- if banks want to lend money to the groups it must be done collectively and only at the normal group microfinance rate, but they must allow the groups to further lend these funds at their own higher internal lending rates (so there remains a material collective profit incentive for members to keep the model working).
8. THE JOURNEY TO MORE CUSTOMER-CENTRICITY

Understanding trends and patterns of the customer journey has been the biggest challenge. Almost all banks invested in market research, and some did focus group studies. Unfortunately, the initial program research budget was cut to a minimum but scoping and scaling the market helped us to understand who the unbanked are and drew our attention to youth and older young adults. We also did some co-creative work and small diary research with young customers. However, what became a really powerful tool for understanding the customer journey was the small and big data analytics work we started in 2014 with the aim to understand the reasons and find solutions for tackling account dormancy.

8.1. Understanding what constitutes usability of savings accounts

We have addressed gaps in product design and service ranges and quality of delivery. Moreover, pricing for affordability has been proven to be possible, albeit challenging. If products still do not work, banks have to decide whether the products they have designated as pro-poor really do offer the usability the poor need and what can be done to make them more usable or reusable.

8.1.1. The challenge of account dormancy – an industry-wide problem

Account dormancy turned out to be a real blocking factor for a while when it became more and more obvious that our partner banks had never had the numbers of active customers they claimed to have at the beginning of the program, nor were they adding real users as quickly as account opening figures suggested. All ten projects were with computerized banks and eight out of ten had relatively modern systems subject to periodic upgrade; we did not realize they were computerizing dormant accounts and in some cases accounts that were not only inactive but had zero balances and no contact details. In some cases dormancy appears to have been on the order of 90%.

Table 5: Comparison between industry and WSBI project partner’s inactivity rates

<table>
<thead>
<tr>
<th>2014</th>
<th>INDUSTRY AVERAGE</th>
<th>WSBI PROGRAM PARTNER INACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>El Salvador</td>
<td>64%</td>
<td>43%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>63%</td>
<td>61%</td>
</tr>
<tr>
<td>Kenya</td>
<td>52%</td>
<td>45%</td>
</tr>
<tr>
<td>Morocco</td>
<td>n/a</td>
<td>64%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>18%</td>
<td>63%</td>
</tr>
<tr>
<td>Uganda</td>
<td>n/a</td>
<td>24%</td>
</tr>
</tbody>
</table>

Source: WSBI

8.1.2. Lessons from reactivating accounts

A dormant account is a lost opportunity, but at least if the account is digitized it offers the potential to re-engage with the customer by messaging them. As ledger fees eat into people’s small balances and are sometimes even perceived as theft, the banks have been working to get rid of the monthly ledger fee for accounts that are not being used. Once this happens the dormant account does no damage to the customer who is not actively saving, but still keeps their past saving secure and it gives the bank low-cost funding without any pretense that dormant accounts are the right way to fund the infrastructure of a bank. That is why we argue that to be sustainable, a savings bank must have a million-plus active customers and it does not matter if someone goes inactive in one month as long as someone else turns active to replace him. The challenge remains to:

a) tap into the open (mainly young) underserved and unbanked market space;
b) support and better engage customers with very low-value proximity payments; and
c) deliver customers transactions in the low single cents.

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8 Banks were recently required to clean-out dormant accounts; TPB’s percentage is based on figures prior to clean-out.
8.2. Tapping into the youth market space: using a mix of research methods and co-creating our way forward

We recognized that nearly 50% of the underserved and mostly poor people in our beneficiary countries are young adults. The banks were aware of this huge potential and had already embraced these young customer groups with a youth savings account (Kenya, Uganda, Morocco) or by channeling government grants for students through their outlets (Indonesia). We conducted qualitative and quantitative research in Kenya and Uganda to better understand low activity rates of the banks’ youth savings accounts.

