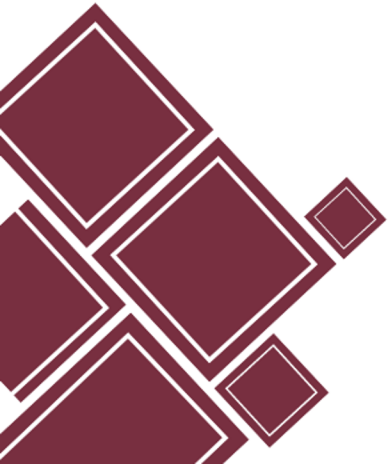
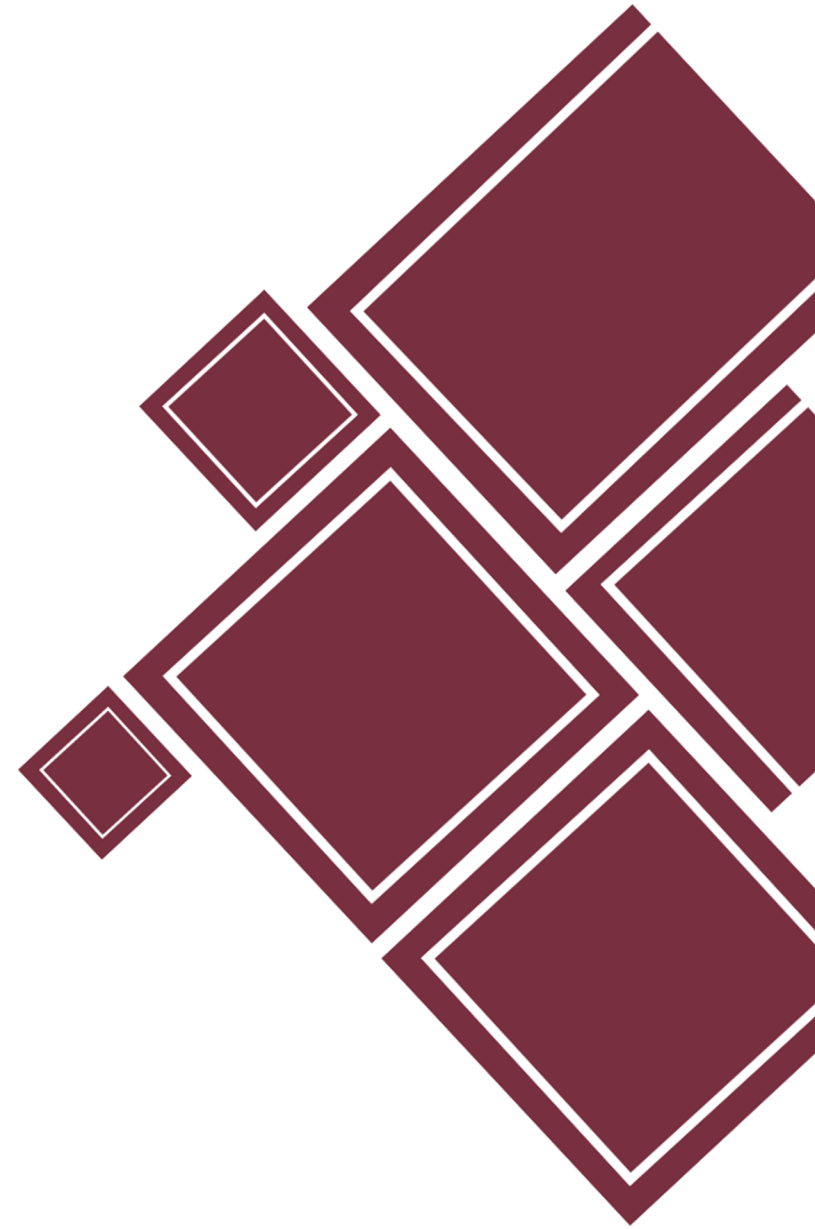


Disaster Risk and Financing Instruments: A Recap

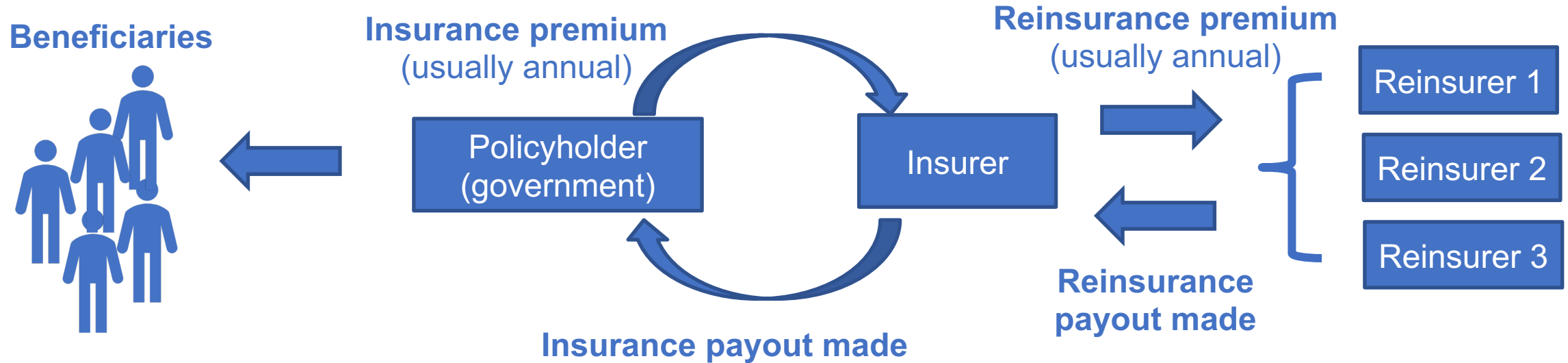
Richard Poulter, Benedikt Signer, Sumati Rajput



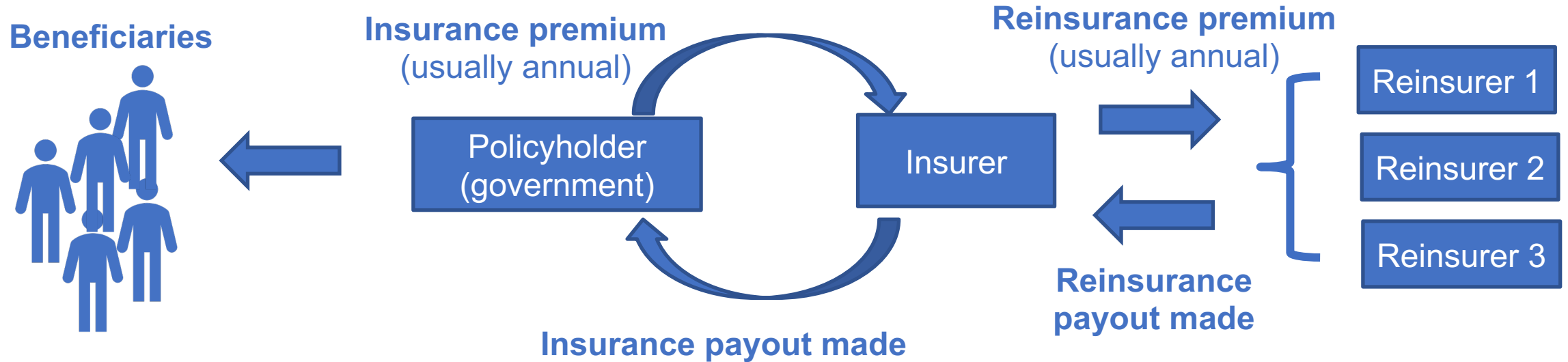
Risk transfer for disasters



How an insurance contract works: traditional (indemnity) insurance



How an insurance contract works: parametric insurance



Claim event occurs

~~Loss adjuster determines loss~~

Calculation agent determines index value (e.g. windspeed, magnitude, estimated loss)

