Empowering Indonesia’s “Change Agents” for Financial Inclusion

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ITU Regional Standardization Forum for Asia-Pacific Region
Jakarta, Indonesia, 27-28 October 2015
Agenda

01 Problem Definition

02 HCD Insights and Financial Diaries

03 Product Design Concepts for Financial Inclusion
Mobile Financial Services (MFS) entered the market in 2007, yet only 0.1% of Indonesian adults have ever used mobile money, leaving the financial landscape driven by banks and nonbank financial institutions.

Why has it failed to scale?
Poor Design Limits Scalability and Interoperability

Arising from non-intuitive UX, fragmented technology interfaces & technology design lead by disjoint and closed loop legacy systems

“Everything I know about using my cellphone comes from my children”
-IGN Sentana Suastika

NEEDS

- Technology should be the enabler, NOT the disabler - needs to be **affordable, secure and simple**
- The branchless banking pilot was largely aimed at the unbanked customers, who tend to be **less technologically savvy**
- Agents need to be empowered with **low investment, intuitive tools** for education and to efficiently perform **assisted transactions for low sophisticated users**

WHAT THEY GET

- Non-intuitive merchant checkout with disjoint interfaces results in high transaction processing times and long ordering queues
- Non-standardized Legacy merchant systems increases onboarding complexity, integration costs and limits interoperability
- Technology-driven design – 26 digits USSD string!

“...ended up spending **25 minutes** to transact!”
-Amdocs research team

Ordering code that doesn’t directly relate to the product’s value, forcing users to make extra association

*545*1*2*4*5*6282757787*7#
Resulting in products that fail to meet consumer needs
And outperform incumbents like cash and informal financial services

**CONSUMERS**

- **BANKED**
  - 50 Million+
  - has collaterals
  - has account

- **UNDER BANKED**
  - BANK E-MONEY
  - BRANCHLESS BANKING PILOT
  - TELCO E-MONEY

- **PRODUCTIVE POOR**
  - 56M SME
  - Basic collaterals
  - no account

- **UNBANKED**
  - BOP
  - no collaterals
  - no account

**BI & OJK REGULATED**
- (FORMAL)
  - BANKS
    - 120 CBs
  - MFI (BPRs & COOPERATIVE)
    - 200,000

**NON BI/OJK REGULATED**

- BALI’s LPD (MFI SEMI FORMAL)

**MERCHANTS**
- 300,000+

**TELCOS**
- TELCO E-MONEY

**MONEY LENDERS**
- (INFORMAL)
  - BI & OJK REGULATED
  - (FORMAL)

Cash
Electronic
No one has yet figured out what consumers want

Although business interests and regulatory objectives are clearer, all stakeholder interests must align for MFS to reach scale
How can HCD help?

Which insights from the field can we leverage to deliver value?
THE STORY OF INDONESIA’S PRODUCTIVE POOR

https://www.youtube.com/watch?list=PLnIezJPlxqvcNS2LXNyZofjzdLDhyejm&v=XaP00Xynfjk
The Story of the Daily Saver

Ibu Minah is a vegetable seller trapped in a vicious cycle of credit

- Day 1: Husband's salary – watchman, odd jobs, carpentry
- Day 8: Pay loans: motorcycle, TV, cupboard
- Day 8: Pay electricity, school fees
- Day 15: Medical emergency
- Day 15: Income from stall
- Day 22: Daily: saving at Arisan, pay loan shark
- Day 22: Daily: food, kids allowance
- Day 30: Remittance from family member or Loan from loan shark
- Day 30: Cycle repeats

Financial Diary for the Daily Saver

High volatility in income flow, daily active-savings discipline, poor financial literacy and multiple open lines of credit
Financial Diary for the Daily Saver

Majority household income is locked in liabilities and multiples open lines of credits for managing daily liquidity

Husband's salary – watchman, odd jobs, carpentry
Pay loans: motorcycle, TV, cupboard
Pay electricity, school fees
Medical emergency
Income from stall
Daily: food, kids allowance
Daily: saving at Arisan, pay loanshark
Remittance from family member or Loan from loan shark
Remittances have a smoothing effect on the volatility
Manages liquidity with daily micro-savings and FOUR open lines of credit

Day 1
Day 8
Day 15
Day 22
Day 30

Cycle repeats

Majority income is perpetually locked in liabilities versus assets, thus the daily saver is trapped in a cycle of credit
Implications for Product Design

*Daily Savings and short-term financing devices help smooth volatility but unable to lift her from the cycle of credit and provide long-term financing to create a lasting impact*

1. Financial Literacy Tools to **build financial capability**, manage repayment schedules and achieve savings goals

2. The poor need **active savings products** that yield **interests** or **auxiliary benefits** like helping achieve savings goals for **self and community**

3. Access to **Longer Term Financing Options** with **affordable cost of credit** to realize lasting impact on livelihoods

- Higher concentration of income in **liabilities** versus savings with **multiple open lines of credit and poor awareness of interest rates**

- Savings are put to work in ‘**Active’ Savings** in ROSCA (Arisan) with tangible benefits of interest payout - either for self or for community

- Patience to wait out for longer period yields **higher interest payout**

- **Low propensity** to store savings in ‘**liquid’ or ‘idle’ form**

- Match income to **immediate spending in assets** even with unexpected incomes

- **Financing options for longer-term investments** are limited to make a lasting impact to livelihood enhancement
ACTIVATING ‘CHANGE’ AGENTS

Transform existing retail infrastructure into low-cost community banking outlets
Mobile + Agent Banking lowers costs for financial inclusion

