SlumLav Millionaire

Morgan Stanley Sustainable Investment Challenge
Tina Aikyo, Ik Jae Jeong, Kaustubh Rajnish, Kevin Delissy
Approach

Challenge and Need

Details of the Financial & Operational Solution

Roadmaps and Risks
Key Objective

Develop institutional quality investment vehicles that seek **positive social impact** and **competitive financial returns**

- **Social Impact**
- **Financial Return**
The Microfinance Institutions have higher proportions of female borrowers have **A LOWER PORTFOLIO-AT-RISK**

**2.5 billion** do not have basic sanitation

**1.5 Billion** Women in the World are not financially independent

**EVERY 20 SECONDS,** a child dies as a result of poor sanitation
**Target Market**

**India** faces multiple challenges in not only sanitation but also microfinance and women empowerment.

### List of countries with child deaths due to diarrhea

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Total Number of Annual Child Deaths Due to Diarrhea</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>India</td>
<td>386,600</td>
</tr>
<tr>
<td>2</td>
<td>Nigeria</td>
<td>151,700</td>
</tr>
<tr>
<td>3</td>
<td>Democratic Republic of the Congo</td>
<td>89,900</td>
</tr>
<tr>
<td>4</td>
<td>Afghanistan</td>
<td>82,100</td>
</tr>
<tr>
<td>5</td>
<td>Ethiopia</td>
<td>73,700</td>
</tr>
<tr>
<td>6</td>
<td>Pakistan</td>
<td>53,300</td>
</tr>
<tr>
<td>7</td>
<td>Bangladesh</td>
<td>50,800</td>
</tr>
<tr>
<td>8</td>
<td>China</td>
<td>40,000</td>
</tr>
</tbody>
</table>

### Population practicing open defecation, by countries

- Rest of the world: 205 million
- Indonesia: 66 million
- Ethiopia: 52 million
- Pakistan: 50 million
- China: 37 million
- Nigeria: 29 million
- Brazil: 18 million
- Bangladesh: 18 million
- Sudan: 14 million

### Microfinance growth outlook by region

![Microfinance growth outlook by region](image)

### Economic contribution of women

**Forecast increase in GDP by 2020, %**

- **India:** 56%
- Argentina: 49%
- Italy: 46%
- Brazil: 43%
- Japan: 38%
- Spain: 35%
- China: 34%
- Britain: 33%
- United States: 30%
- France: 29%
- Germany: 28%
- Sweden: 23%

*Source: Booz & Company, 2012*
Concept

**Women Operated Microfinance Driven Portable Toilet Installations for Women across Urban Indian Slums**
Idea of installing compost toilet in India has been around the market for several years, however, they are focused on either Social Impact or Financial Return.
Our Value Proposition

Unique Product + Competitive Financial Structure + Established Partnerships

Social Impact:
Save millions of people

Financial Return:
Save millions of dollars

A social impact investment fund that provides improved sanitation to currently unreached populations and communities in urban slum in India accelerating health, social and even economic development with strong value creation and significant health & environment benefit.
Unique Product

Blue Diversion

- Odorless
- Coin Dispensed
- Solar Powered
- NO Electricity
- 300 USD
- 10 Year lifecycle
- Soap Dispenser
- Rugged Design
- NO Water
- Easily Removable Compost

Compost Separator

- self-sealing lid of faeces container
- ergonomic handle
- sealing mechanism
Competitive Financial Structure
Operating & Financial Model

**Back End Investment**
- Cash Flow
- Product Flow
- Support

- Fund Partners
- Slum Lav Millionaire
- External Partners

**Front End Operational**
- Cash Flow

- Microfinance Institution
  - Microfinance loans
  - Loan repayments

- Government
  - Subsidy
- NGOs

- Operators / Cleaners
  - Salary
  - Collection of toilet payments, sales proceeds of manure

