Asia-Pacific Climate Finance Fund (ACliFF):

Disaster Risk Financing for Microfinance

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Geophysical Hazard Disrupt Businesses

Geophysical Hazards are correlated risk that impact many borrowers at the same time

- Drought, excess rain, heatwaves, flood, tropical cyclone, earthquakes, volcanoes, landslides, pandemics, etc.

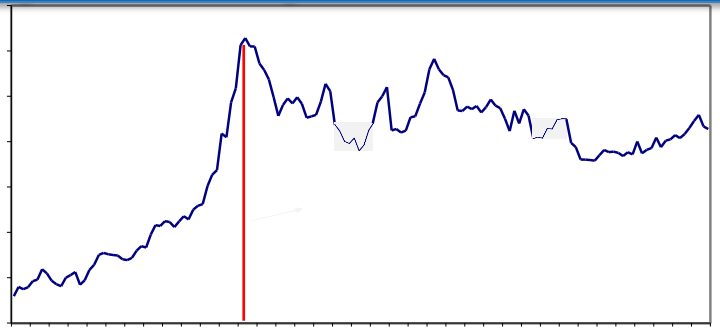
The dynamics of business interruption created by a geophysical shocks have *serious negative implications* for **access to** and **cost of capital.** These impeded costs as well as the business interruption from the shock negatively impact **growth** of the MFI.

These risks are now being seriously evaluated by central banks in developed countries.

This discussion fits best with the **banking regulator**

We estimated that the cost of capital in N. Peru was likely 200bps or higher due to extreme El Nino

Peru agricultural lending after extreme El Nino of 1997-98



Geophysical Hazard Disrupt Businesses

Access to and Cost of Capital

- ✓ Only recently are we developing a deeper understanding of the dynamics of geophysical hazards – developing robust estimates of the added cost of capital.
- ✓ Climate risks alone added 117 basis points (BPS) to the cost of capital in low-income countries in recent years, and that evidence comes from *looking back* at *only climate risk* – seismic risks and pandemics are excluded.
- ✓ Looking forward – "extreme weather events have increased fivefold over the past 50 years“
- ✓ Building resiliency against geophysical hazards requires *ex-ante* Disaster Risk Financing (DRF) whereby the balance sheet of businesses slammed by extreme geophysical hazards can be *quickly rebuilt*.
- ✓ DRF solutions allow for business continuity by having financing immediately after an event. Furthermore, recovery lending from the MFI gives businesses a chance 'to build back better,' *reinforcing a system of resiliency*.

What problem are we trying to solve?

MFIs often have inadequate tools to manage disasters

MFIs can suffer from impacts such as capital erosion, increase in NPL, withdrawal of savings, and withdrawal of wholesale credit. But local borrowers and their communities shoulder the lion's share of the burden as their access to credit **dries up when they need it the most**.

MFIs reduce lending after disasters (Collier 2015) using mix market and EMD

Shocks impact profitability and growth

1. Loan growth declines 11 percentage points in disaster year
2. Another 8 percentage points the following year
3. Lenders with low capital ratios lend substantially less after disaster

