**PROBLEM:** Sub-Saharan Africa (“SSA”) is the world’s region most impacted by HIV and remains as the largest market for HIV medication. Despite the strong local demand, manufacturing of HIV drugs in SSA is still preliminary stages with 70 - 90% of consumed drugs imported. The lack of locally manufactured HIV drugs restricts the local community’s stable access to these drugs, especially when supply chains are disturbed by external events such as COVID. Large international manufacturers are unfamiliar with local landscapes so are hesitant to invest in the market.

**OPPORTUNITY:** The imbalance between local demand and the lack of local manufacturing has drawn global attention. PEPFAR, one of the largest HIV drug procurers, has committed to purchase more locally manufactured drugs. Impact investors, thinktanks and advocacy groups have been working with African governments to push this localized manufacturing. Additionally, large pharmaceutical companies have partnered with local manufacturers to license COVID vaccines, facilitating a more accommodating environment for localized manufacturing.

**TARGET GEOGRAPHY: SOUTH AFRICA**
- Large market (~8.5M people living with HIV with ~$752M annual drug spending)
- Existing drug import, sourcing, manufacturing, & distribution infrastructure
- Renewed government support in growing local manufacturing
- Mitigating supply chain risk of critical healthcare needs
- University of Cape Town provides key funnel of skilled medical professionals
- Existing local manufacturers of other non-HIV drugs to target
- Precedent of existing partnership between large pharma and local manufacturer for COVID vaccine

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**FUND PROFILE**

<table>
<thead>
<tr>
<th>Fund type</th>
<th>Convertible bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund size</td>
<td>81 million USD</td>
</tr>
<tr>
<td>Asset class</td>
<td>Collateralized Debt</td>
</tr>
<tr>
<td>Ticket size</td>
<td>5 million USD</td>
</tr>
<tr>
<td>Tenor</td>
<td>10 years</td>
</tr>
<tr>
<td>Geography</td>
<td>South Africa</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>Fixed at 8.8%</td>
</tr>
<tr>
<td>Interest PMT Dates</td>
<td>Every six months</td>
</tr>
<tr>
<td>Fees</td>
<td>2%</td>
</tr>
<tr>
<td>Use of funds</td>
<td>Working capital and manufacturing facility capex</td>
</tr>
<tr>
<td>Credit</td>
<td>Procurement contract from PEPFAR</td>
</tr>
</tbody>
</table>

---

**FUND DIAGRAM**

1. **Investors**
   - SPV structures bonds
   - Bond proceeds
   - JV issues convertible bond; Payment of interests and principal

2. **HIV Fighter Fund**
   - Provides incentives to large manufacturers to provide tech & knowledge transfer to local manufacturers with PEPFAR’s procurement agreement

3. **Joint Venture**
   - JV sells drugs to PEPFAR; Impact reporting
   - Procurement contract as guarantee of bond repayment
   - Identifies Operating Partner & Negotiates JV structure

4. **Knowledge & tech transfer**
   - Translation of technology and knowledge to local manufacturers

5. **Operating Partner**
   - Provides drugs
   - Procurement contract
   - Profits & control sharing

---

**People Living with HIV in SSA**
- 25.6M People living with HIV in SSA
- 67% of Global HIV Cases
- 0.86M New infections of HIV in SSA in 2021
- 57% of Global Rate
Our potential investors usually finance enterprises and intermediaries that result in long-term growth and sustained benefits to communities, probably with a focus on emerging markets. Typical investors include:

- Multilateral development banks
- Foundations
- Impact investors

**TARGET INVESTORS**

The proposed solution help address several sustainable development goals declared by UN:

### SDG GOALS

- **3 Good Health and Well Being**
  - **IMPACT**: By localizing manufacturing, HIV Fighter Fund helps stabilize the access to key HIV medicines in SSA, where people are harmed by the AIDS pandemic the most. The growing drug manufacturing industry will also enlarge health workforce in these countries. (SDG 3.3, 3.8, 3.B & 3.C)

- **9 Industry Innovation and infrastructure**
  - **IMPACT**: HIV Fighter Fund helps grow the pharmaceutical industry in SSA, improve local infrastructure, develop technical capabilities, diversify the economy and create jobs for local people. (SDG 9.3, 9.5, 9.A & 9.B)

### IMPACT & METRICS

**IMPACT**

- Market Expansion: Expand to other diseases such as tuberculosis and malaria that cause disproportional deaths in SSA.

- Geographical Expansion: Expand to other SSA countries such as Kenya, Nigeria, and Rwanda etc.

- Value Chain Expansion: Extend local manufacturer’s capabilities to produce active pharmaceutical ingredients (APIs).

**METRICS**

- # of HIV patients benefited;
- $ of HIV drug sales;
- # of people in health workforce;
- $ of GDP created;
- # of jobs created;
- % of pharmaceutical industry growth.

### RISK

- Credit risk: Issuer not able to repay interest and principal
- Regulatory risk: Change of government regulations and delay of drug approval
- Project risk: Local manufacturer not able to set up facilities and produce
- Supply Chain risk: Dependency on API imports and local supply chain delays

### MITIGATION

- The procurement agreement from PEPFAR ensures sale revenue for repayment
- Monitor policy changes closely and proactively communicate with policy makers and partners such as PEPFAR
- Operating partners transfers tech, expertise and experience
- Work closely with governments to ensure stable supply of essential resources such as electricity
- Leverage PMPA pooled procured mechanism and AfCFTA to strengthen local supply chain, market distribution and trade

### BOND ISSUER 10-YEAR FINANCIAL PERFORMANCE (M USD)

Net Income & Cash Balance on Portfolio Investment (In Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Income</th>
<th>Bond Repayments</th>
<th>Cash Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>$100</td>
<td>$50</td>
<td>$150</td>
</tr>
<tr>
<td>2024</td>
<td>$120</td>
<td>$60</td>
<td>$180</td>
</tr>
<tr>
<td>2025</td>
<td>$150</td>
<td>$75</td>
<td>$200</td>
</tr>
<tr>
<td>2026</td>
<td>$200</td>
<td>$100</td>
<td>$300</td>
</tr>
</tbody>
</table>

**Key assumptions:**

- 81 M USD bond issuance at the end of 2023;
- 100% bond principal repayment in year 10 if not converted;
- 10.8% annual interest rate;
- Total 33M USD CAPEX spreading evenly in the first 5 years;

Drug sales beginning in year 4