



Financial Instruments to scale up investment in Geothermal Power. A Mexican approach.

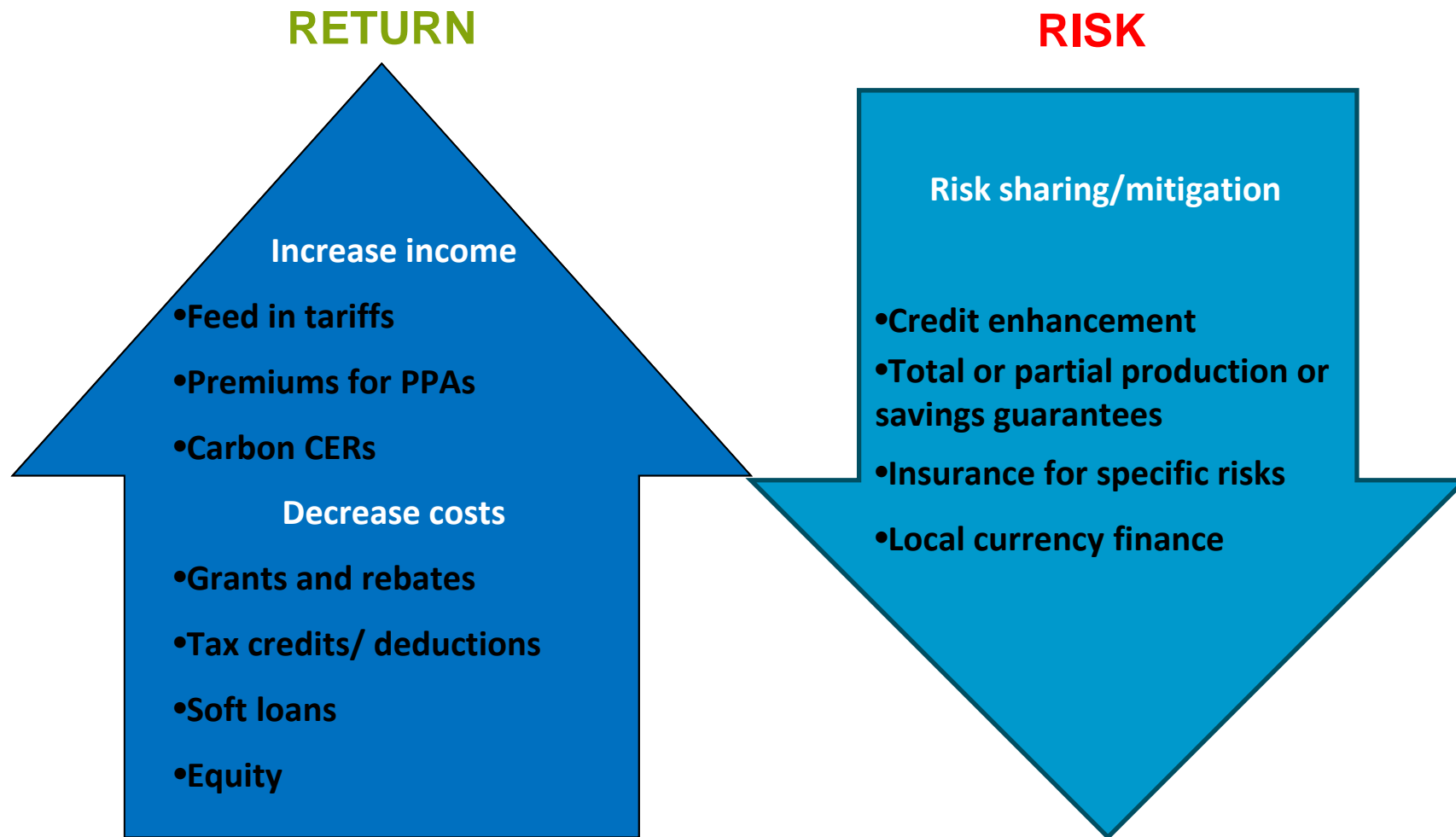
Fourth Annual San Giorgio Group Meeting,
CPI, 16th and 17h October 2014