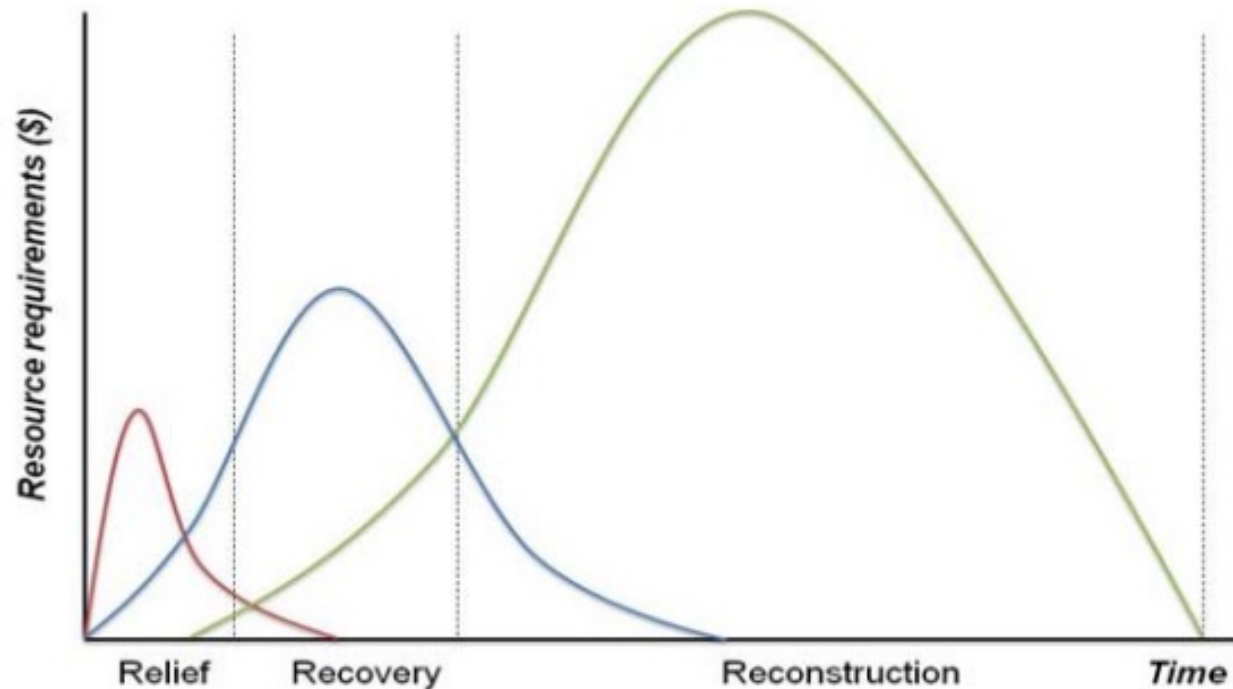
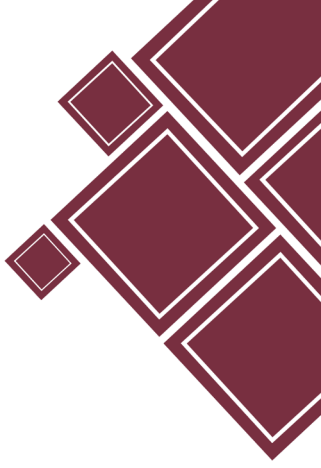


Very fast process, so payout can be made quickly



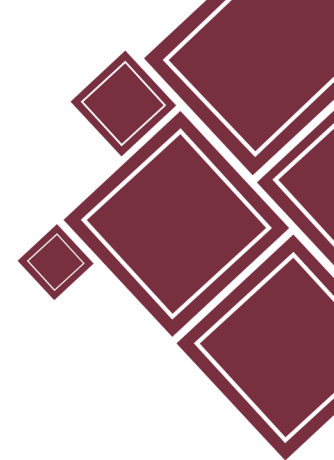
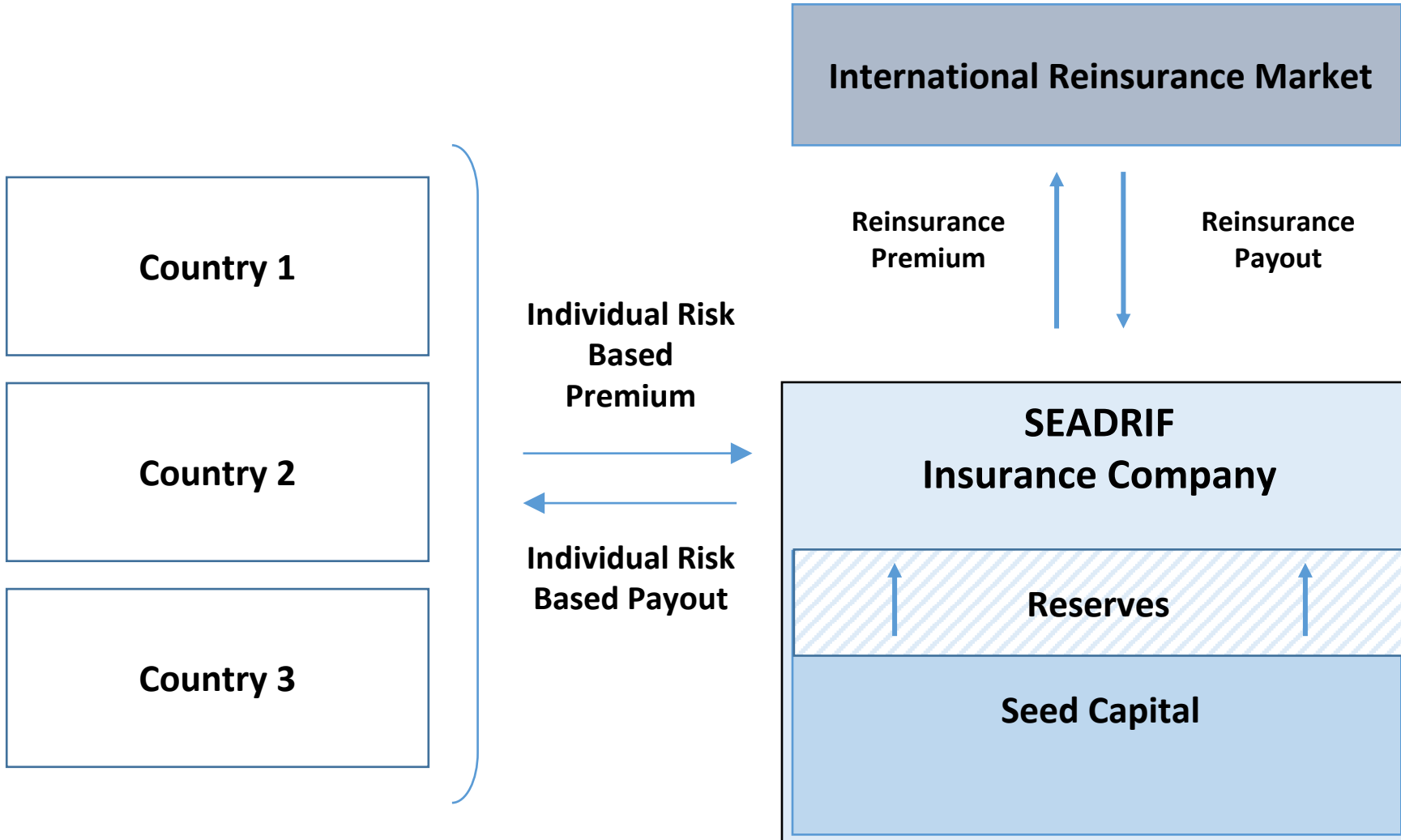
May not cover all of the loss incurred

What type of insurance is most appropriate for disaster relief, recovery & reconstruction?



Both types are needed as they serve different purposes

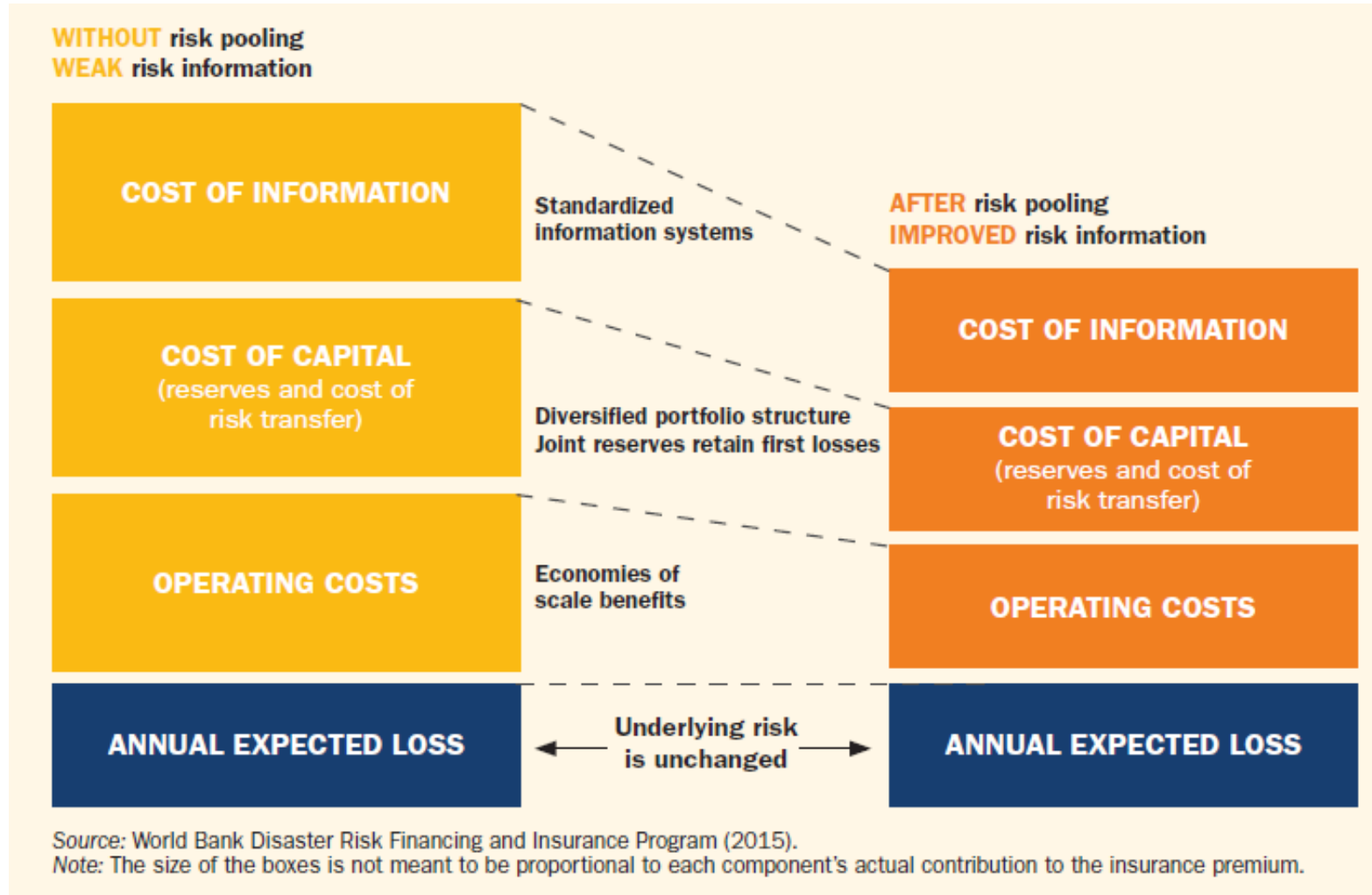
How does a regional risk pool like transfer risk