8.2.1. The challenge of working with youth

In the case of Kenya, 75% of adopters of a youth savings account had gone inactive or dormant and many did not make any deposits after the original opening deposit. The qualitative aspect of our research concluded that there was a need for increased autonomy, group accounts, redefining legal structures, restructuring the boundaries of the youth product and increasing trust between the bank, youths, trustees or parents, and the community. Quantitative research outcomes concluded youths’ role in household finances was rarely recognized and that more research needs to be done to indicate how finances move between household members, and the role of youths and young adults in financial management and decision-making. Co-creative work sessions with youth and bank staff highlighted the need for increased marketing efforts, working with sales executives for supporting young customers, reinterpreting legal structures for more autonomy in using the accounts and testing mobile-enabled platforms for family group accounts.

In the case of Uganda, a country with 77% of its population aged under 30, we were faced with a youth product with nearly zero take-up rates and therefore conducted qualitative research which looked more into specific gender roles of young people and the roles parents and technology play when making financial decisions, as we felt we did not know enough about these specific behaviors.

8.2.2. What we’ve learned about young people’s financial needs, source of income and spending behavior

Younger youth and youths’ spending priorities taught us that, although school fees and scholastic materials played a minor role, priority was generally given to self-sustaining goods and to satisfy basic needs, such as food or rent. This suggests that though all youth may want or aim to save for the long term, they generally save for the short term and to satisfy their immediate needs.

We could clearly identify that spending behavior and the perception of ease of use of technology is related to gender: young females spend their money on very different things than young males. Spending priorities for young females relate to their looks: clothes, cosmetics, make-up, hairstyling and shoes. Among young males, spending priorities were more focused on satisfying basic needs, such as food, clothing and rent, as well as on leisure activities and investment in long-term sustainability of their livelihoods. The use of technology is not gendered, but female youth are found to be more cautious in their approach to technology. Male youth are perceived to be more adventurous and are more comfortable exploring technology.

An analysis of younger youth and youth in transition indicated that young females are financially dependent on their parent(s)/guardian(s) for a much longer period than their male counterparts are. In contrast, young males are expected to help their mothers in earning an income to support the family and the household when it becomes necessary. Parent(s)/Guardian(s) are the most important sources of support, both financially and emotionally. Understanding the role parent(s)/guardian(s) play is relevant to supporting youth financial inclusion. We identified substantial fear among focus group discussion participants/parents that their relationship with their child might be spoiled by increased economic activity and financial independence.

Income sources and expenditure flows indicate that friends are an important source of income, for example by offering loans to be paid back with interest. Youth will aim to supplement pocket money given by their parent(s)/guardian(s) with income earned themselves. The research also revealed that young people thought banks were safer than mobile money and SACCOs, which in their eyes are growing increasingly insecure.
8.2.3. The research methods we used to understand young people's needs

We used LifeLine techniques to explore transition during focus group discussions. Life narratives show the fabric of events and their interrelationship with support mechanisms. LifeLines are suitable tools for identifying key moments in youth’s lives and points of transition, which may include leaving school or becoming an orphan. Variations in life events and their timing bring to light gender differences.

8.2.4. What we’ve learned about young people’s cash flow at household level

One of the most interesting findings in Kenya came from contrasting household survey data with what youth were actually telling us about how they handled money in the focus groups in the run-up to the co-creation process. Those focus groups suggested quite a rich personal monetary existence, albeit with small amounts, providing youth the autonomous spending power they wanted. The survey responses tended, however, to be dominated by lead householders (household head and spouse or partner), often the parents of several young adults in the household. Rarely if ever did these older adults ascribe any monetary value to anything done by anyone in their early to mid-twenties or younger unless they were part of the lead couple. When, in Uganda, we moved to the next stage of our work we ran a very small and short diary study just to confirm with youth themselves how much money they were handling and what they were doing with it. The survey was neither large enough nor long enough to produce statistically robust results, but it unambiguously showed:

• that youth do handle money (probably as much per day as we think they live on in total);
• their parents or older family members give them some of that money but they also make some of it themselves through informal economic activity;
• and to get slightly larger amounts of money to meet larger expenditures they use a range of “savings” techniques (hiding money, leaving money on a phone, gifting, lending to and borrowing from friends) just like the bigger diary studies show their parents doing at a household level.