Ramon Guzman, CMF/IFD

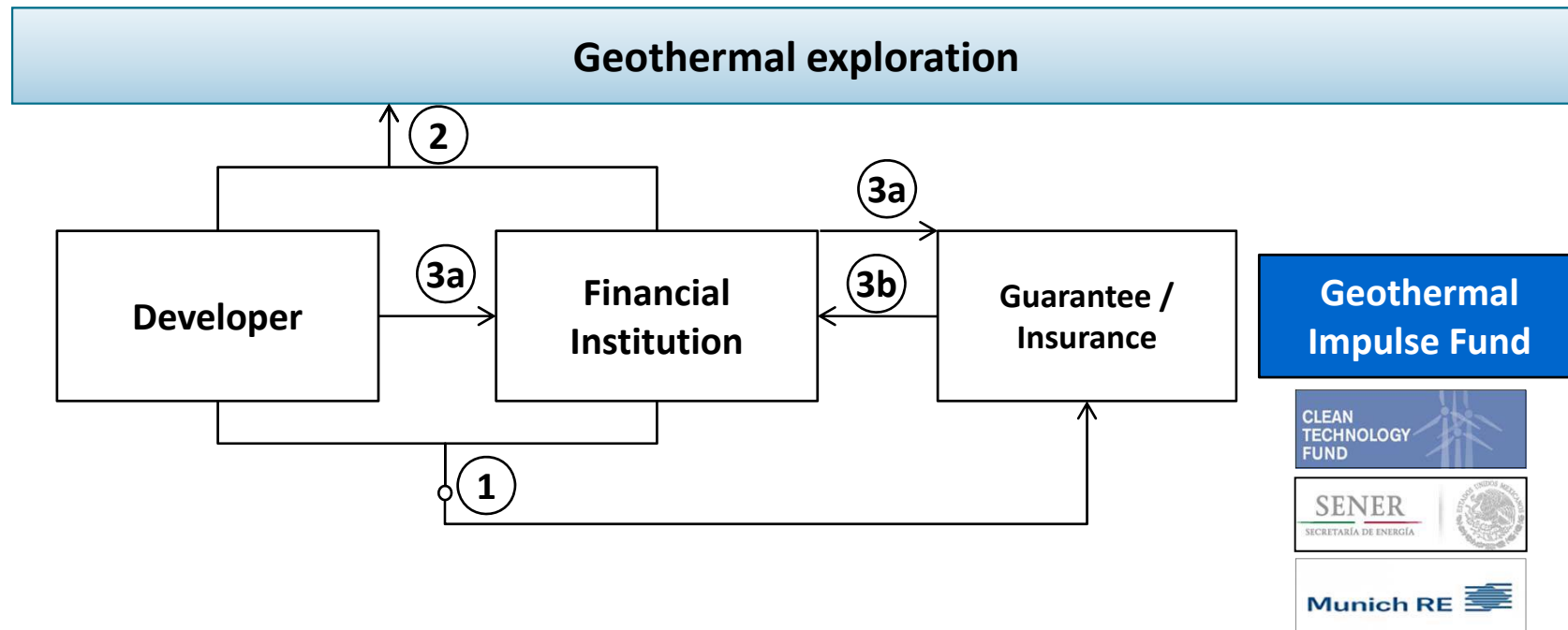
Outline

- **Introduction, our approach**
- **The view of investors**
- **The view of donors/authorities**

The point of view of the investor: a risk-adjusted-return approach



Insured/convertible loan: structured to share risk during the exploration stage



- ① • A developer, leveraged by a financial institution, pays a fee/insurance premium that covers financing during the exploration stage
- ② • A developer, leveraged by a financial institution, invests in geothermal exploration
- ③a • In case of a successful exploration, developer re-finances the loan, pays principal and interests and a success fee to Fund.
- ③b • In case of failure, the insurance company/Fund covers the loan.