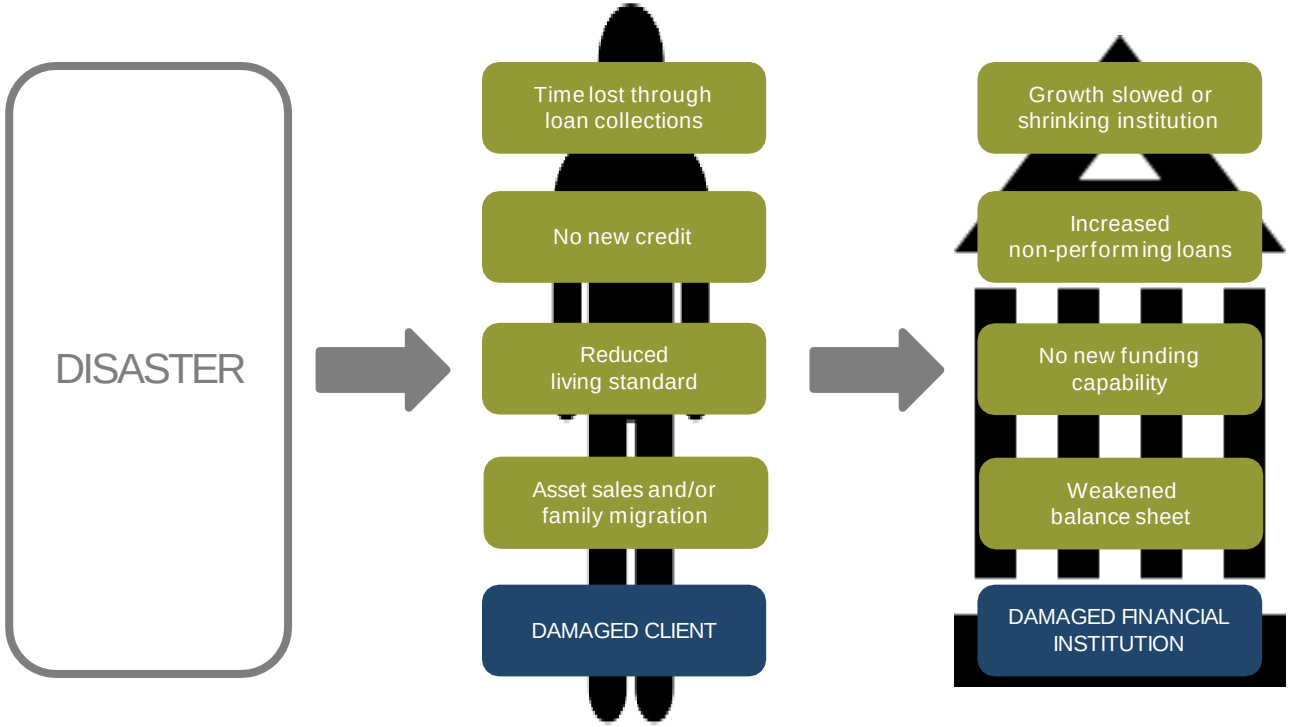
Disaster Risk Financing

By working with the MFIs to better understand their exposures and develop efficient financial tools that provide relative certainty of cash when it's needed most after a disaster. This critical financing allows the MFI to activity rebuild impacted communities post-disaster instead of running away

Continuing or increasing lending from any FI when there is a disaster and their clients' communities have a greater demand is excellent business