8.2.5. The research methods we used to understand young people’s cash flow

The methodology we used was small diary studies by way of household surveys with 30 households over ten weeks. Household surveys were conducted twice, with 30 younger youth and youth and regular follow-up. Respondents came from the Mbarara region of Uganda with an equal gender balance in Bwizibwera (rural) and Ruharo (peri-urban), representing a good mix of backgrounds, experience and age. The study is only just finishing as this publication is being finalized, but it has certainly proved the existence of phenomena that are worthy of more detailed quantitative research. Moreover, the diary tool has not only worked with the target younger youth (that had been established by earlier studies outside the program) but it has done so in a way that the bank is interested in replicating under its own management.

8.3. Small data analytics – using World Bank open data as a source to understand population spending

How can intelligent use of data help us to better understand what our target customers are probably willing to spend and save and how often segments of people transact with a financial institution?

Working with existing bank or external source data by feeding them into simple spreadsheet models is what we call “small” data analytics, which is different and less costly than “big data” analytics, which uses big data companies and complex software to filter millions of sets of data. Our affordability envelope work (see above) made a first attempt to estimate how many world (PPP) dollars it takes to live different kinds of lifestyle and how many actual dollars that equates to in each particular country. It shows that public domain data is there to answer basic questions about the proportion of the population living each kind of lifestyle and then go a stage further to work out how many of them are probably being served by some sort of formal financial institution and what proportion of the unserved population they account for.
8.3.1. Our toolkit for segmenting the market with open source data

We developed a process which allows banks to pull and overlay open source data from the World Bank relating to financial inclusion (Global Findex) on top of the World Bank’s WDI and Poverty/Equity databases. Putting the two together creates a market segmentation that otherwise could be very costly to get from a market research company. The toolkit transforms income inequality data into $ consumption/day. The toolkit then interpolates to demonstrate the share of the population by spending band.

Toolkit 2: Segmenting population by actual USD available per day

Source: WSBI

8.4. Small data analytics – using banks’ customer transaction data to understand customers’ savings behavior

How can data analytics help us to better engage customers in very low value proximity payments assuming we have pricing and proximity right?

8.4.1. The challenge of defining what constitutes an active savings account

Given the overall goal of the program, a lot of our earlier work addressed account opening and less addressed sustaining account activity. We started this small data project work to address two key issues of common interest to most projects in the program and indeed the wider WSBI membership base:

1) Are we misunderstanding the nature of savings as opposed to transactional banking? Our definition of an active account, agreed with our funders, is any account that has transacted in the last six months. The six-month cut-off was pretty arbitrary – longer than the definition used for something as transactional as mobile money but shorter than the contractual definitions of inactivity for many savings accounts (typically closer to two years). The big Global Findex data only shows a third of all adults doing any kind of saving during one year right up the development spectrum, even as far as upper middle-income countries such as El Salvador and South Africa.
Therefore, it may just be part of a customer’s desired savings behavior to save in bursts of activity and then go quiet for a period before starting again, and our measure of activity ignores this kind of saving during its quiet periods.

2) And, is there any way of guessing how many currently unused accounts might come live again?

8.4.2. Our toolkit for segmenting bank account data

The project was built around existing elements of widely used office spreadsheet software. We were looking to create something that can be run in WSBI member banks using existing capacities and then find a way of sharing lessons. We asked banks for simple transaction files that list a date, amount, type, location and closing balance for each transaction. We merged these with account listings by opening (and very occasionally closing) date and fully anonymized the data before processing it. A sample of the sort of analytics we can produce is shown below.

