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# Shock-Resilient Finance

## How Disaster Resilience Loans Strength Fiscal Resilience of DMCs

October 9<sup>th</sup> 2025

Climate Change, Resilience and Environment Cluster, CCSD



# Agenda

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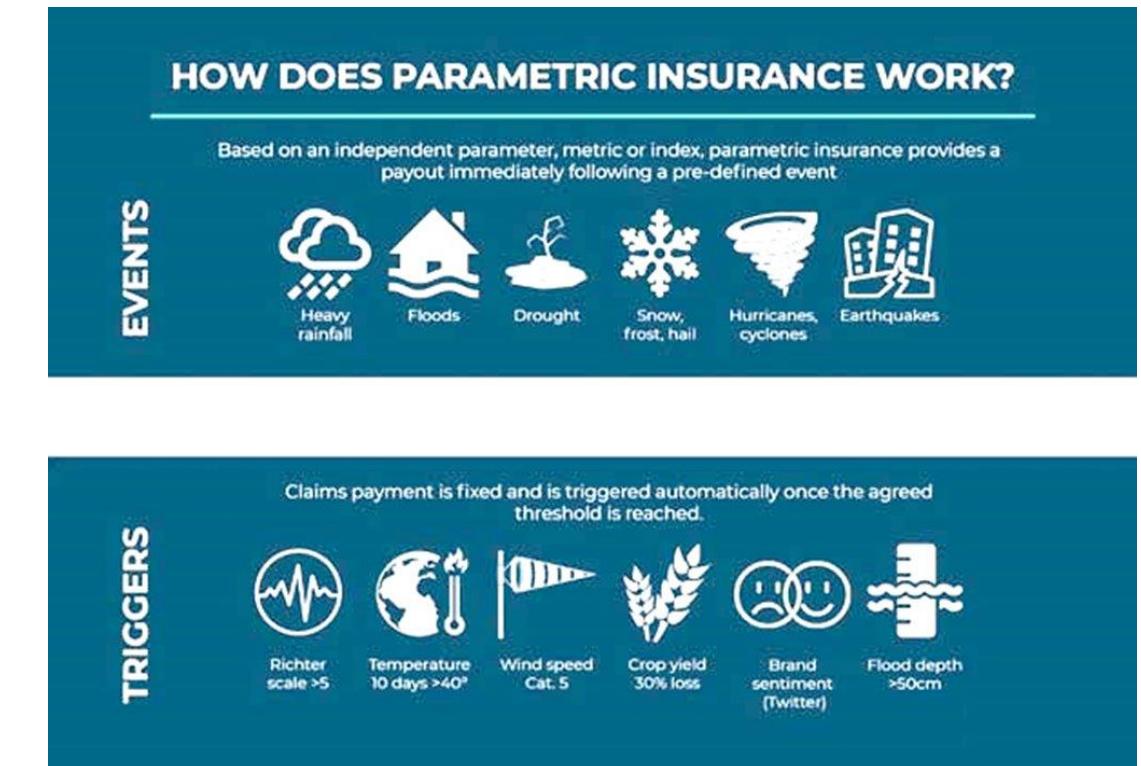
- 1. How do Disaster Resilient Loans (DRL) work? Overview and complementarity with ADB's Crisis Response Toolkit**
- 2. Technical pricing analysis for pilot DMCs**
- 3. Q&A**

- Disaster Risk Finance (DRF) refers to the set of financial instruments, tools, and mechanisms that governments, organizations, and individuals use to prepare for, respond to, and recover from the financial impacts of disasters.
- Designing DRF using a risk layering approach

**Risk retention:** ex-ante annual contingency budget lines, reserves, contingent financing; and ex-post budget reallocations, borrowing, tax increases