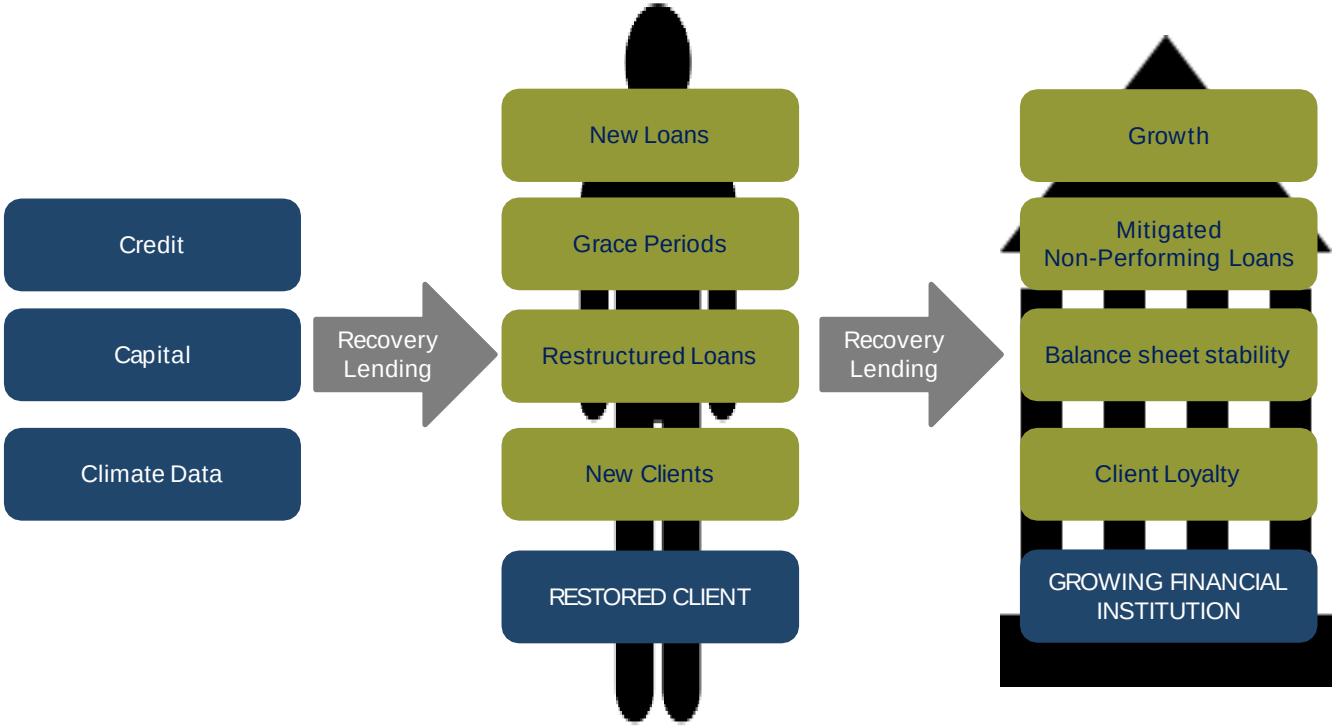
Disaster Impact on Borrowers and FI

Without a financial recovery program, natural disasters often leave both borrowers and the financial institution that serves them in a significantly weakened position that can slow growth capacity, create liquidity stress or in an extreme situation, lead to a bankruptcy situation.



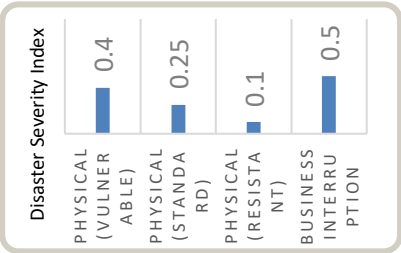
How Recovery Lending Changes things

With the right DRF solutions in place, ***recovery lending*** *(i.e., post disaster lending programs) can offer highly impactive mechanisms to build client resilience, strengthen client loyalty and improve the financial institutions bottom line*



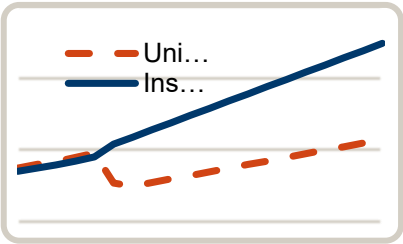
Disaster Risk Financing to build Resiliency

Business Interruption



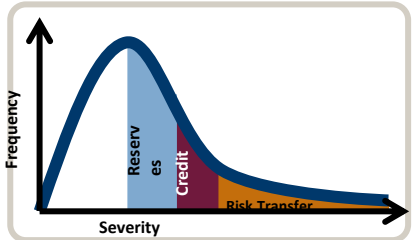
Not just protection for physical assets but the larger set of disruptions and setbacks that are created by extreme events

Business Continuity



First goal is to help clients **continue or increase** their services following a major disaster to maintain stability and continuity of operations.