- Cleaners
  - Maintenance / Cleaning
  - Daily collection of manure

- Portable Toilets
  - Toilet payments
  - Usage

- Customers
Partnership Ecosystem

- **Impact and Institutional Investors**
  - Promote to investment community

- **Investment Bank**
  - Partner with Leading IB

- **Microfinance Institutions**
  - Negotiate with local MFIs

- **SLUMLAV MILLIONAIRE**
  - Secure toilets through Local Franchise
  - Partner with NGOs for distribution

- **Government**
  - Negotiate with Government for operator Subsidies

- **Product Manufacturer**

- **Government of India**

- **NGOs**

- **Public Private Partnership**

- **NGOs**
  - Partner with Leading IB

- **Product Manufacturer**
  - Negotiate with local MFIs

- **Investment Bank**
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- **Government**
  - Partner with NGOs for distribution
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Roadmaps and Risks
Back End Investment Cash Flow

**Investors**
WACC: 15%

**Investment Bank**
Fee: 3%

**MFI Loan Book**
Fee: 4%

**Operators**
Interest
Payment: 24%

**SlumLav Millionaire**
Mgmt Fee: 1%
NPL Cost: 1%

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**Expected Return**
Senior: 9%
Junior: 25%

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**CDO Structure**
- 16M US$ CDO
- 3 Year Maturity

**Senior Tranche**
- 11 units of USD$ 1M
- 100% FX Hedged

**Junior Tranche**
- 5 units of USD$ 1M
- 100% FX Hedged with assumed NPL ratio of 5%
- Above and Below NPL Ratios will impact hedging

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**CDO Features**
- Investors receive above market returns for comparable risk profile: US CLO BBB- 7.5%, US CLO Equity 15%
- MFI is incentivized to write loans backed by toilets
- MFI must keep a buffer of 500k USD of loans on its own books in order to ensure quality of background checks
- Increased investors demand for CDO will help push loan rates lower
Issuance of CDO Units

MoM Loan Growth Rates

- 2014: 20%
- 2015: 14%
- 2016: 7%
- 2017: 4%
- 2018: 2%

Wave 1

Phase Launch

CDO Launch

Fast Growth

Growth Phase

Maturing Phase

Number of Units for Wave 1 (2015)

- Senior
- Junior

Months:

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Number of Units:

- Month 1: 1 Senior, 1 Junior
- Month 2: 1 Senior, 1 Junior
- Month 3: 1 Senior, 1 Junior
- Month 4: 1 Senior, 1 Junior
- Month 5: 1 Senior, 1 Junior
- Month 6: 1 Senior, 1 Junior
- Month 7: 1 Senior, 1 Junior
- Month 8: 1 Senior, 1 Junior
- Month 9: 1 Senior, 1 Junior
- Month 10: 1 Senior, 1 Junior
- Month 11: 1 Senior, 1 Junior
- Month 12: 1 Senior, 1 Junior

[Graph showing the issuance of CDO units with a timeline and the number of units for each month in 2015.]
## Operator Financials

### Total Value
- **Total Value:** 18,000
- **Downpayment:** (2,000)
- **Loan:** 16,000
- **Interest %:** 25.0%
- **Monthly Interest:** 2.1%
- **Monthly Payment:** 1,333
- **Sqft:** 15.0
- **Rent per Sqft:** $3
- **Monthly Rent:** $45
- **INR F/X:** 60
- **Monthly Rent (INR):** 2,700