**Risk transfer:** ex-ante insurance, reinsurance, and insurance-linked securities

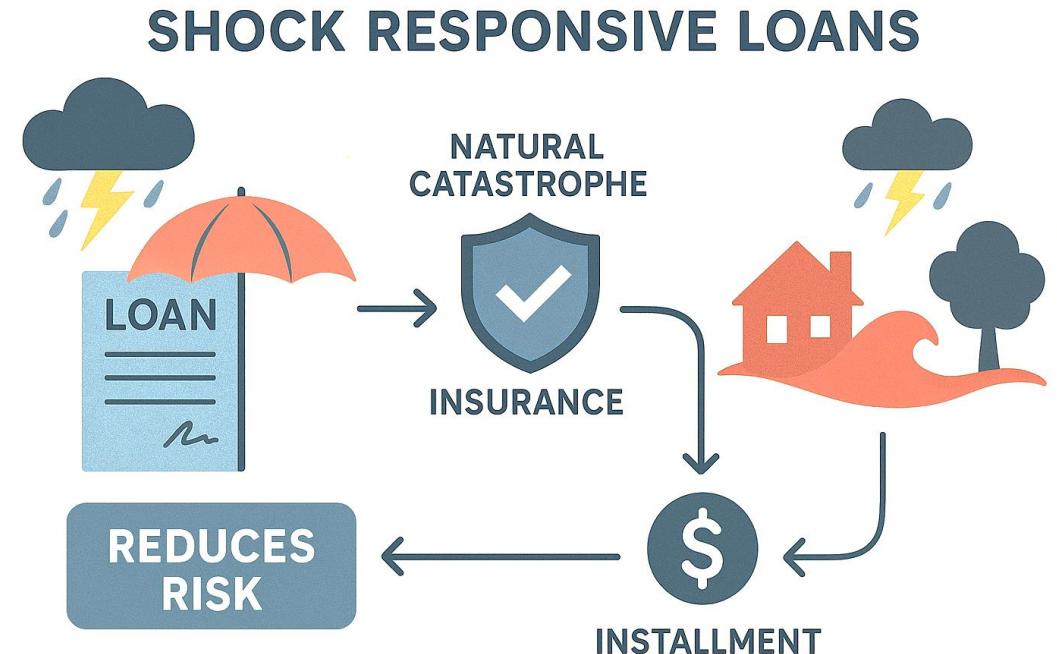
**International assistance:** ex-post grants, loans and technical assistance from development



**The Disaster Resilient Loan has natural catastrophe insurance as part of the loan structure**

It makes a number of instalments on behalf of the borrower, rather than defer borrowers' repayment instalments following a disaster

- Aligned to Debt Deferral Clause goals:
  - reduce the risks of a payment default and/or a lengthy debt-restructuring process
  - preserve liquidity in support of disaster assistance
- The DMC does not need to make these payments, reducing the risk of a default and avoiding further debt.
- The DMC can instead redistribute resources in support of disaster assistance.



## Challenge:

- Pacific SIDS face some of the world's highest disaster losses relative to GDP: high natural catastrophe risk, small economies, worsening with climate risk
- Disasters force governments to divert scarce fiscal resources, leading to debt distress or delayed recovery