Toolkit 3: Segmenting customer account data by intensity of use and balance size

<table>
<thead>
<tr>
<th>LATEST MEASURABLE STATUS -- 30 MONTHS AFTER OPENING</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTI-USE ACTIVE/PAUSED</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>1,018</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>TREND</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFTER 6 MO.</td>
</tr>
<tr>
<td>Active</td>
</tr>
<tr>
<td>Paused</td>
</tr>
<tr>
<td>Active &gt; inactive</td>
</tr>
<tr>
<td>Inactive</td>
</tr>
</tbody>
</table>

‘----------------------- of which 2,487 saw opening deposit only ----------------------- ’

<table>
<thead>
<tr>
<th>GAPS IN USE</th>
</tr>
</thead>
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<tr>
<td>SAME MO.</td>
</tr>
<tr>
<td>1st-2nd TXN gap</td>
</tr>
<tr>
<td>Maximum gap</td>
</tr>
</tbody>
</table>

Source: WSBI.
(NB - both rows in bottom table exclude accounts that only saw opening deposit)
8.4.3. What do the account data analytics reveal

Some of the questions that we could answer using the output sheets are as follows:

- **How many of my new accounts in this category never get used again?** A third of all accounts opened (in extreme cases sometimes three-quarters) see one deposit and no more and almost all of these see an opening deposit below the level required to operate the account and not only will not but cannot ever be used.

- **What is a typical transaction gap?** For accounts transacting more than once, over 90% transactions are within three months of the next/last (bottom of output table 1) but that does not mean over 90% of all these multi-use accounts transact every three months – in fact, a quarter of multi-use accounts that are still active had a gap of more than six months sometime in the past.

- **Is there any hope that some of the accounts that have only seen an opening deposit may come live again?** Yes, especially if they are very new, but only 15% of multi-use accounts saw a gap of more than six months between first and second deposits, so following up non-use after opening may help cut dormancy significantly.

- **Are we understating activity with the simple six-month rule?** This is finely balanced, as some of the multi-use accounts that have gone quiet will come live again and some of the newer single-use accounts and even some multi-use accounts that have been active recently are heading for dormancy.

8.4.4. What have we learned from the account analytics

We worked out how these inputs can be produced on partner banks’ own systems in formats that are not too large to manage and how account numbers can be anonymized before any data leaves the bank. The wider relevance of this is:

- It is really important to intervene quickly if accounts are opened but then do not see further activity. Essentially, if an account goes much more than a month or two before the second deposit there is only a one-in-six chance that it will see regular use.

- Once an account is being used actively, it is not unusual for there to be quiet periods – very few people save continuously all the time and we see this in big population surveys related to access to finance. In this case messaging has to be nuanced, congratulating active savers for having used an account well and reminding them that it is there ready and waiting for their next savings goal.

- The idea of money put aside to do nothing for long periods of time just does not resonate with the mass-middle market in low-income countries let alone the poor – if an account has not been used in a year it is almost certainly dead.

- A six-month activity definition is not a bad proxy for the long-run activity rate of a bank’s customer base because for every paused account that is going to come live again there is at least one newly opened or recently active account that may have already started the slide into inactivity.

This exercise served as proof of concept for more detailed (but also more cost-intensive) analytics in the future with a small test-bed of anonymized data. A future analysis would require using database query tools to embed the approach in banks’ existing reporting suites and ultimately to invest in full-scale business intelligence (or data warehouse) solutions. Future work could also consider engaging customers with mobile communication solutions by using SMS-based automated systems to establish dialogue with the customer.

8.5. Big data analytics - Using banks’ mobile customer data to understand customer savings behavior

By 2013, WSBI had spotted the early trend and potential of using big data in transforming product design and delivery, client segmentation and credit references in ways that allow outreach to the unbanked and underserved. In particular, various initiatives around the world had been piloted to use call data records (CDRs) held by MNOs to design credit scoring models for banks. This led us to explore whether a similar approach could be employed using CDRs to develop propensity models for poorer communities to save.