For sustainable financial inclusion products for micro-entrepreneurs like Ibu Gusti

Costs lowered by 3X

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Acquisition cost per account per month</th>
<th>Total variable costs</th>
<th>Total fixed costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Wallet</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile based bank agent</td>
<td>$1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POS based bank agent</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal money lender</td>
<td>$2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFI (LPD)</td>
<td>$4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Branch cashier</td>
<td>$6.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DAILY COSTS ($)  
-  2.0  4.0  6.0

- Illustrative transactional savings account costs $ (2 deposits, 2 withdrawals, 1 transfer in agent channels)

- Operating at 100% capacity utilization
1. Micro-loans: Short term liquidity shots

*Emergency loans products help smooth income volatility and manage short-term liquidity needs*

**FI – Telco partnership model**

- **Data analytics for risk assessment**
- **Underwrites credit from their balance sheet and bears risk for defaults**

- **Serves as initial source for data**
- **Provides distribution channel for credit provision**

- **Key data points are level and frequency of mobile money transactions and loan repayments for repeat users**
- **Call data and demographics do not play as important a role**

Source(s): Industry figures, company reports
2. Build comprehensive credit history via digital footprint

* A self-learning ‘big data scoring’ algorithm that perfects over time and minimizes risk

**Integrated decision engine gathers inputs from multiple digital touch-points**
3. Extending long-term financing options

Leveraging new age risk assessment models for non-collateralized lending that can make significant impact to the lives of productive poor

- **Goal**: Filling gap between short-term liquidity shots and Current commercial loans
- **Challenge**: Reducing NPAs and managing delinquency for non-collateralized loans
- **Solution**: Leverage self help groups, big data scoring and low cost of tech-driven automated decision engines

**Short-term Finance**

**Long-Term Finance**
4. Digitizing Informal Micro-finance & ROSCA models

Leveraging group wallets, group savings and group lending for increased credit worthiness

Leveraging power of “Groups” where higher income of leaders to uplift the rest and mitigate risk

Creating homogeneous groups and risk profiles for credit assessment
5. Community based P2P Lending
Crowdsourcing Funds from friends, family and marketplace lenders

Create wish list

Invite friends and family to contribute to wish list and set recurring payments

Track and Redeem Wish (Instant Buy from retailer website)
6. Pooled Savings as Pre-Cursor for Financial Capability

Increase Deposit Base for FI to further increase priority lending, increase interest payouts and build financial literacy

1. Create group wallet with term period and savings target defined by group admin

2. Savings rate is automatically calculated based on group wallet definitions

3. Admin invites members to join the group account by linking to existing customer reference number (mobile, email, etc.). Members accept invite to join

4. UNLOCK: In case of emergency cash-out by a member, group rules define approval terms by all members. Individual contributions will then be transferred to individual wallets

5. Group members automatically transfer recurring amount from principal savings account into group wallet based on rule definitions at product creation

6. Members earn interest on daily/monthly basis against the total wallet balance as per savings terms
7. Financial Literacy and finance management solutions

Intuitive UX, alerts and gamification to seamlessly build financial capability

Create New Savings Goal

Define rules for goal and term for savings

Define source funds for drawing savings, and recurrence schedule

Monitor and manage progress
To summarise…
All stakeholders must align for MFS to reach scale while keeping the customer in the forefront

Design for user engagement versus commercial profitability and lowering costs

- Proportional risk assessment and tiered KYC
- Open standard API formats
- Interoperability and shared infrastructure
- Augmenting public-private partnerships
- Pave way for scalability and future-looking technology design

CONSUMER CENTRIC DESIGN

BUSINESSES (commercial viability)

REGULATORS (regulatory feasibility)
Contact:

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## Baseline delivery costs for lending product

<table>
<thead>
<tr>
<th>Annual cost per loan, $US</th>
<th>Key activities</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 – 3.5</td>
<td>Credit officer conducts customer education with potential applicants (e.g., financial literacy training)</td>
<td>Very little marketing and advertising cost as most new customers come through referrals</td>
</tr>
<tr>
<td>3 – 5.5</td>
<td>Credit officer meets with applicant to take in application documents and meet guarantors</td>
<td>Applicants typically must come for multiple visits because they do not have all documents and guarantors on first visit</td>
</tr>
<tr>
<td>5.5 – 6.5</td>
<td>Admin officer enters applicant into database</td>
<td>Steps can vary according to bank model (e.g., level of centralization, use of technology)</td>
</tr>
<tr>
<td>10 – 20</td>
<td>Credit officer conducts home visit to assess riskiness and collateral</td>
<td>Home visit the primary cost driver</td>
</tr>
<tr>
<td>5 – 9</td>
<td>Cashier collects loan payments once / month</td>
<td>Some banks use mobile payments, lowering cashier costs</td>
</tr>
<tr>
<td>~0.5</td>
<td>Accountant manages portfolio, prepares books, and files internal and external reports (e.g., audit)</td>
<td>Some banks check-in regularly to monitor business performance</td>
</tr>
<tr>
<td>2 – 2.5</td>
<td>Labor and infrastructure costs on maintaining core loan management system</td>
<td>...</td>
</tr>
<tr>
<td>1.5 – 7</td>
<td>Credit officer calls and test borrower</td>
<td>Cost varies significantly with share of loans in default at a given time and intensity of collections operation</td>
</tr>
<tr>
<td>9 – 11</td>
<td>Losses from write offs</td>
<td>Loss rate of 5-6%, typical across business offering microloans</td>
</tr>
</tbody>
</table>