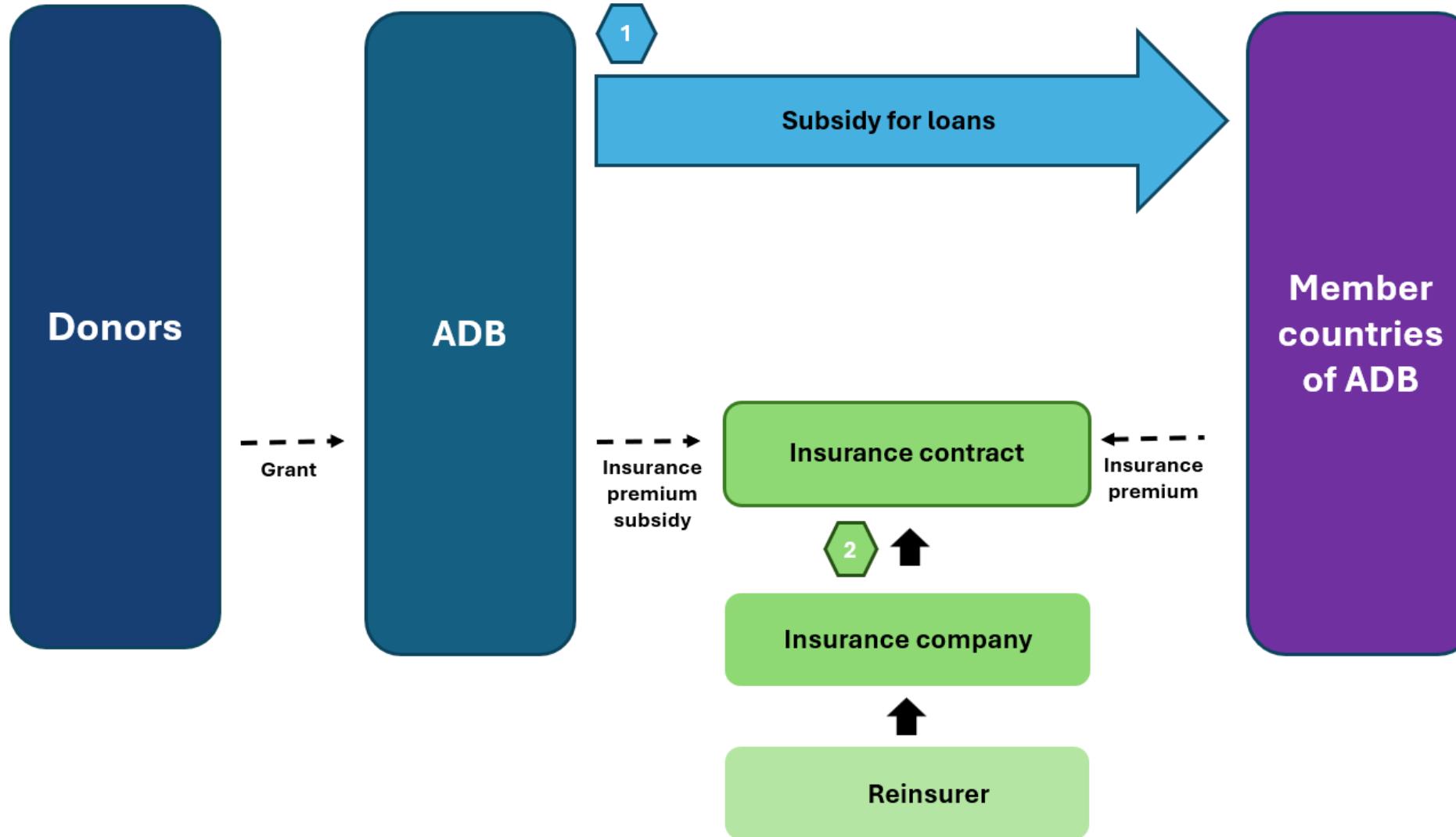
## Response:

- Strengthen ADB's Crisis Response Toolkit and alignment with DDC program with the design and testing of DRLs
- Demonstrating feasibility in the Pacific sets a precedent that can be scaled and replicated in other climate-vulnerable regions – for ADB and other MDBs