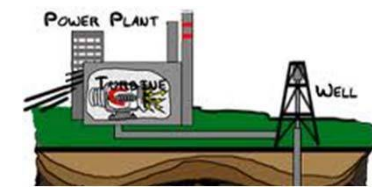
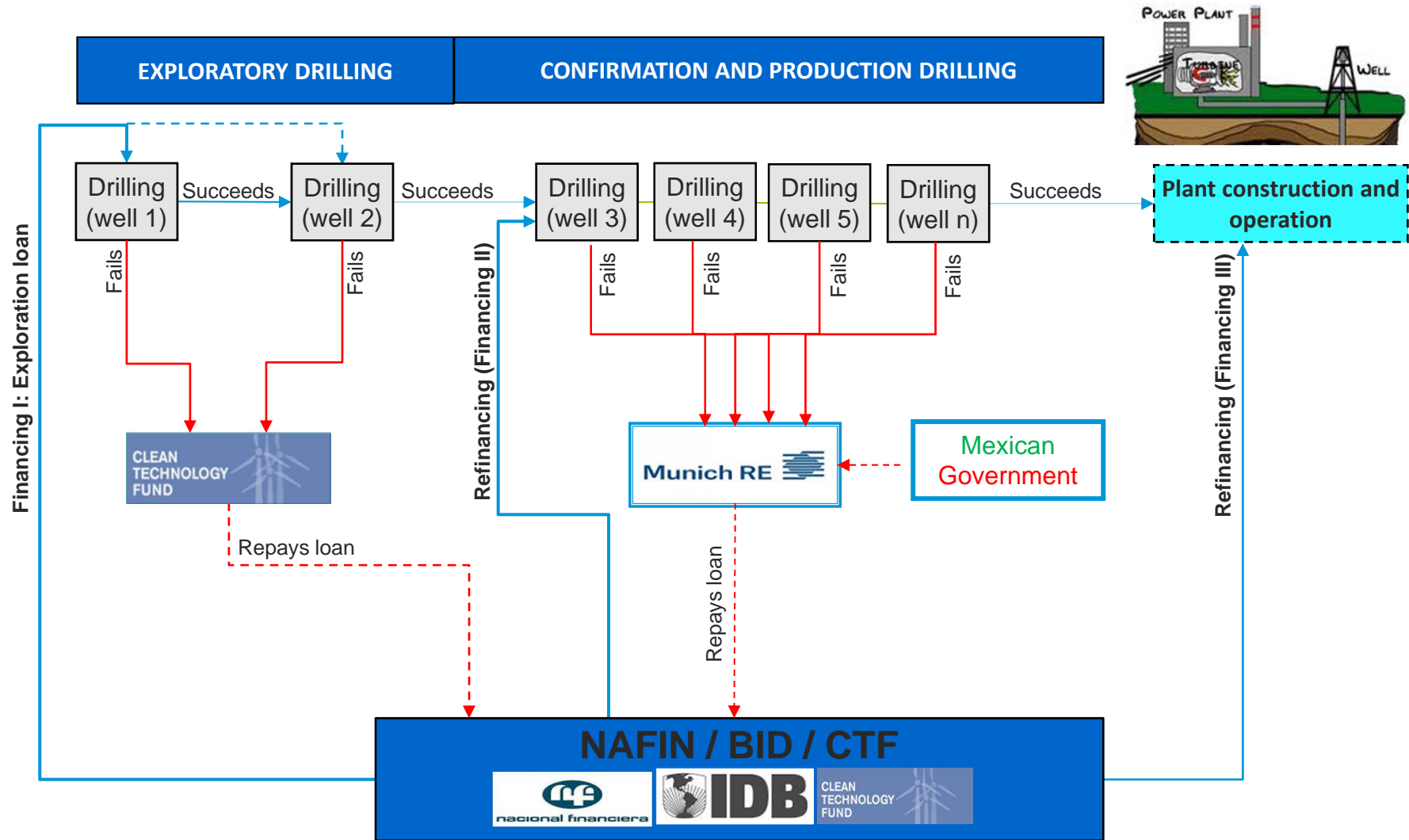
Impact of insured loan for investors

Expected capital flow is not significantly different for successful projects with or without the insured loan, breakeven dates are delayed but not by much.

| <i>Simulation results</i> | VAR | NPV in case of success | IRR |
|--|-----|------------------------|-----|
| Without the loan | 9.3 | 93 | 15% |
| With the loan, Fund pays interest rate | 4.6 | 81 | 17% |
| With the loan, Fund pays interest rate and 25% of the insurance premium | 4.6 | 85 | 18% |
| With the loan, Fund pays interest rate and 100% of the insurance premium | 4.6 | 86 | 18% |