We brought together WSBI’s member in Ghana, HFC Bank, and Airtel Ghana, and contracted U.S.-based data analytics company Cignifi, Inc., to conduct a first pilot to establish whether there was a correlation in savings behavior and use of mobile telephones.
8.5.1. Key lessons on what mobile customer data tell us about savings behavior

The early phase, completed in 2014, confirmed a clear correlation that mobile usage behavior does indeed open up a new data-driven way to identify the unbanked and who among them is most likely to accept and use financial products. Analyzing mobile usage behavior provided valuable insights into the types of products most likely to appeal to different customers of different income characteristics and propensities to use particular financial services. Thus it had the potential to help in the design and use of a variety of marketing messages, channels, pricing and promotions rather than traditional one-size-fits-all approaches. This paradigm should then set up a new data management cycle: as customers take advantage of new products that come on the market, additional data sets will provide a deeper understanding of customers and their interest in and usage of financial products, creating a virtuous circle based on rich data.

The positive conclusions of the first phase led to a second phase that is ongoing through 2015, again involving HFC Bank and Airtel Ghana, to develop and test an innovative HFC Bank mobile savings product on the Airtel Money platform that combines features of mobile and savings products. Behavior-based propensity scores are being used to segment Airtel’s subscriber base and test targeted marketing campaigns to drive high quality customer acquisition for HFC Bank.

8.6. Big data analytics – using banks’ mobile customer data to engage customers into an interactive dialogue

We believe that by studying customer access data and using these data to design tailored messages which can be sent by phone to the customer, and by regularly tweaking these messages, banks have a powerful tool to optimize their touch points with the customer and increase customer engagement and usage of savings accounts, e.g. through increased account balances, increased numbers of transactions.

We have noticed a real demand for this type of engagement technique but also internal resource constraints when dealing with state-owned partners and national legal limitations when it comes to sharing customer data with third parties.9

The small data analytics project (see above) has given us a tool to access customer data in East Africa and use these data to re-engage with their inactive customer base through an iterative process. The missing element, however, is the twofold interactive dialogue between the financial service provider and the customer.

9. THE JOURNEY AHEAD – TOWARDS VALUE PROPOSITION 3.0

The program has helped us move away from Proposition 1.0 – a combination of undifferentiated products and channels with a savings or transactional account that requires a low or no minimum balance and charges accountholders depending on the channel used (some channels are free) – to Proposition 1.5 – seeking to improve savings account profitability by lowering costs, chiefly through shifting the primary channel of cash delivery to bank agent networks, the basic product remains the same, but in many cases the channel may be cheaper, and accessible for more potential clients, than with bank branches and ATMs. Finding that the promise of agent networks is not always realized made our partner banks then move towards Proposition 2.0 – this involves using both products and channels (often technology-heavy) to better understand client savings behavior with more digitally driven solutions and more customer data coming in. Rigorous analysis of existing and new data turned out to be a crucial step in that direction – towards real, client-driven financial inclusion. Are there ways which go beyond capturing data to connect us with peoples’ minds and help us understand their preference and behavior when it comes to making financial decisions?

9 Several program partners, including PostBank Uganda, Tanzania Postal Bank and Fedecrédito from El Salvador, had been discussing with JuntosGlobal customer engagement projects which did not materialize due to various reasons.
Do we need to move towards Proposition 3.0 – which shall help us to understand what affects peoples’ choices, what are peoples’ touch points and how service providers can optimize connecting with people’s preferences alongside the customer journey? How can financial service providers enter into a long-lasting two-way interactive dialogue with the bottom of the pyramid, and how do organizations maximize touch points with customers in a more and more digitized and less face-to-face world across channels and products?