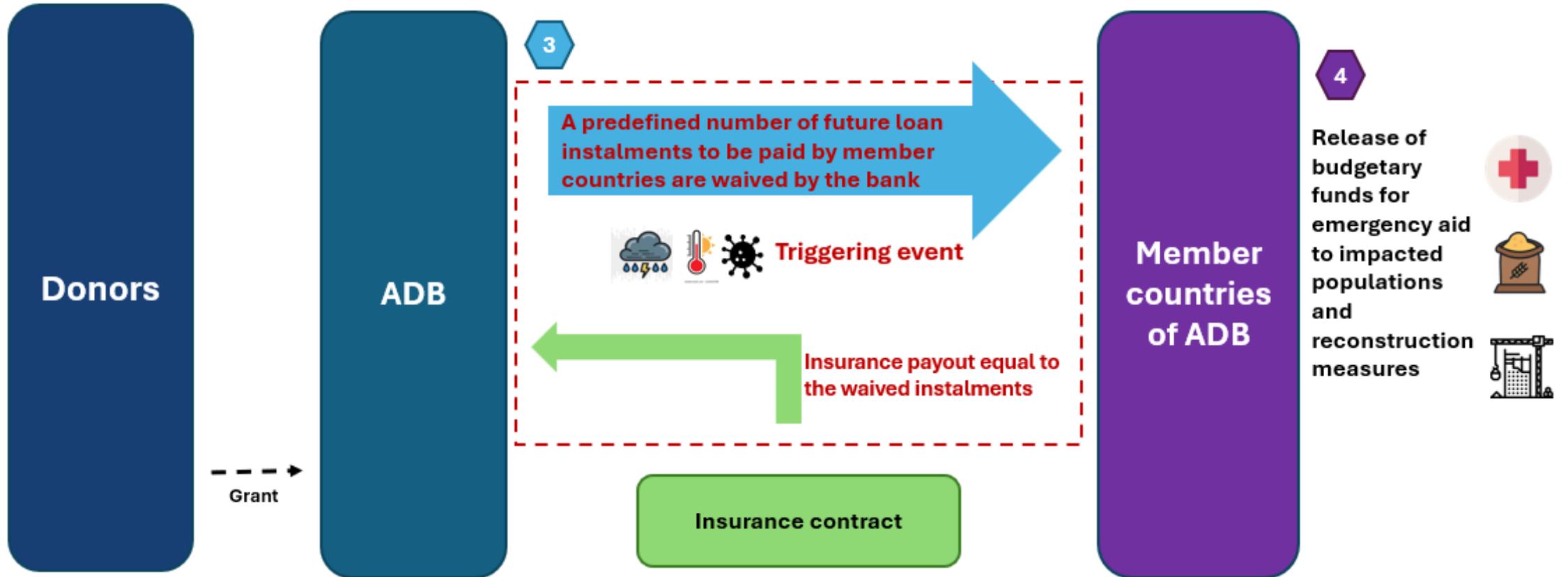


# DRL Concept

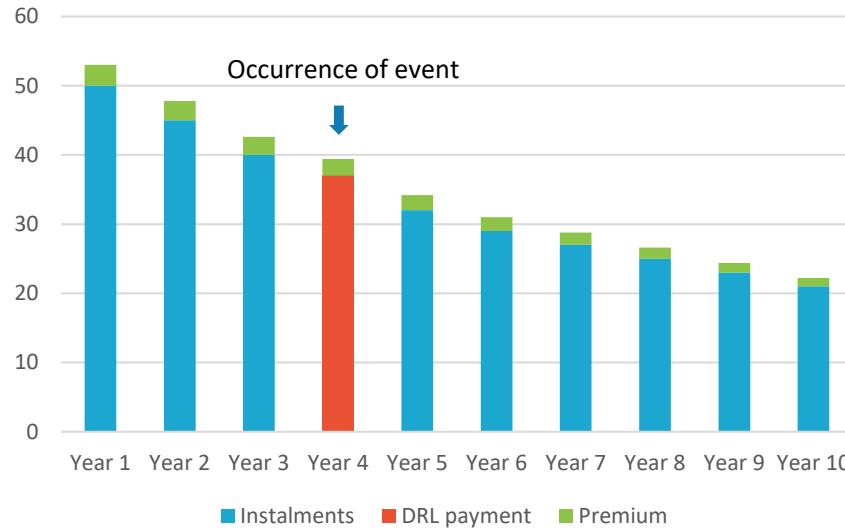
# Disaster Resilient Loans - To cover borrowers' payment obligations in the event of qualifying events breaching the pre-defined triggers.