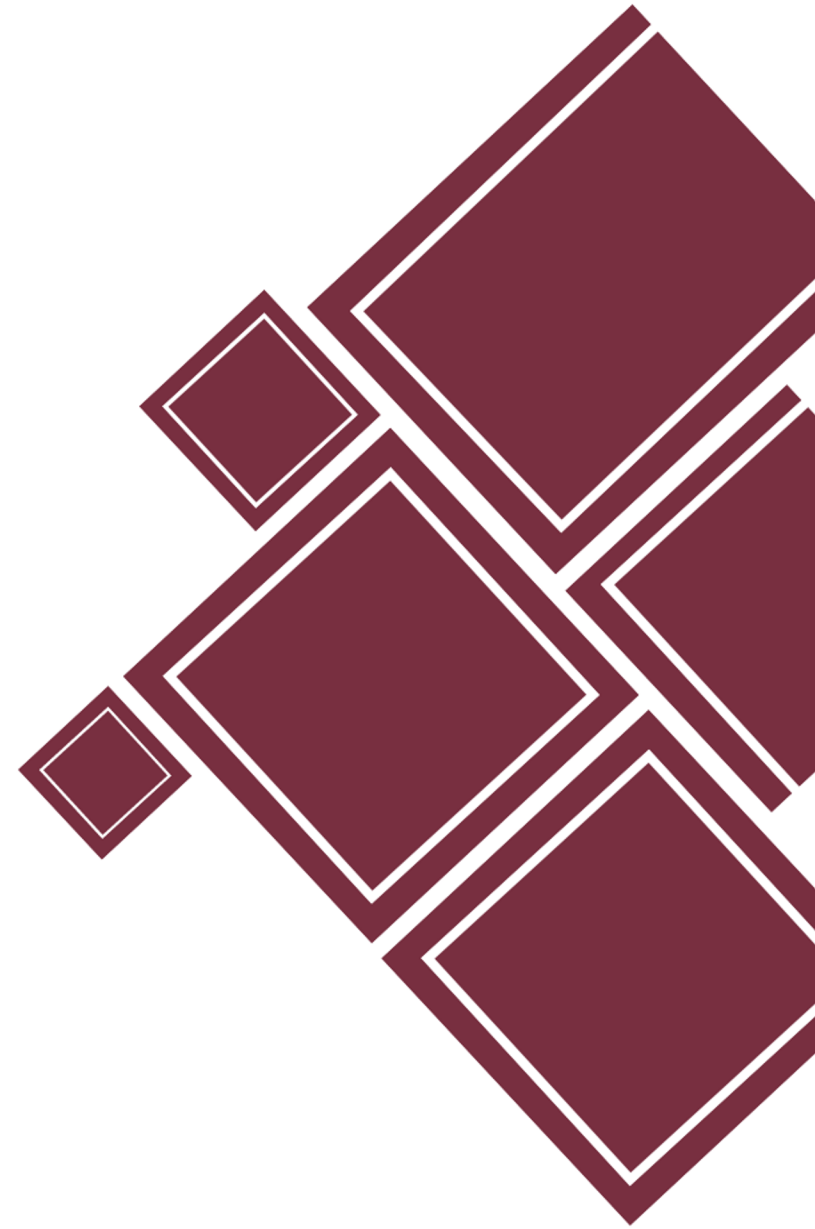
How an insurance premium is calculated, and how risk pools like



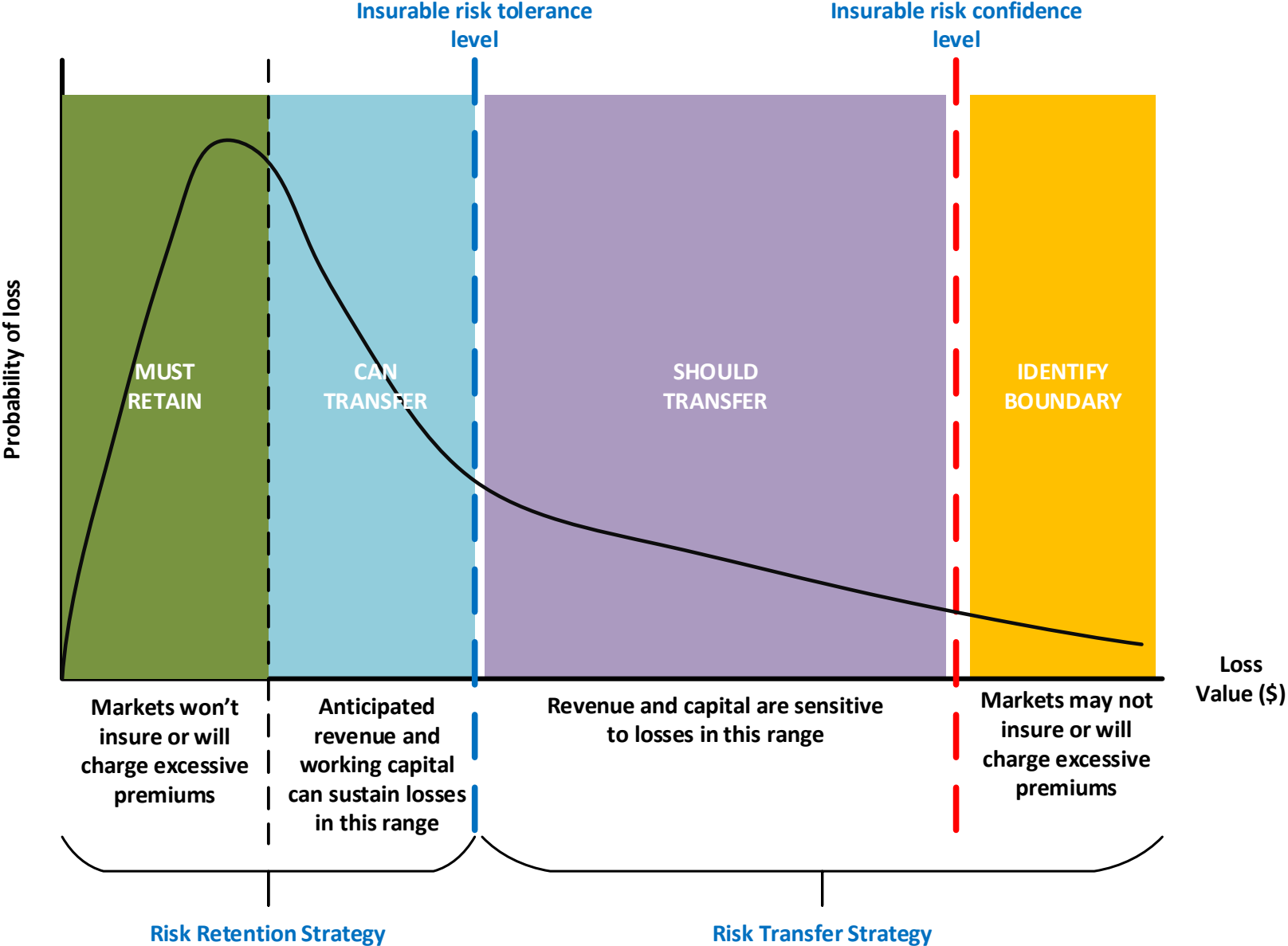
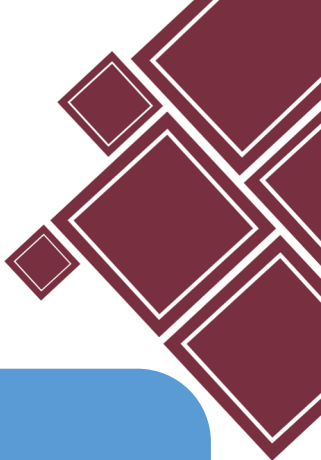
can offer cheaper premiums



Financial protection of public assets



Options assessment: Risk retention versus risk transfer



How much to retain?

How much to transfer?