9.1. From identifying people’s immediate needs to using behavioral approaches to get a better understanding of people’s minds, choices and behavior

We already knew back in 2011, that in general terms the poor and economically fragile do not display fundamentally different financial needs than the better off – they need to store income until it is needed, smooth peaks and troughs in available cash, handle emergencies, put aside money for known future needs and sometimes borrow to accumulate. But what is fundamentally different about the poor and economically fragile is the degree of irregularity in their income, the way they therefore organize their expenditure and in the difficulty to build up and sustain a savings cushion in the long term. Out of that understanding we identified a set of six fundamental client needs for our target market:

Figure 5: Financial needs of the poor

The most immediate need of the poor are payments to/from family and friends and locking away savings into an account comes at the end of it.

Source: WSBI

We also learned from the recent World Bank Development Report “Mind, Society and Behavior” that the assumption that people make rational choices can be particularly misleading when dealing with the bottom of the pyramid, because people tend to think automatically, socially and with mental models, and even when people try to make careful financial decisions, the complexity of the decisions often leads them astray. Hence, financial service providers need to find people’s emotional touch points to become better at retaining customer loyalty.
9.2. The challenge of shifting supply-side mind-sets

Recognizing the immediate need for sending and receiving money to family and friends as well as seeing the need for a more interactive provider-customer relationship has meant an enormous shift in the mind-set of traditional savings banks that were set up to offer savings accounts to the underserved and unreached and traditionally were seen as the key banks serving this market. In particular, in East Africa, where banking systems reach barely one in five adults but MNO-led mobile money seems to reach half of all households, we were faced with the challenge of how to make a (mobile) banking offer “as good as mobile money” to better meet people’s immediate needs and connect to customers as successfully as mobile money did. Our partner bank in Tanzania, for example, reacted by employing staff from the mobile network industry.

Adjusting to people's needs and being more customer-centric for some banks meant a 180-degree turn, which implies enormous change in supply-side behavior. Institutional capacity building was not meant to form part of the program, thus the program was not seen as a behavioral change management challenge and therefore sometimes struggled with not being able to support the complexity of the required institutional changes and the necessary means to cope with them. Nor did program goals and indicators focus sufficiently enough on the learning curve of the service providers throughout all institutional levels, starting from the institutions’ mission statements down to staff trainings and front-end performance.

Nevertheless, our final program evaluation revealed that there had been an enormous learning curve in all participating savings banks. The program has nowhere remained a separate program but has been completely integrated into the banks’ strategies and operations. The main consequence is that all lessons learned and acquired skills from the program have spread into the banks’ other activities, leading to change in behavior. The missing link is to fully internalize customer satisfaction and make it become part of the DNA of a bank’s business model.

“The user interface of smartphones could potentially change how poor people are able to interact with their financial services provider in ways that they really can’t over conventional phones” Greg Chen, CGAP

9.3. Using smartphone technology as a powerful tool for people to interact with each other and increase engagement with their service providers

Nearly half of the unbanked using a mobile phone are in possession of a smart phone. With smartphone prices dropping across Africa and Asia this trend will increase.

What are the delivery channels that maximize learning and behavioral change for young people in the most cost-effective and scalable way? Digital financial education at an early stage could be an answer.

9.3.1. How technology and gamification allows young students and their parents to jointly manage pocket money to increase savings held with banks in Sri Lanka and El Salvador

Establishing an early long-term relationship with young customers can support engagement of clients throughout their full life-cycle. PocketBank is the digital extension of the SchoolBank concept that WSBI members have been carrying out in all continents for many years. Through SchoolBank, young students receive financial education, as well as social and livelihood education. The theoretical curricula are complemented by a practical approach which offers children and students the opportunity to open up a savings account that can then be connected to an application-based pocket money management solution for parents and their children. The solution is currently being tested by Fedecrédito (El Salvador) and National Savings Bank Sri Lanka and aims to prove that an application-based money management solution helps create financial awareness amongst young people and increase usage of savings accounts for both parents and their children.
9.3.2. How Bluetooth technology becomes a powerful tool for people to transact at nearly zero cost in their villages in rural Kenya

Knowing that over 80% of day-to-day activity and over 70% of day-to-day living expenditure takes places within villages, and feeling the need for a very low-cost or even free capacity to move pocket money downloaded from a bank account between phones to support customers’ cashless proximity payments (see above), made us look into the benefits and opportunities of Bluetooth technology.