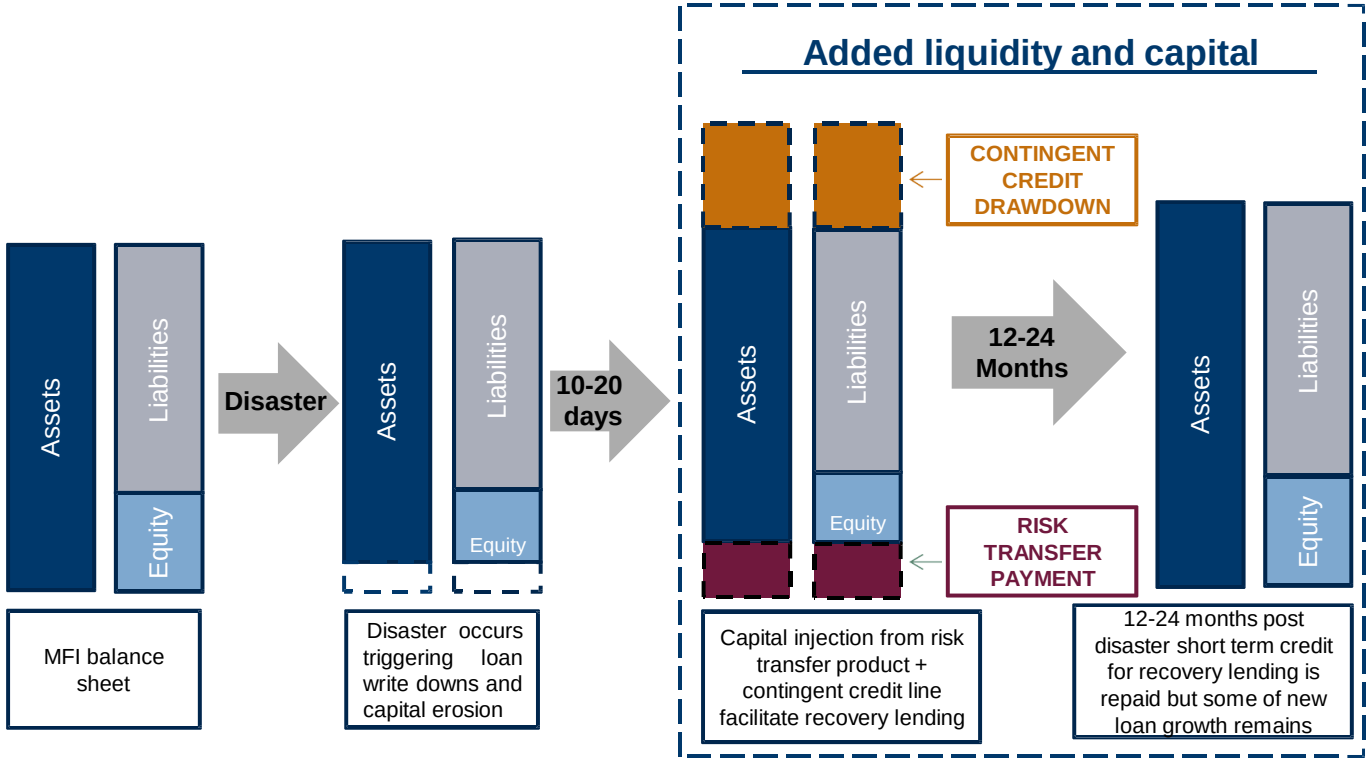
Risk Layering



Optimal risk management requires a tailored blend of multiple financial tools – cash reserves, credit, and risk transfer

Cash Reserves → **Access to Credit** → **Risk Transfer**

DRF solutions rebuild balance sheets



Event-based Disaster Risk Financing

Event-based structures trigger payments based on the statistical rank of the geophysical event. Amounts and modalities for financing are scaled based on the rank (e.g., using only reserves for events occurring 1 in 5 years and all three modalities for events occurring 1 in 100 years).

Unlike an insurance offering, event-based DRF protections are triggered based on third-party data and *require no proof of loss*. Importantly, this means the protection can be used for the expected extra cost and lost income (business interruption) created by geophysical events.

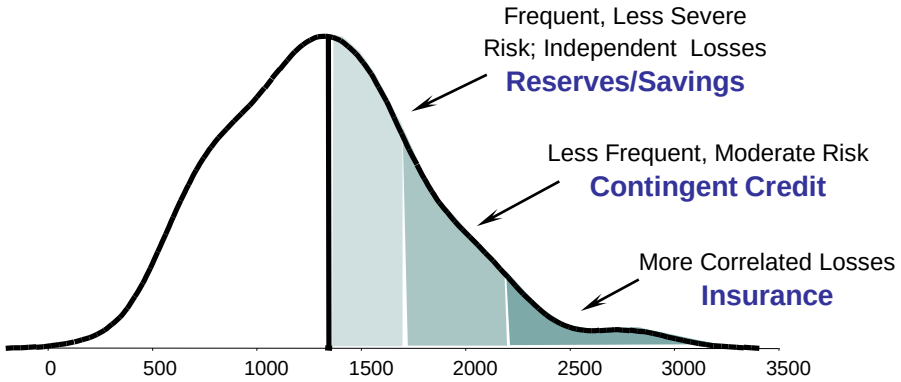
Predictive analytics matches the hazard with the exposure of the client to offer tailored DRF protection.