Minimum standard

Schedule of values

- Location Name
- Each location geocoded to street address (at least 90% of schedule)

- Total insured value at each location split at high granularity (i.e. physical property, contents, stock, hardware/software, fine art, business interruption)
- Occupancy at each location
- Number of Buildings

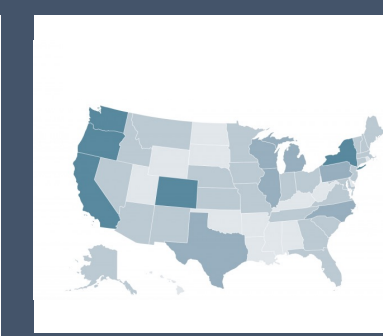
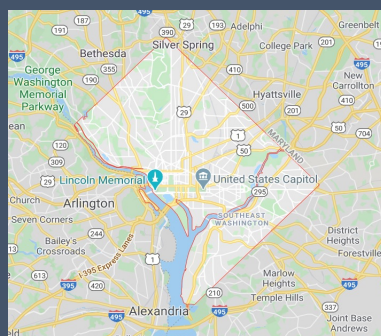
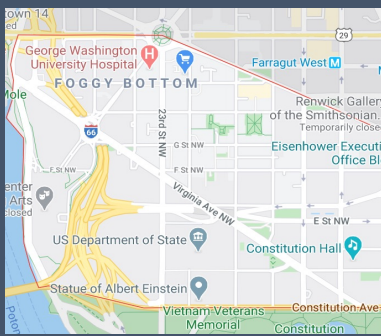
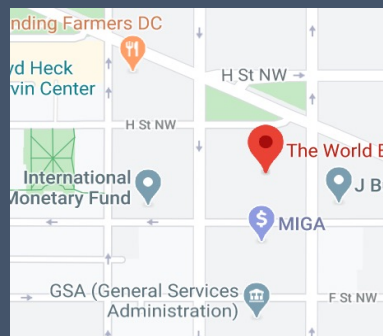
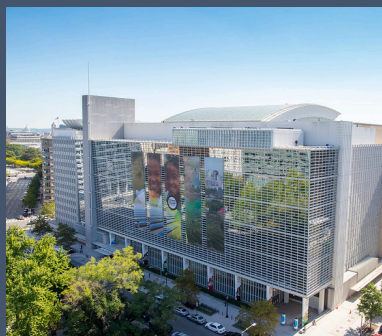


Schedule of values

- Major Renovation Information
- Protection details: sprinkler systems, security (Alarms, Security Staff etc.), other additional protections
- Basement/Parking Information
- Catastrophe Zone of each location (For Flood, Earthquake and Typhoon)
- Secondary Modifiers collated from building diagrams. These may include EQ resiliency such as base isolation, cladding type, foundation



High Quality



Building

The World Bank Group

Street, ZIP/Postcode

High Street NW
DC 20433

District

Foggy Bottom

City

Washington DC

State/Province

Washington DC

Country

United States of America

Lower resolution | Lower overall confidence | Higher uncertainties on risk profile

Developing and structuring a risk transfer framework



Collect and analyze data and information suitable for identifying and quantifying the risk to determine price and capacity

(Hazard / Exposure / Vulnerability)



Determine key priorities and requirements for financial compensation



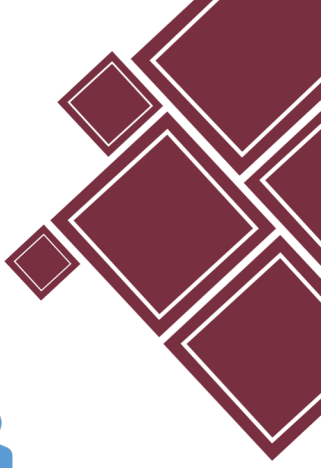
Establish appropriate legislative / regulatory frameworks to enable financial risk transfer, including claims settlement and audit



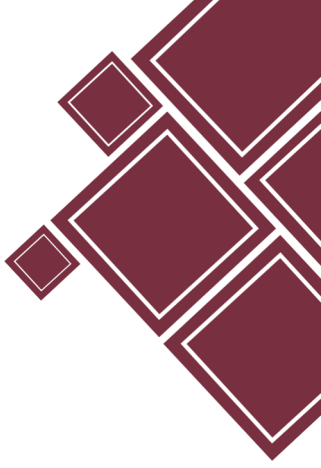
Ensure **procurement regulations** enable use of insurance, reinsurance and if needed, third party advisors



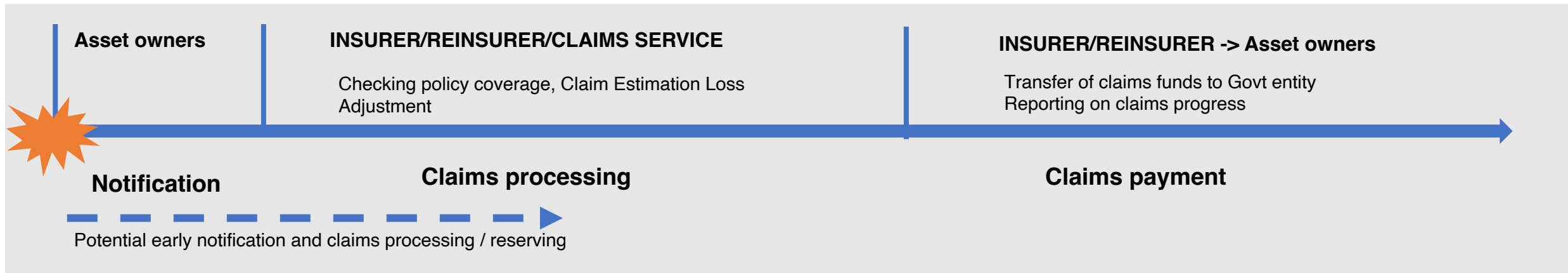
Develop **competencies, governance and procedures** to enable effective risk management



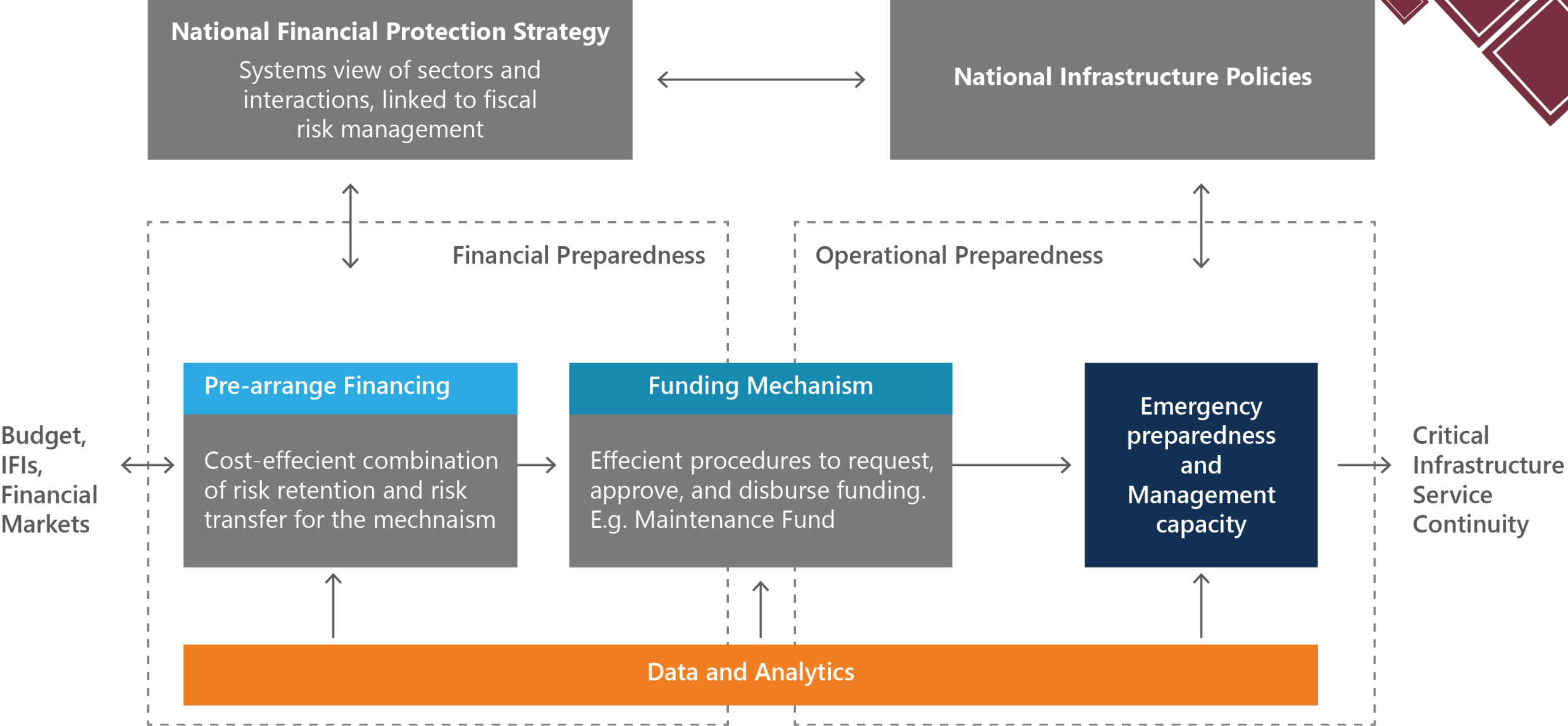
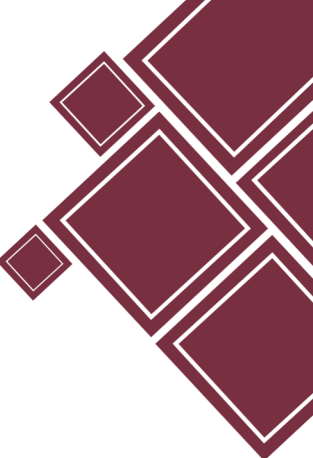
Develop the operational risk transfer mechanism: Claims management