The idea is to create free C2B and member-to-group transaction vehicles to allow people in remote villages to start to cash-in/out for very small amounts informally via each other and via groups and even merchants. The model also supports group members who don’t have a smart phone with Bluetooth technology: they can transact by using a group phone on behalf of a validly registered group member. The wallet is set up for different limits by category and ownership to, e.g. prevent merchants having to download value several times during the day. Everyone is each other’s cash-in/out agent, which is something that the Foundation has been calling for since their Strategy Refresh in 2011. Exploring the AML/CTF requirements goes hand in hand with developing the application.
10. CONCLUSIONS

We have developed tools to put real numbers on different elements of consumer demand. These tools allow banks to estimate flows of money handled day to day, as well as how far and how fast financial services may be spreading within as well as across households.

We have further developed methods to turn national data into detailed market segmentation; we have frameworks for mapping customer needs, and worksheets to understand what the customer can afford to put through an account and pay to use the account.

As part of understanding the customer, demographics matter hugely, so we break down target markets by type of unbanked adult. Our estimates suggest that the single biggest coherent group of unbanked adults across the Global South are young third (fourth, fifth, etc.) adults living in someone else’s household.

Understanding how customers manipulate money is a critical aspect to product design. We have identified six drivers for what constitutes customer needs in financial services:

Send and/or receive money from friends and family; get periodic but irregular surpluses of money out of the pocket quickly; accumulate/lock away usable lump sums derived from put-aside surpluses; interface with the formal economy (without wasting time/money); turn spasmodic lump sums into a predictable but not always regular cash flow; access credit as another way of protecting wealth and major spending from shocks.

We also have to think more about banks’ capacities to meet needs rather than just providing “products” (i.e. customer-centricity). Systems that meet the needs of the poor must have all the same capacities that any good IT platform for mass-retail banking has: the needs of the poor are not so different. However, it is necessary to add low-cost digital transactions into the mix.

Nevertheless, how to provide around five transactions per month within the very tight margins that people can afford to spend on financial services remains a challenge: say $1 per month in the poorest countries (Uganda, Tanzania, Burkina Faso, Kenya) to around $2 per month in middle-income countries (Indonesia, El Salvador, South Africa). But recognizing that these sums also have to be shared with other providers (including informal sector), it is safer to think in terms of $0.60 and $1 respectively.

This needs to be further nuanced to take into account the amounts of cash flow that households are living on in different contexts. In rural areas, whole household cash flows are so tight that to get $10-$20 through an account per month at the bottom end will be a challenge, and charging $0.50 would be too much. In urban areas, seeing $50 per month through an account looks much more feasible as does charging $1 per month.

Getting a real rural reach in Africa and Asia seems beyond us without a mobile money tie-up. The way that people cluster and the distances they are prepared to travel (walk) to conduct different types of transactions define proximity. GIS analysis has allowed us to see people “clusters” and how many locations there are at scale. It is surprising how quickly settlement density falls below the level needed to have 5,000 people living within 2 km of a possible agent location (5,000 is the number of people living in a catchment area needed to support a customer base of around 700 for an agency to be sustainable). Two km is the maximum that people are prepared to walk to get a spare $1 or $2 out of the pocket and deposit it with a financial institution. Mobile money, on the other hand, reaches further, as people will easily walk 5 km to pick up/send a transfer that typically equals a week’s living. In Kenya, the cut-off comes after around 1,000 locations containing about half the total population. In Tanzania, the cut-off comes after only 200-300 locations that capture only a quarter of the population. Parts of Asia – Vietnam and Indonesia – look the same. It was this challenge that brought us to recognize the potential of linkage banking.