**Lower NPV, Higher return,
Lower value at risk**

Insured/convertible loan: Financing scheme

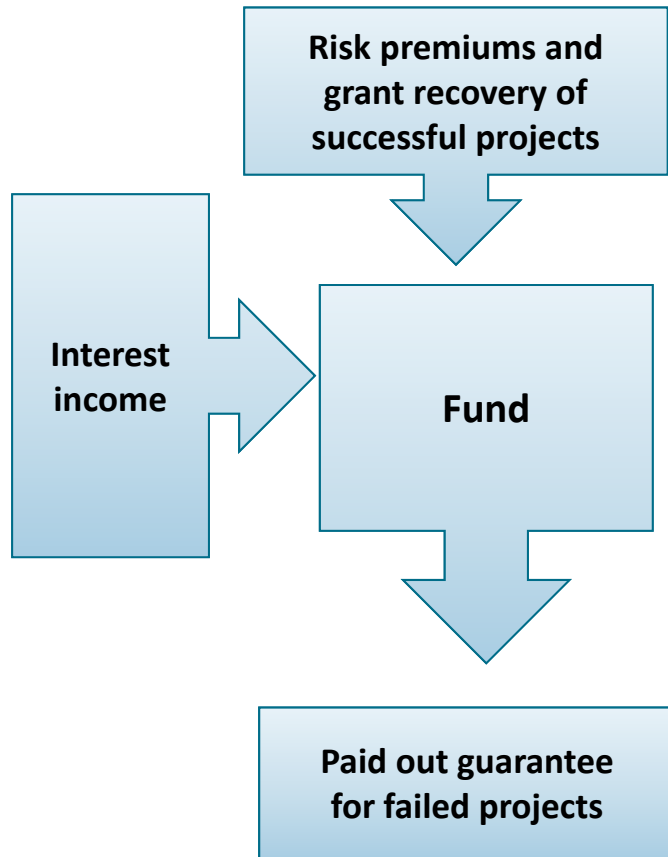


The point of view of Governments and donors

- **The use of public resources:**
 - a) EFFICIENCY IN TERMS OF IMPACT: Modeling the impact of access to finance at early stage**
 - b) MINIMIZING RISK: Moral hazard, risk sharing, minimum capital, support capped per project**
 - c) MAXIMIZING REVOLVING NATURE OF THE FUND: Modeling the sustainability of the fund, the Mexican case**

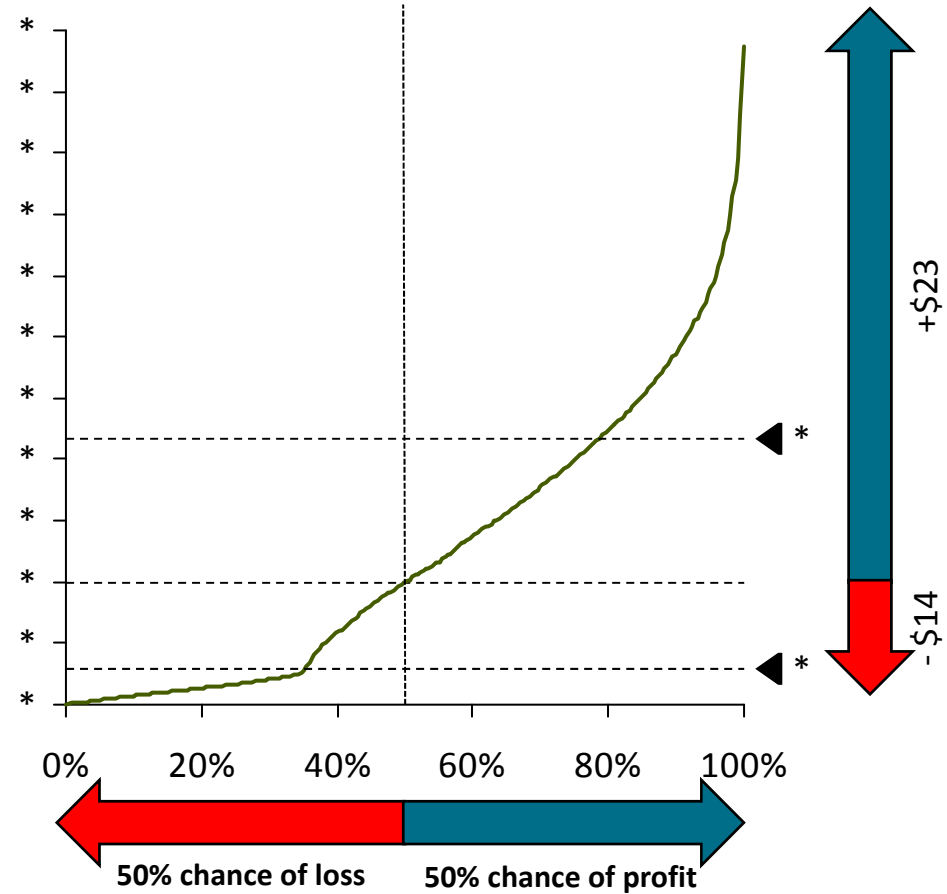
Modeling the sustainability of the fund

Cash Flows



Fund size 15 years out

Million USD



CONCLUSION

- Geothermal Finance in Mexico

- ❑ **SHORT TERM** urgency requires

- ❑ **SPEED** helping Governments scale up investment

- ❑ **LEVERAGE = EFFICIENCY:** blending Government, IDB and international climate finance resources in innovative ways, to scale up private and PPP investment

- ❑ **LONG TERM** requires

- ❑ structuring **DEMAND**, helping bring old CFE projects out of the closet

- ❑ helping design **POLICY**, assisting in the drafting of the new Geothermal Law

- ❑ Using National Development Banks to promote **SUSTAINABLE FINANCING** by **PRIVATE BANKS AND CAPITAL MARKETS**

Institutions for People



IDB

Inter-American Development Bank/ www.iadb.org