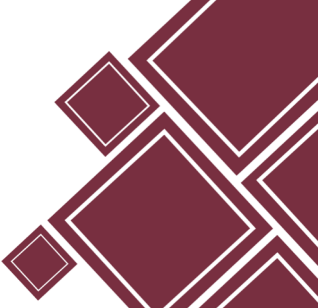
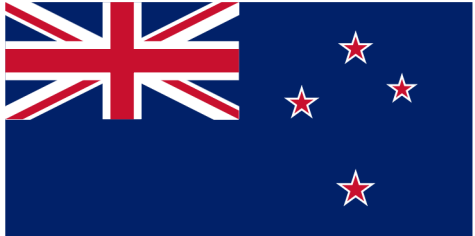
- Type of insurance product will influence the claims process design
 - Parametric – trigger mechanism, funds released
 - Indemnity – claims notification, loss adjustment and settlement
- Essential to have a clear notification and loss adjustment procedure
- Large scale events – ability to handle and complete large volumes of multiple claims



Shock responsive systems: Combine Financial and Operational Preparedness



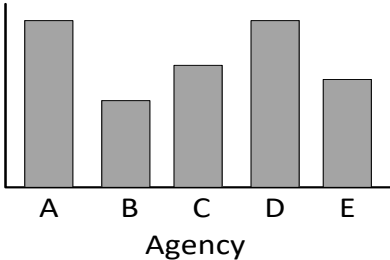
New Zealand Case Study: Choosing between different options



Option: Do nothing

Continue current practice of agencies managing their individual arrangements.

Representation:

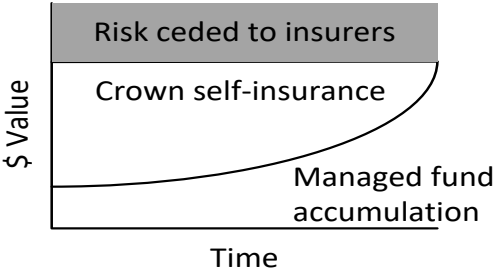


Option: Partial self-insurance

Consolidate agency risk financing arrangements into an AoG solution, involving:

- Agencies paying a risk based contribution into a managed fund to cover expected losses;
- Crown self-insuring a layer of calculated risk within Crown’s financial risk tolerance; and
- Ceding risk above Crown tolerance to the insurer market.

Representation:

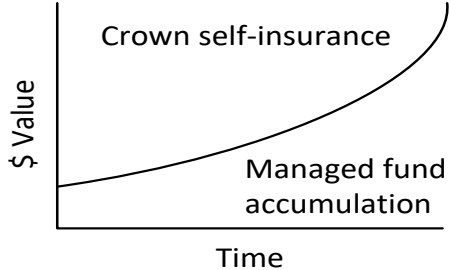


Option: Full self-insurance

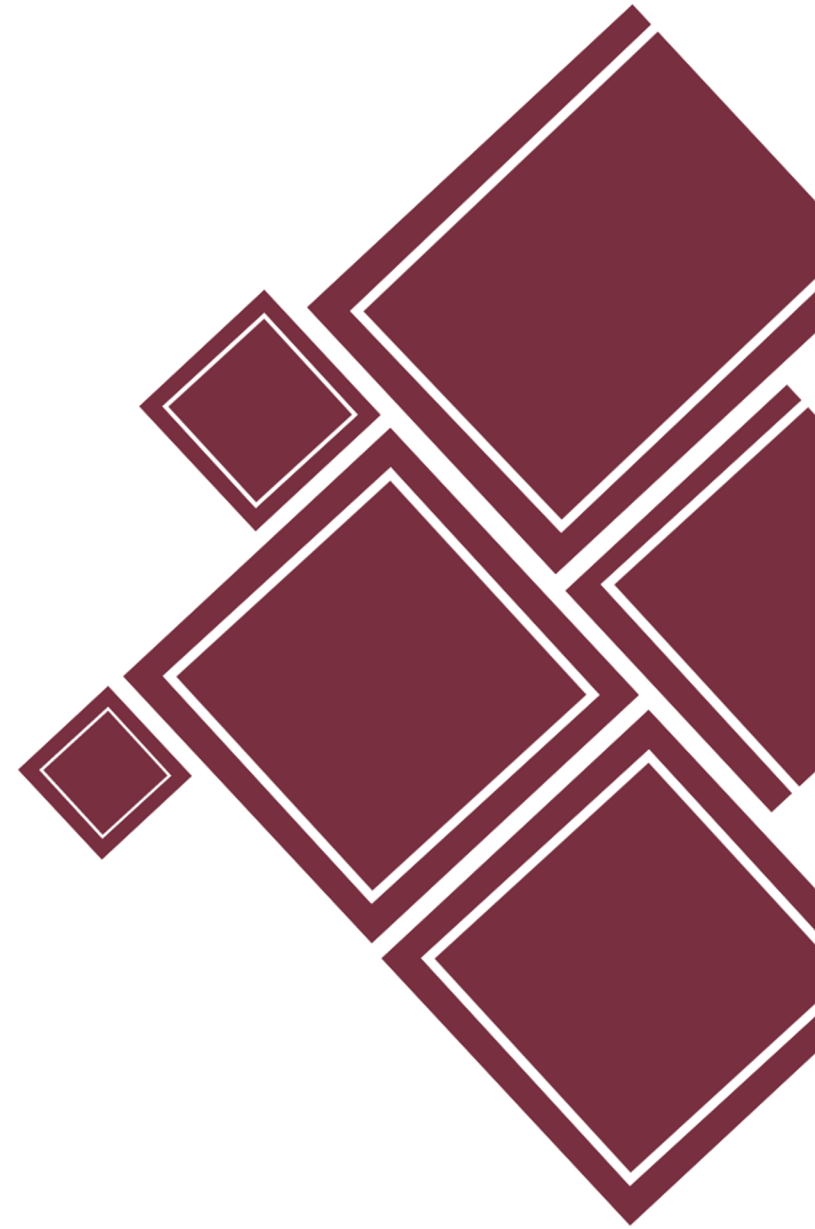
Consolidate agency risk financing arrangements into an AoG solution involving:

- Agencies paying a risk based contribution into a managed fund to cover expected losses; and
- Crown self-insuring the risk of exceptional losses (i.e. those losses exceeding the financial tolerance of the managed fund at a given point in time) without ceding risk to the insurer market.

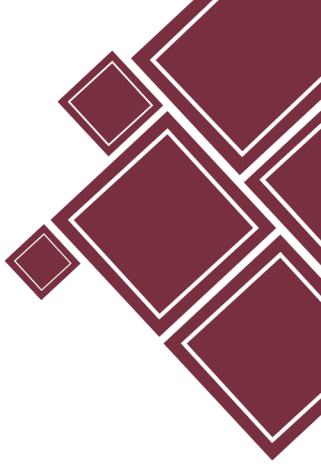
Representation:



Disaster reserve funds



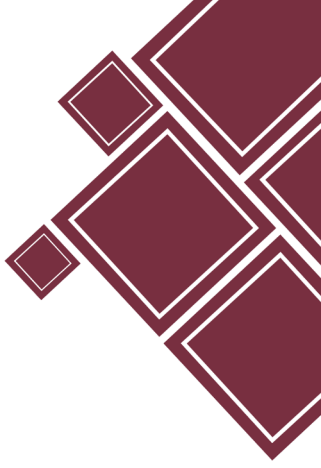
What are disaster reserve funds?



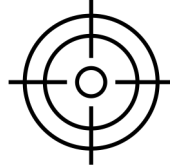
Disaster Reserve Funds:

- **Form:** funds set aside as reserve within the budget with specific rules for use or established as a dedicated institution;
- **Financial management:** fulfil key policy objectives to strengthen financial resilience and to improve the financial management of disasters;
- **Disaster response:** provide the government with readily available resources to be used for post disaster expenditure to enable emergency relief and response after a disaster, and long term recovery including rehabilitation and reconstruction;
- **Coordination:** alignment to key processes and systems that enable the flow of funds to ensure they get to the point of need for effective recovery
- **Knowledge and capacity building:** serve as a centre of knowledge and capacity building on disaster risk financing within Government

How are they set up?