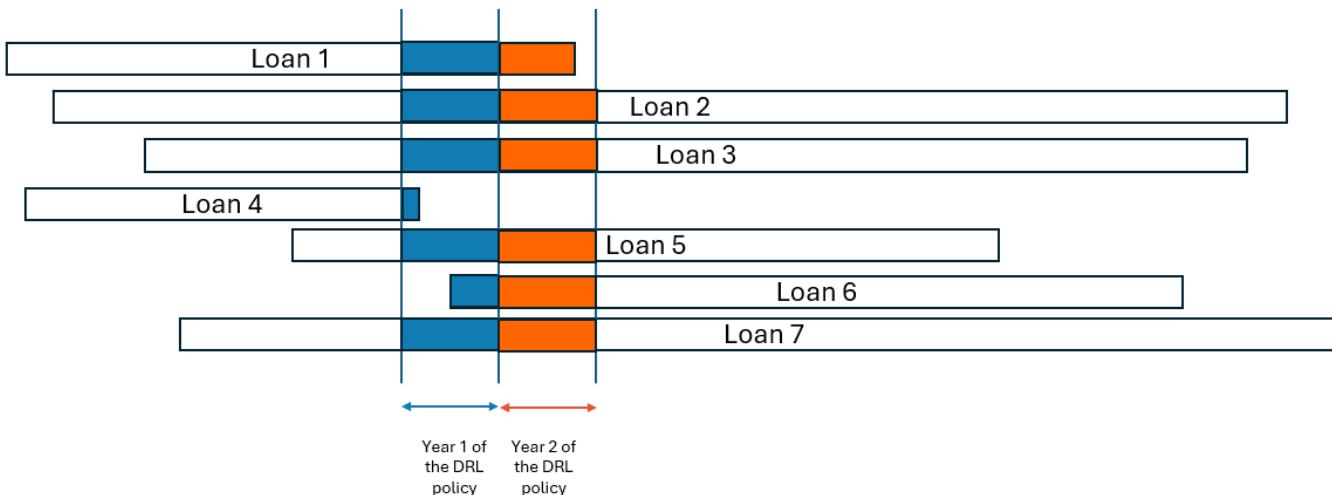
# Outflow of funds after a triggering event