### Loan Amortization Schedule

<table>
<thead>
<tr>
<th>Month</th>
<th>BoM</th>
<th>Interest</th>
<th>Principal</th>
<th>EoM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16,000</td>
<td>(333)</td>
<td>(1,000)</td>
<td>14,667</td>
</tr>
<tr>
<td>2</td>
<td>14,667</td>
<td>(306)</td>
<td>(1,028)</td>
<td>13,333</td>
</tr>
<tr>
<td>3</td>
<td>13,333</td>
<td>(278)</td>
<td>(1,056)</td>
<td>12,000</td>
</tr>
<tr>
<td>4</td>
<td>12,000</td>
<td>(250)</td>
<td>(1,083)</td>
<td>10,667</td>
</tr>
<tr>
<td>5</td>
<td>10,667</td>
<td>(222)</td>
<td>(1,111)</td>
<td>9,333</td>
</tr>
<tr>
<td>6</td>
<td>9,333</td>
<td>(194)</td>
<td>(1,139)</td>
<td>8,000</td>
</tr>
<tr>
<td>7</td>
<td>8,000</td>
<td>(167)</td>
<td>(1,167)</td>
<td>6,667</td>
</tr>
<tr>
<td>8</td>
<td>6,667</td>
<td>(139)</td>
<td>(1,194)</td>
<td>5,333</td>
</tr>
<tr>
<td>9</td>
<td>5,333</td>
<td>(111)</td>
<td>(1,222)</td>
<td>4,000</td>
</tr>
<tr>
<td>10</td>
<td>4,000</td>
<td>(83)</td>
<td>(1,250)</td>
<td>2,667</td>
</tr>
<tr>
<td>11</td>
<td>2,667</td>
<td>(56)</td>
<td>(1,278)</td>
<td>1,333</td>
</tr>
<tr>
<td>12</td>
<td>1,333</td>
<td>(28)</td>
<td>(1,306)</td>
<td>0</td>
</tr>
</tbody>
</table>

### Monthly
- **Usages per Day:** 200
- **Price per Usage (INR):** 2
- **Days:** 30
- **Usage Fees:** 12,000
- **Fertilizer:** 2,000
- **Total Revenue:** 14,000
- **Cleaner:** (4,000)
- **Misc.:** (3,000)
- **EMI:** (1,333)
- **Rent:** (2,700)
- **Total Expenses:** (11,033)
- **Net Income:** 2,967
- **Net Profit %:** 21%

### ROI
**ROI = 120%**
Approach

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Roadmaps and Risks
Road Map

Short Term

April - June
- Build up solid partnerships with toilet manufacturers, NGOs, MFI, and investors

July - August
- Kick-off of first micro loans
- Distribute first toilets

September - December
- Complete 1st 3m USD microfinance loans in order to trigger launch of CDO

Long Term

2014
- Wave 1 – USD 16m CDO
- Issuance

2015

2016

2017

2018
- Wave 2 – USD 22m CDO
- Maturity
- Issuance
- Maturity

2014
- Wave 1 – USD 16m CDO
- Issuance

2015

2016

2017

2018
- Wave 2 – USD 22m CDO
- Maturity
- Issuance
- Maturity
Impact – Wave 1 Target

Social Impact

108,000+
toilets installed

21,000+
female operators

Financial Return

120%
Returns for the Operators

25%
Returns for the Impact / Private investors

9%
Return for Pension Fund investors

USD 16 million CDO
## Risks & Mitigation

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default risk of operators</td>
<td>• Partnering with the local microfinance institution</td>
</tr>
<tr>
<td>Availability of resource</td>
<td>• Conflict with the existing subsidies programs: Discussion will be held with the Government of India to reduce toilet subsidies in the target areas</td>
</tr>
<tr>
<td>Conflict with existing Sulabh program</td>
<td>• Consultation will be made to Sulabh International</td>
</tr>
<tr>
<td>Lack of technical skills of operators</td>
<td>• Provide initial technical training to operators as needed</td>
</tr>
<tr>
<td>Default risk of operators</td>
<td>• Partnering with the local microfinance institution will mitigate this default risk through MFI's frequent visits and business advise to the operators</td>
</tr>
<tr>
<td>Confrontation with local operators</td>
<td>• Partnering with government &amp; local NGOs will help mitigate risk</td>
</tr>
</tbody>
</table>
Expansion Plan

Wave 1
All slum dwelling women 15+ Years in Top 8 Metro ($8M market)

Wave 2
All slum dwelling women 15+ Years in 32 Tier II cities ($16M market)

Wave 3
Extending to Men in India’s Top 8 Metros ($14M market)

Wave 4
Extending to Men in India’s Next 32 Tier II cities ($22M market)

Wave 5
Extending to other emerging markets
Acknowledgements

• Our Mentor: Ian Potter, Distinguished Fellow at INSEAD

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• Sanergy: Miranda Lewis

• Sulabh International

• Blue Diversion Ltd.