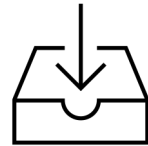
Legal basis: Needs a legal mandate



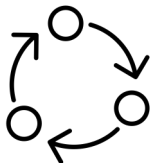
Fund design: Objective, scope, rules



Financial design: Risk appetite for risk transfer, accumulation levels, investment strategy



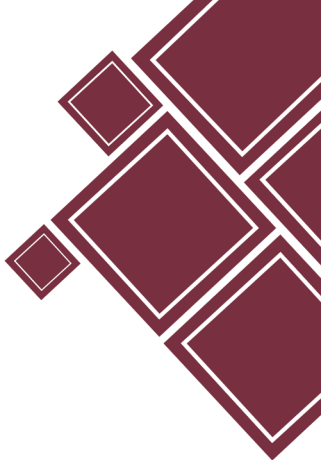
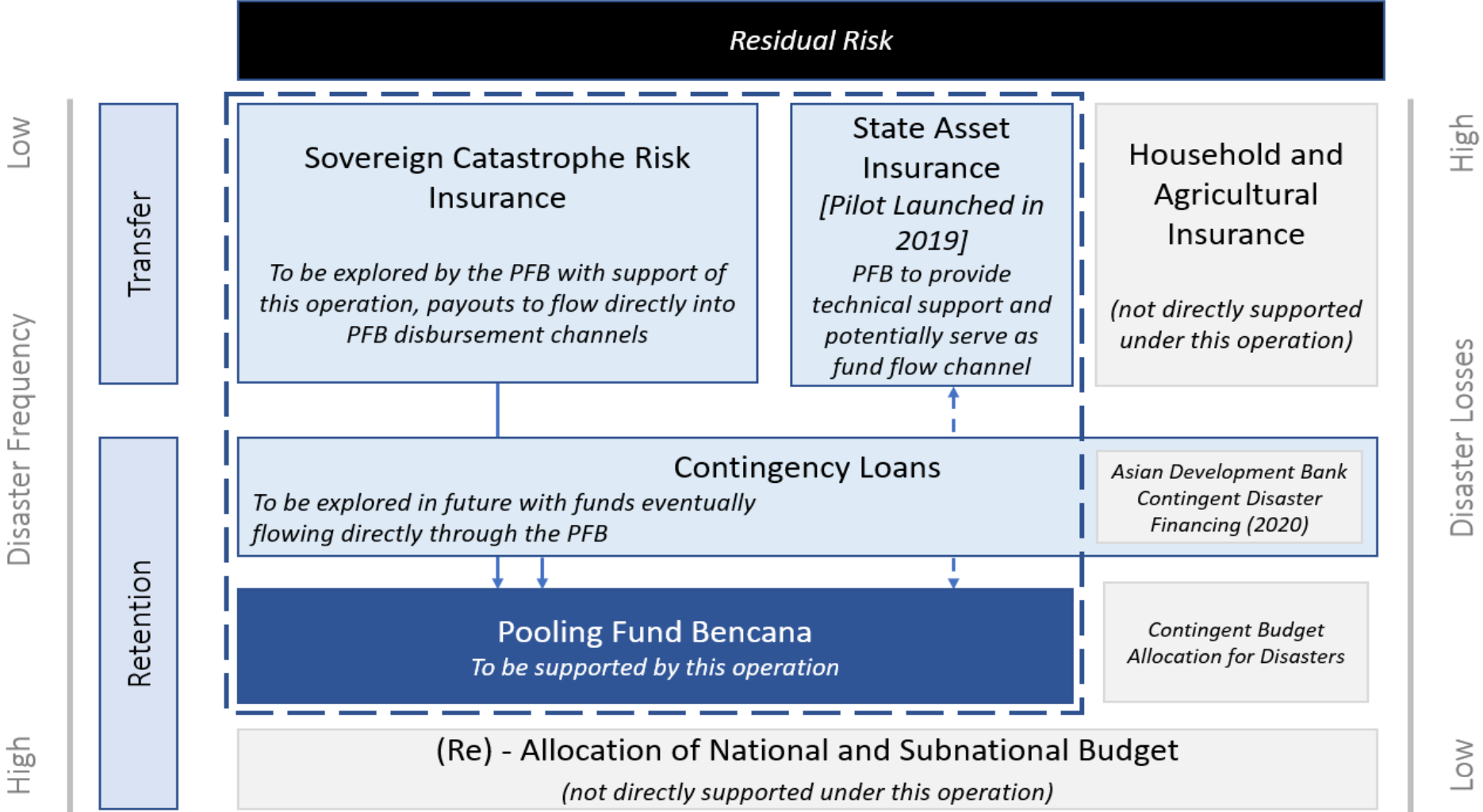
Regulatory design: How the fund will be operationalized and monitored



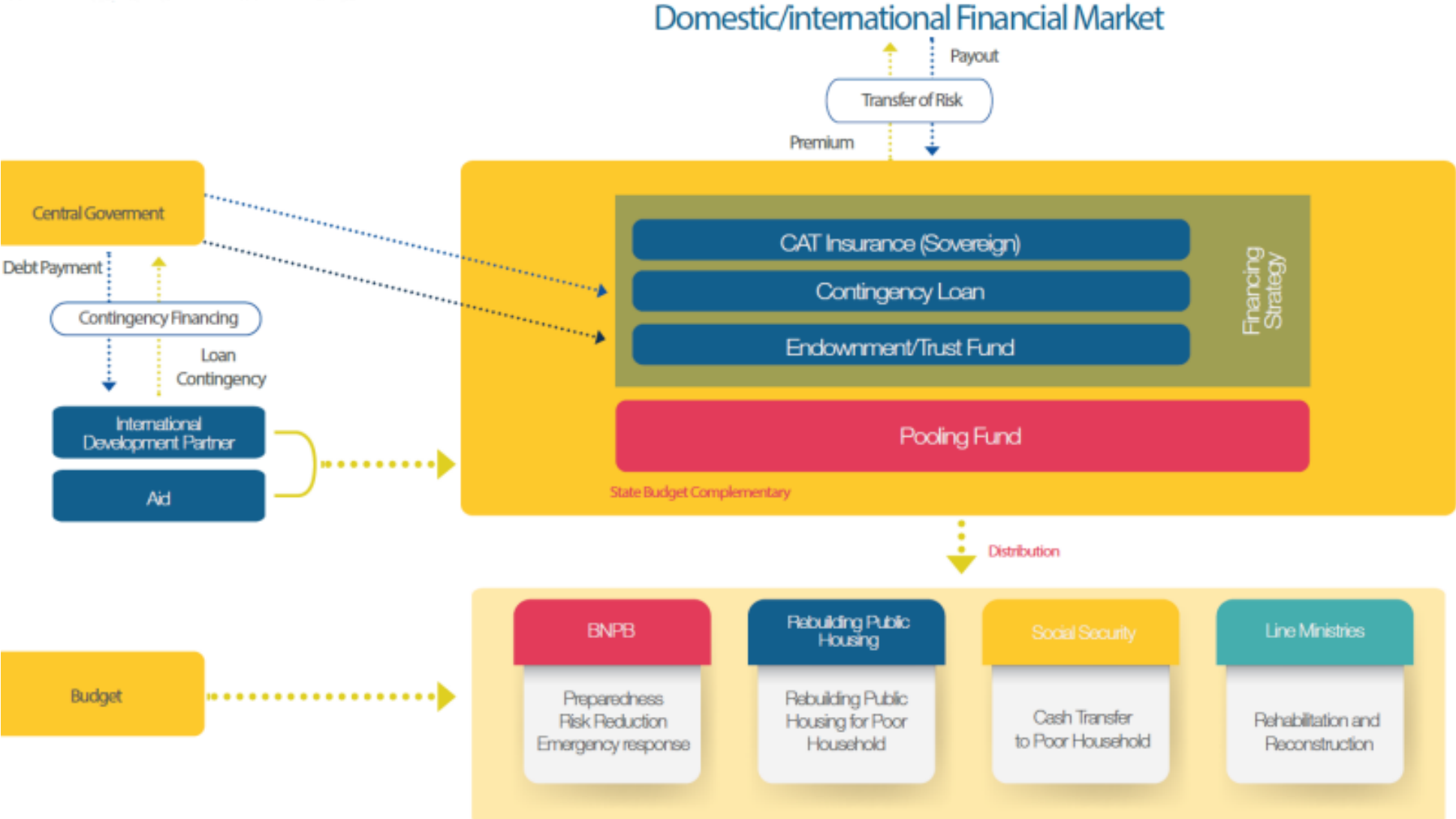
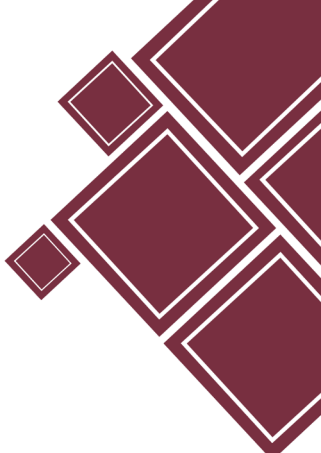
Ongoing review and fine tuning: Design adjustments to meet objectives

Indonesia: Pooling Fund within the DRF strategy

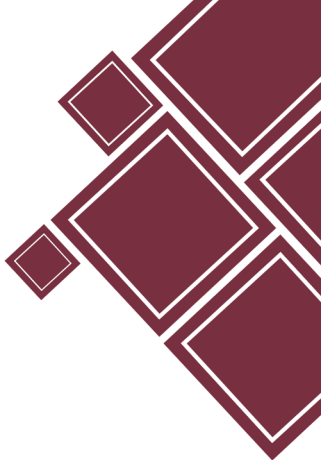
The PFB will be a dedicated fiscal mechanism to (i) ensure effective access to sufficient resources for disaster response; and (ii) streamline execution and transparency of spending.



How the pooling fund would work?