Parametric DRF in Practice – Layered Financing

The rank (severity) of the event triggers financing from different sources (layering risk)

- **5-year event can trigger funds from a reserve/savings**
- **7-year event can trigger contingent credit**
- **10-year event can trigger risk transfer**

Advanced *parametric* statistics are used to get the rank of an event-based financing structure



This structure is fundamental for protecting financial institutions

Benefits of ex ante DRF

1. Client Retention: By providing its borrowers with financial support through recovery loans and other mechanisms post-disaster, it is expected that the level of retention will increase due to this unique value proposition to their clients, who will have no need to go either go elsewhere or forfeit their debts.
2. New Client Acquisition: FI's may be able to lend into more risky geographies, and post disaster, with a FDRM program in place will be able to reach out to new clients in their community, while their competitors contract lending. Evidence has shown that ample opportunities exist for attracting new clients to grow portfolios.
3. Reduced Loan Write Downs: Experience shows that by providing disaster impacted borrowers with the new loans to restart their businesses and rebuild livelihoods efficiently, the longer-term performance of participating FI's loans are improved resulting in less overall write downs.
4. Increased Leverage: Depending on regulator, lenders and risk management protocols, the FI may have the opportunity to marginally reduce the amount of capital held on its balance sheet, effectively increasing the ability to leverage, with significant benefits for profitability and growth.
5. Cash From Risk Transfer Payout: According to the FI's selected payout structure for their risk transfer products, they receive a cash infusion in the event of a disaster that helps build capital managing the impacts to their balance sheet and support planned response program within their target communities

Who should pay?

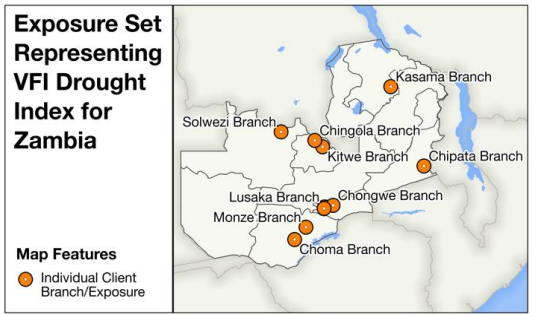
Microinsurance solutions are not recommended as the starting point for MFI using Disaster Risk Financing

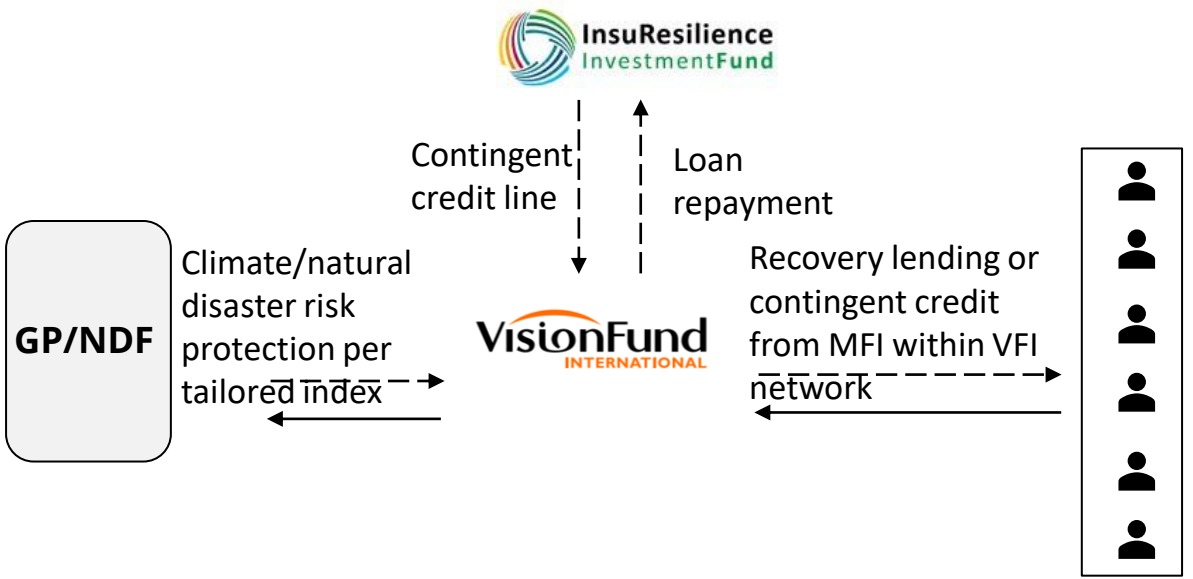
Furthermore, as the DRF solutions presented below involve steps and processes to protect the balance sheet of the MFI which has economic value to the business, ***it is not recommended that the cost be passed onto the borrowers.***