# Yearly DRL renewals: Entire loan portfolio, multiple payouts possible

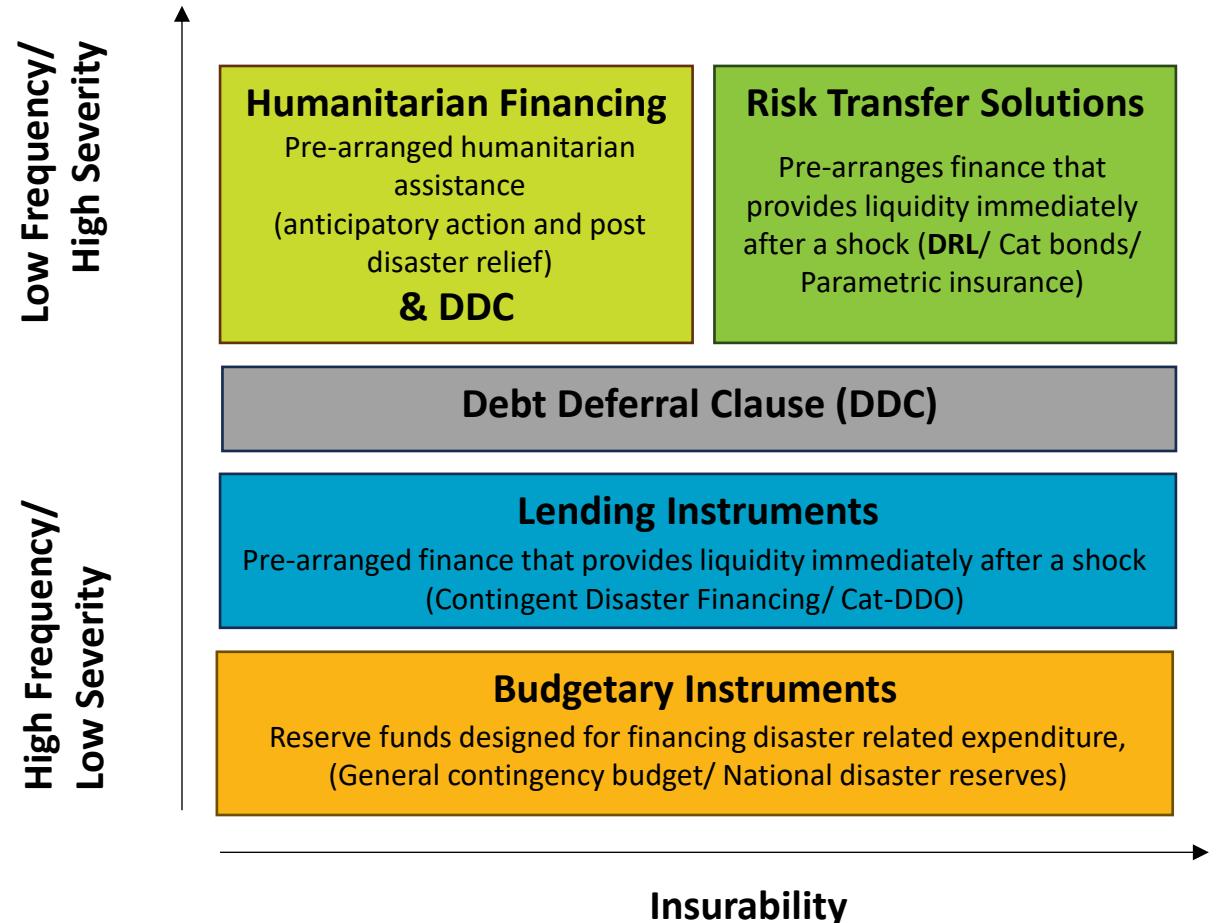


- Example of a single 10-year loan: Catastrophe event in year 4 leads to a DRL payment, with the entire loan term kept intact.
- Yearly renewal of insurance policy with yearly premium being paid means that another payment is possible at the next triggering event.



- Cross-sectional view of the yearly DRL policies across multiple loans

- DRL provide coverage for **insurable** perils that cause **significant but less frequent** shocks
- These events create significant fiscal risk to DMCs
- By covering loan instalments in disaster years, DRLs provide **liquidity when it matters most for disaster recovery**
- This also ensures the stability of ADB's loan portfolio performance as the loan terms remain intact