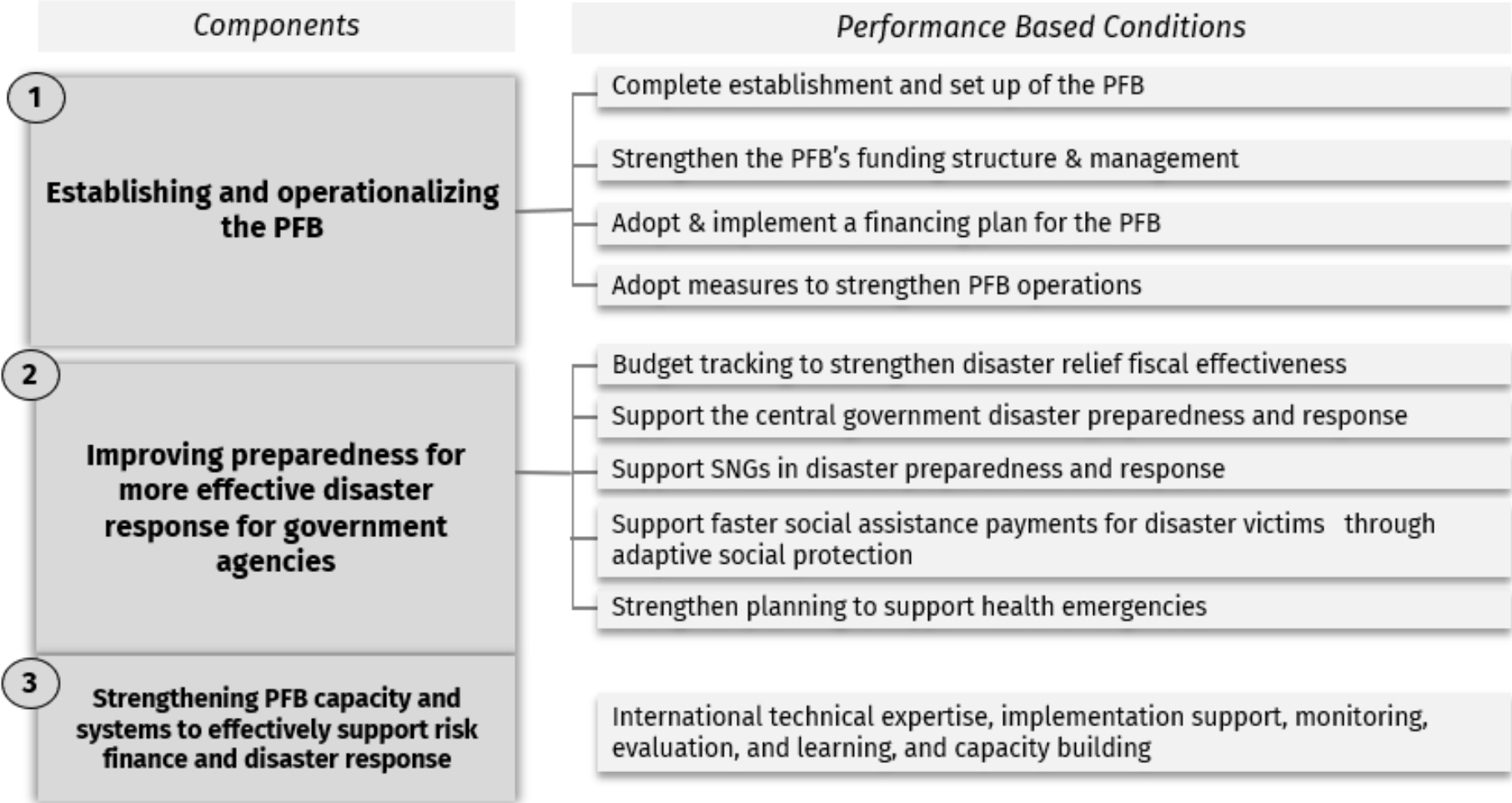


Indonesia: Pooling Fund operationalization



PDO: To strengthen the financial and fiscal resilience of the Borrower to natural disaster and health-related shocks.

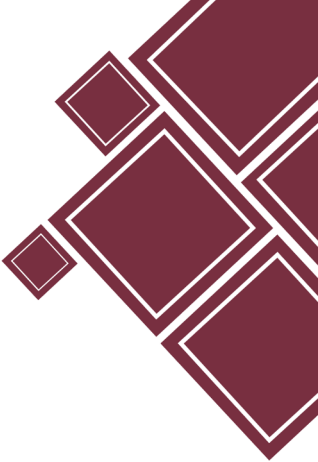
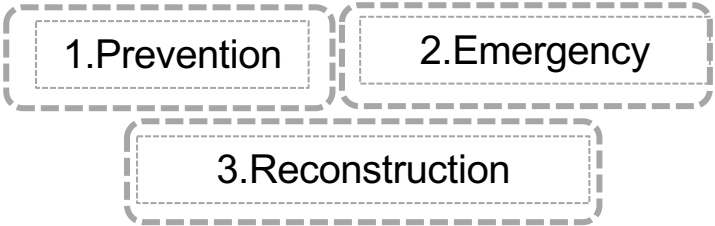
Financing Instrument: Investment Project Financing with Performance Based Conditions



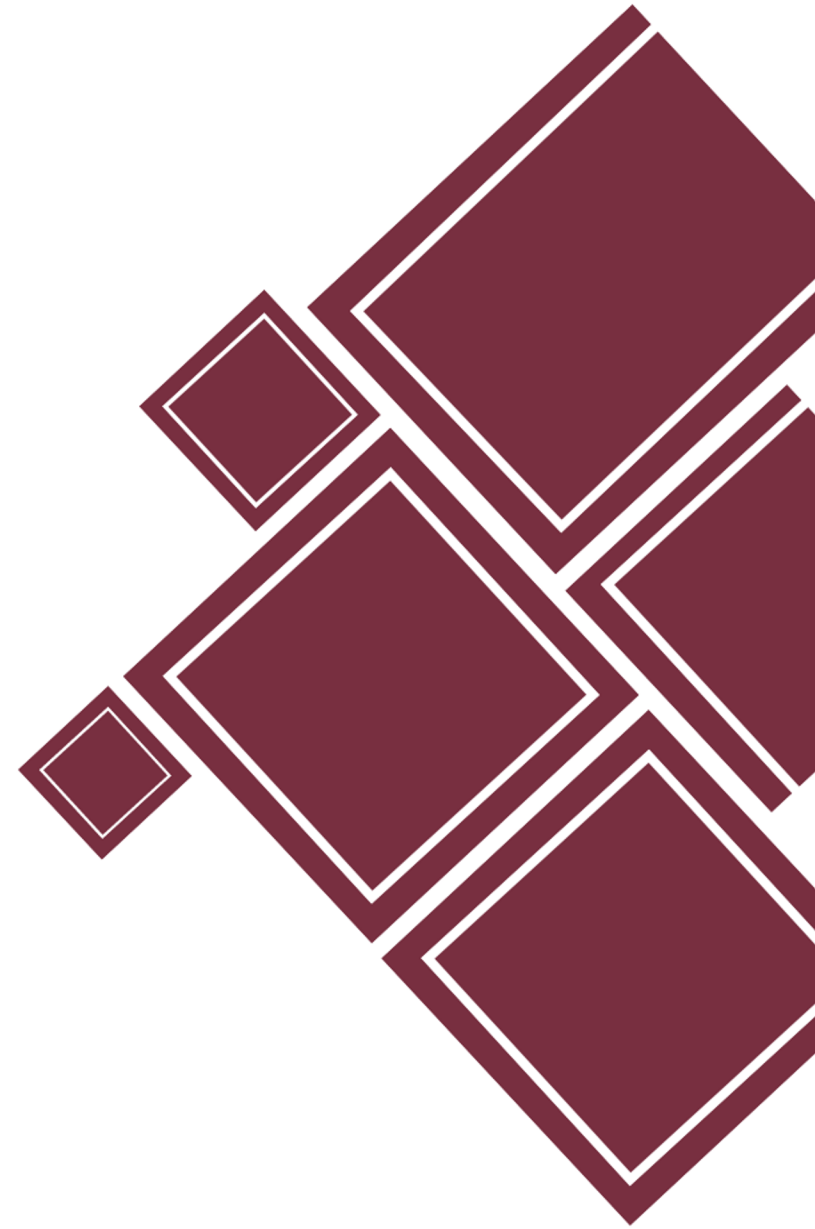
Mexico: FONDEN

Mexico's Federal Budget
0.4% of the Federal Budget is allocated to FONDEN every year

Technical Committee



Disaster reserve funds



What are disaster reserve funds?



When does it make sense to have disaster reserve funds:

- To strengthen financial management for disasters by having finance available quickly for disaster response
- To streamline multiple existing process, systems, and sources of financing for more streamlined and better targeted financial response
- To enable immediate relief but also be able to finance longer term recovery and rehabilitation
- To link finance to clear delivery mechanism for disaster response so funds go where they're supposed to go

What can disaster reserve funds look like?