The critical issue to be addressed is what mix of delivery channel and number of transactions (i.e. costs) can be delivered within what poor customers can afford to pay. The ultimate challenge is how to price a pro-poor package so that customers meet as many of their needs as possible using banks’ platforms, and then use banks in partnership with others to close the proximity gap (particularly remote cash-in/out).
A remaining challenge is how to deliver affordability in a sustainable way. Can we get our pricing down to take advantage of the hyper-elastic part of the demand curve where very high volumes of low-value transactions are conducted? And can we do this with the existing network? How do agent networks help, and what role is there for mobile? We believe that mass retail banking is such a high fixed cost business, and there are such high levels of dormancy, that it is possible to supply services profitably at a very low price. But it means that banks have to move from passive, dormant models to an active, used one, as inactivity across existing channels is a real issue. Our models demonstrate that the spare capacity in bank branches suggests a huge but calculated risk can be taken with pricing ($0.06-$0.07 per transaction but deposits free and $0.10-$0.15 per withdrawal) and P2P transfers and retail payments provided at cost. But this can only be done profitably with an active customer base of 1 million.

The program has provided important seed money and helped banks to appreciate and tackle most of the challenges of proposition 2.0. Future support now needs to go into helping banks to develop savings from a customer perspective rather than from a bank perspective to tackle new challenges on the journey to 3.0. Banks have started acknowledging the need to optimize touch points with existing and potential customers. Co-creation and interactive dialogue techniques and data analytics have started to provide us with valuable insights into people's preferences and behavior, but more support and capital is needed to properly interpret and use bank data for better engagement strategies with customers and higher connectivity, with knowledge from the consumer good industry and behavioral and diary research.
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GLOSSARY

• ABB Al Barid Bank
• AML/CTF Anti-money laundering / counter terrorism financing
• ATM Automatic Teller Machine
• BSN Bank Simpanan Nasional
• BTN Bank Tabungan Negara
• C2B Consumer to business
• Fedecredito Federación de las Cajas de Credito y Banco de los Trabajadores
• FINDEX Financial Data Exchange
• FMO Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden
• G2P Government to person
• GIS Geographic Information System
• GSMA Groupe Speciale Mobile Association
• GSM Global System for Mobile Communications (formerly Groupe Speciale Mobile)
• HFC HFC Bank
• KPOSB Kenya Post Office Savings Bank
• LPB Lesotho PostBank
• LVPB LienViet Postbank
• MNO Mobile Network Operator
• P2P Peer to Peer
• PBU Postbank Uganda
• PoS Point of Sale
• SACCO Savings and Credit Cooperative
• SASSA South African Social Security Agency
• SAPB Southafirca PostBank
• SMS Short Message Service
• TPB Tanzania Postalbank
• VSLA Village Savings and Loan Association
• VICOBA Village Community Bank Association
• WSBI World Savings and Retail Banking Institute
WSBI partner banks and key staff (as at 31 August 2015)

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WSBI Program Steering Committee as at 31 August 2015

- Arthur Arnold | Former CEO FMO
- Wendy Chamberlain | Bill & Melinda Gates Foundation (Tamara Cook until February 2015)
- Chris De Noose | Managing Director WSBI
- Seema Desai | GSMA
- Susan Johnson | Bath University
- Antonique Koning | CGAP
- Johnny Rizq | Chair

WSBI Program Management Team as at 31 August 2015

- Weselina Angelow | Program Manager
- Stephen Peachey | Program Technical Advisor
- Ian Radcliffe | Program Director

Other WSBI Program staff prior to 31 December 2014

- Fatoumata Camara | Project Manager East and West Africa (2013-2014)
- Kostas Konstantinopoulos | Project Manager East and West Africa (2010)
- Lisa Stahl | Project Manager East and West Africa (2010-2011)
- Christine Zander | Program Administrator