The investors (including development financial institutions) in the MFI should find value in adding these protections as they will make the investment more valuable by reducing the cost of capital and increasingly the likelihood of continued growth after a geophysical shock

Case: Microfinance Network

- ARDIS recovery lending and contingent credit scheme launched in 2018 with 5 participating countries, now scaled to 28 countries across Africa, Asia and Latin America and covering four hazards.
- In 2020, the ARDIS program was activated four times, providing a direct payments of **$315,000** from the NDF and access to up to **$3,950,000** of contingent credit supporting the recovery about **675,000** active borrowers

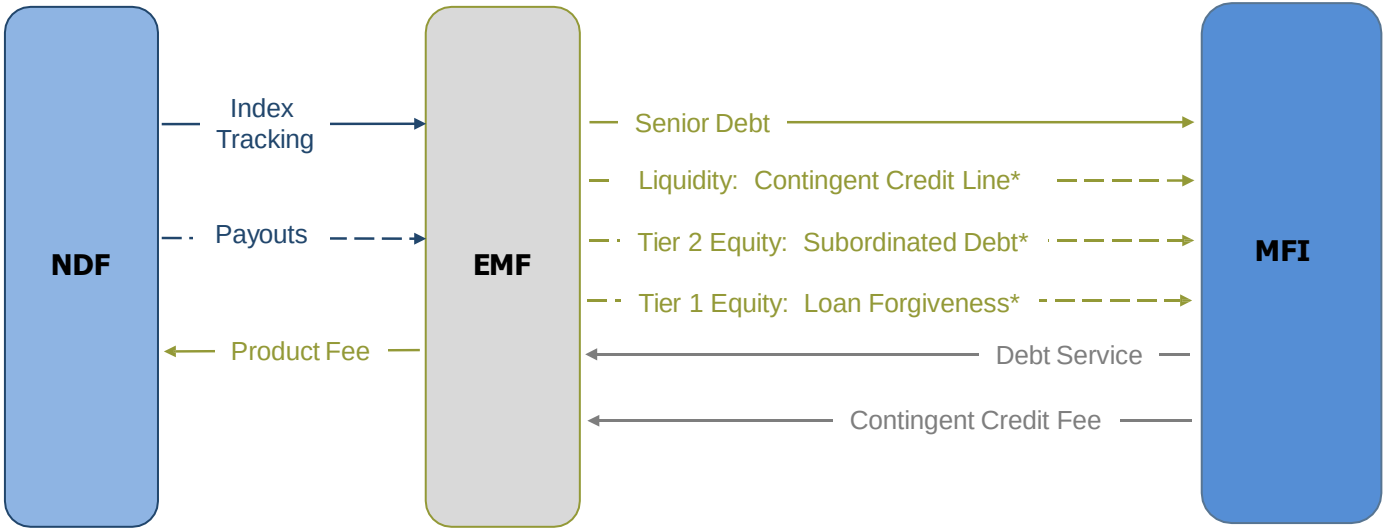




Case: Microfinance Investment Vehicle

The Climate Resilience Enhanced Debt facility is structured for a Cambodia MFI via a **unique partnership** between the

The **Enabling Microfinance Fund (EMF),** managed by Enabling Qapital (**EQ**)
&
The **Natural Disaster Fund (NDF),** managed by Global Parametrics (**GP**).



Case for: Development Financial Institutions (DFIs)

As Overseas Development Assistant (ODA) grew by 50%, investments from DFIs grew over 800% between 2000 ($10 billion) and 2017 ($86 billion).

DFIs are now well positioned to lead the implementation of DRF strategies for financial institutions.

There is a ***solid business case*** for coupling DFI investments with DRF protections. *Efficient DRF protections will increase long-term growth and lower the risk of investments.* DFIs investing in DRF protections can expect their *assets to be worth more when they sell them after maturity.*

DFIs can purchase the catastrophe protection setting in motion requirements and incentives for their fund managers and investees to build upon the same structures

Thank you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