- Funds set aside as reserve within the budget with specific rules for use
- Separate institution/public service agencies to coordinate and strengthen financial management of disaster response

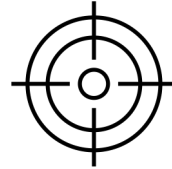
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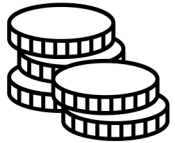
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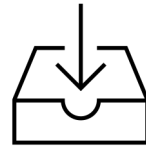
Institutional design: How it will be established and governed



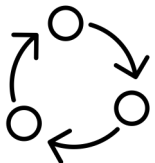
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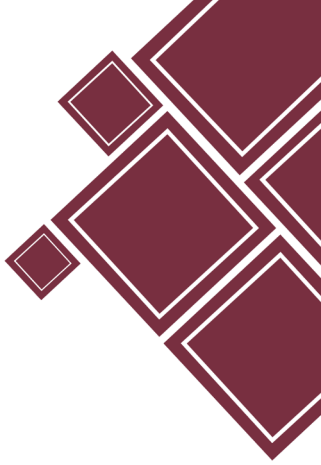
Financial design: Risk appetite for risk transfer, accumulation levels, investment strategy



Regulatory design: How the fund will be operationalized and monitored

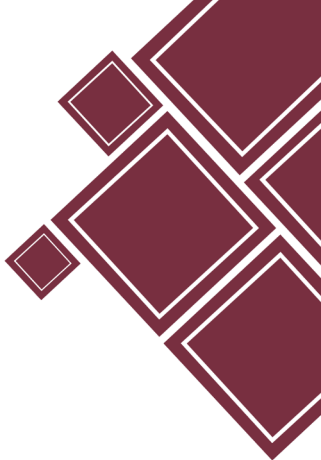
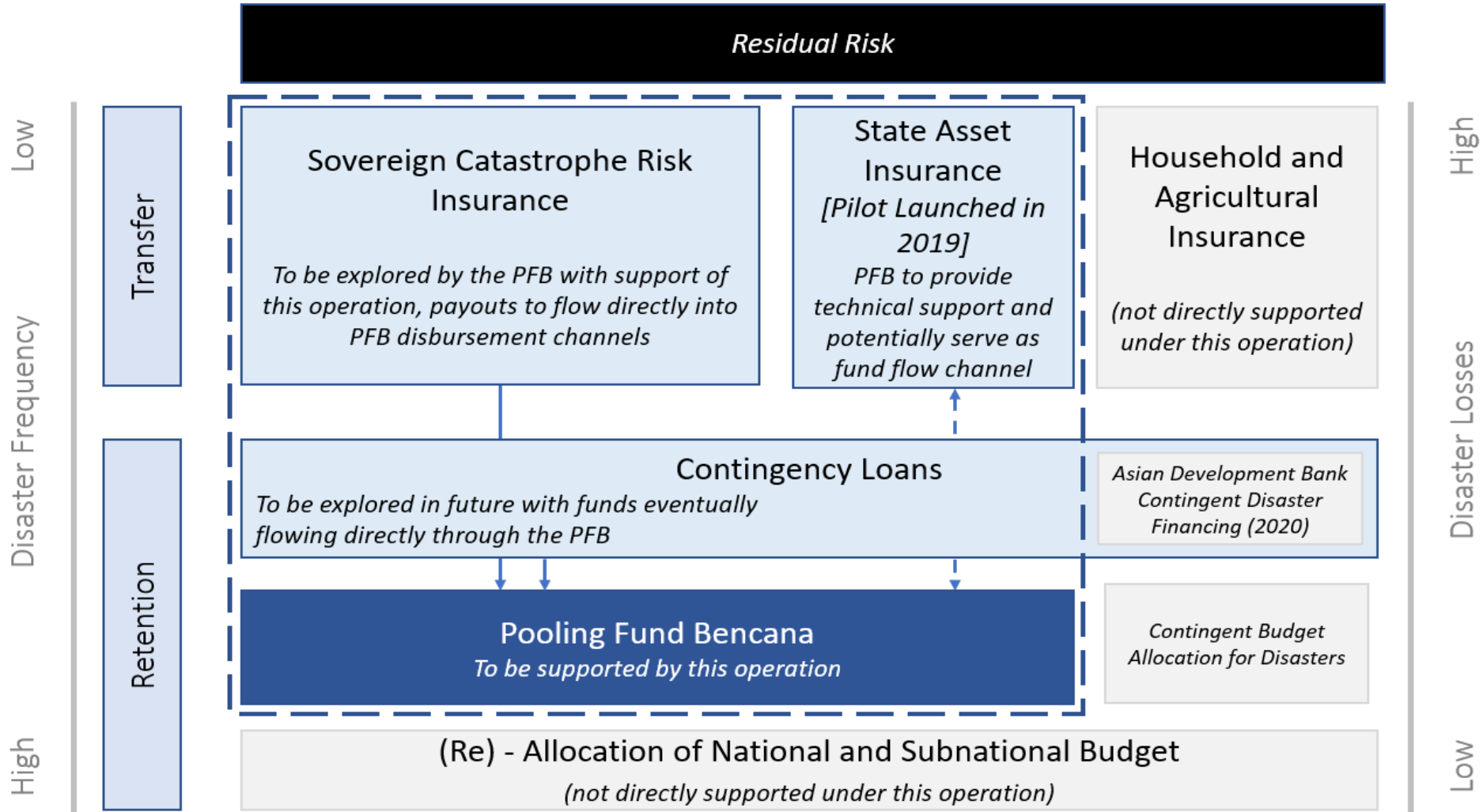


Ongoing review and fine tuning: Design adjustments to meet objectives

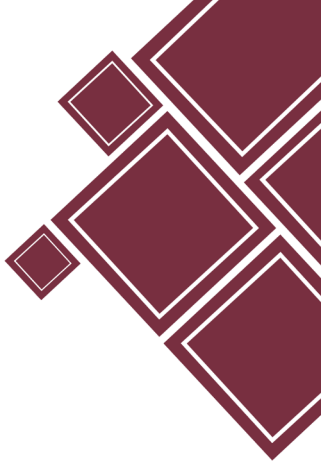


Indonesia: Pooling Fund within the DRF strategy

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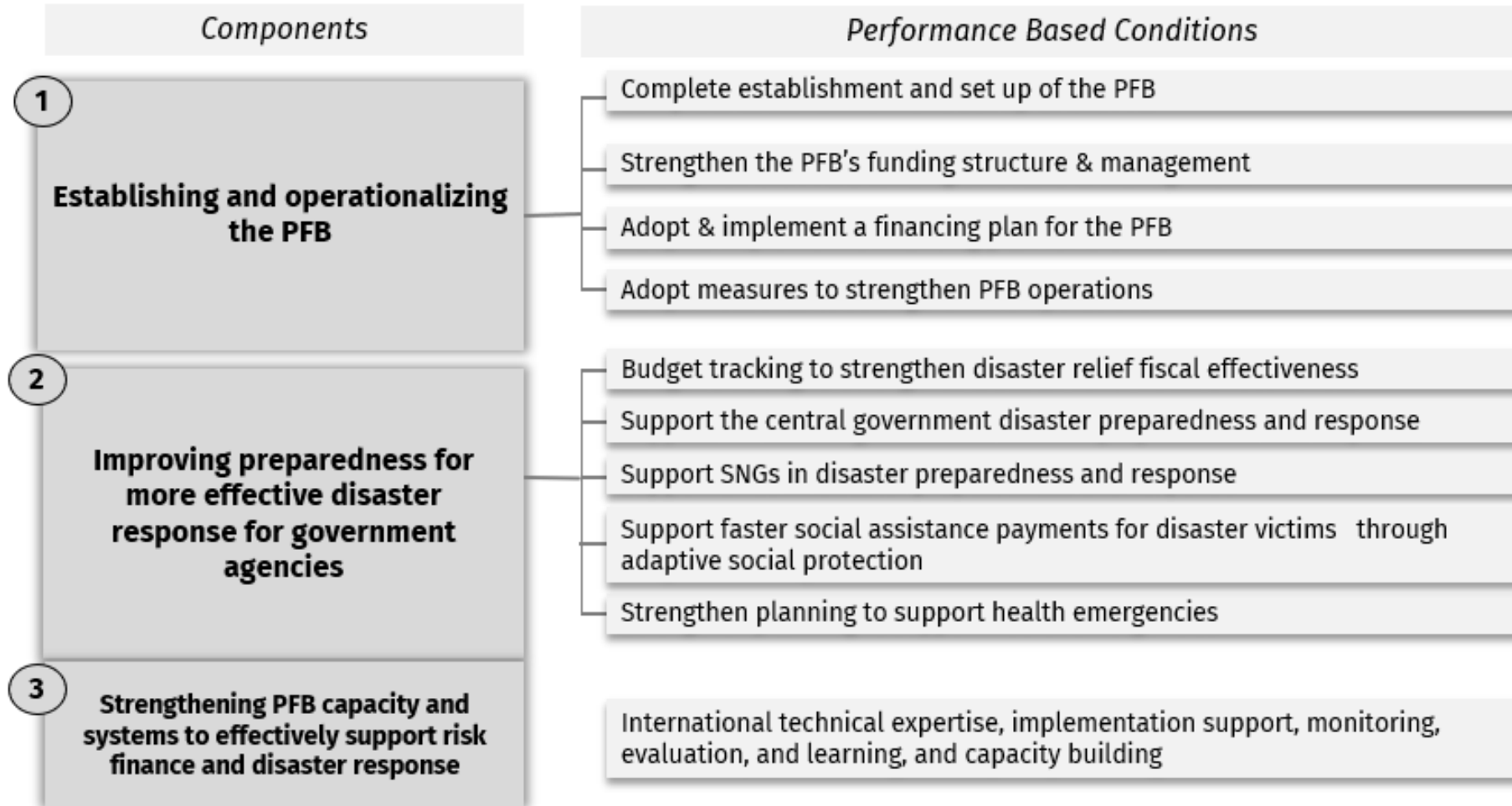


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