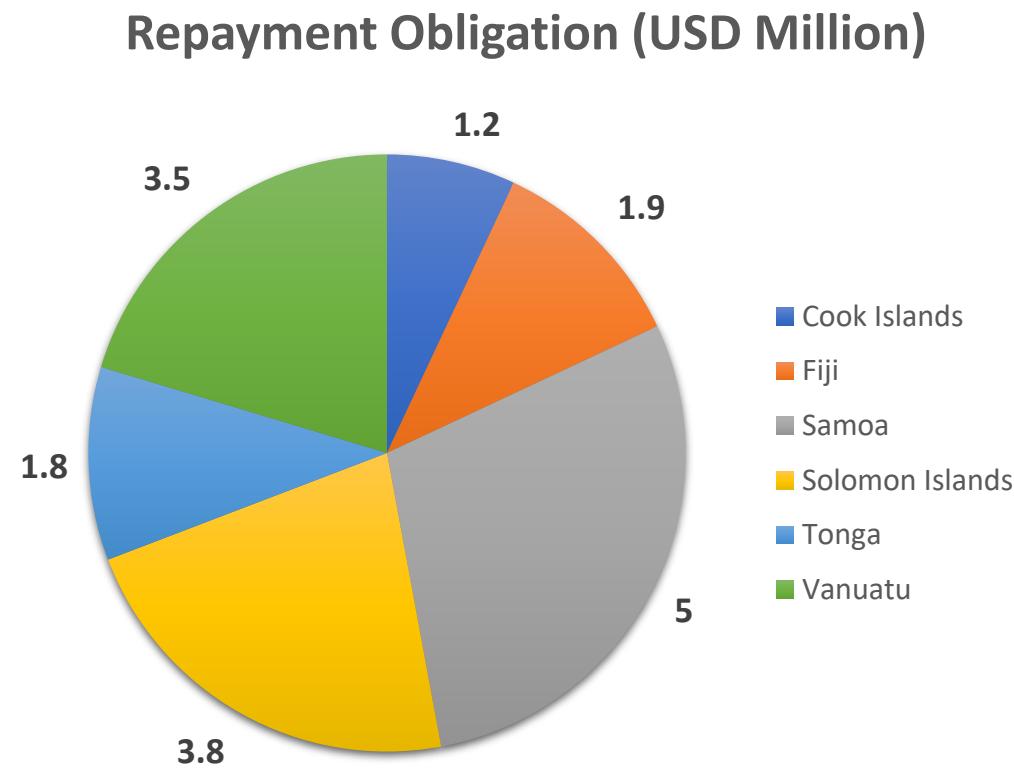


# DRL Pilot

## Technical Pricing & Structure

# Potential perils and DMCs for Pilot

- Pilot Selection Criteria: Pacific SIDS already engaged with disaster risk financing, where DRLs are an additional tool.
- Pilot countries with significant exposure to **tropical cyclone and earthquakes**
- DRL coverage linked directly to **ADB loan repayment obligations** (principal + interest) due over the 12-month period.
- Repayment obligations are covered: if a qualifying disaster occurs, the parametric insurance covers instalment(s) due



Source: ADB Treasury, DMC outstanding positions as of 30 October 2024

## Mechanism

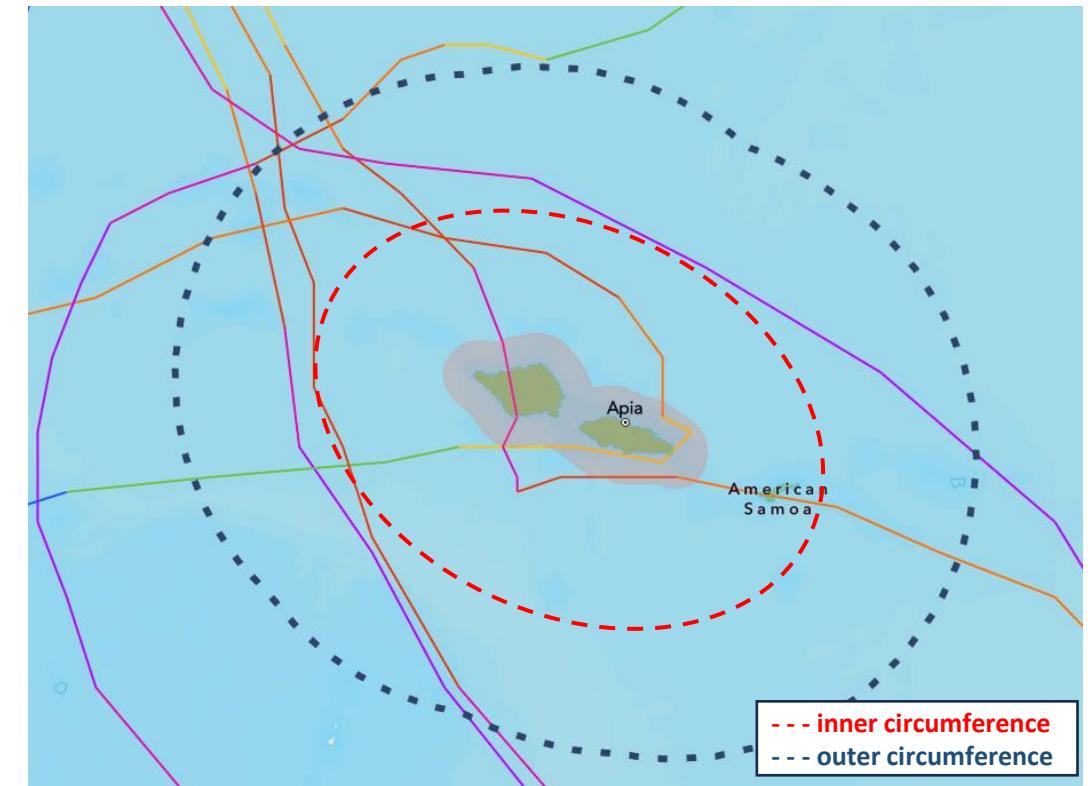
- Pays when on a Category 4 or 5 storm, within a specified distance of the DMCs
- Payouts are based on severity:

Saffir Simpson Scale	DRL Payout	
	Inner shape	Outer shape
1 - 3	0	0
4	1 payment	0
5	2 payments	1 payment

## Implication

- If a major cyclone strikes, the country's loan repayments are automatically covered, depending on the severity

*Samoa insurance shapes shown as an example*



# Historical “As-if” DRL payouts for Tropical Cyclone

Historical repayment obligations covered by DRL insurance

4

3

2

1

0

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

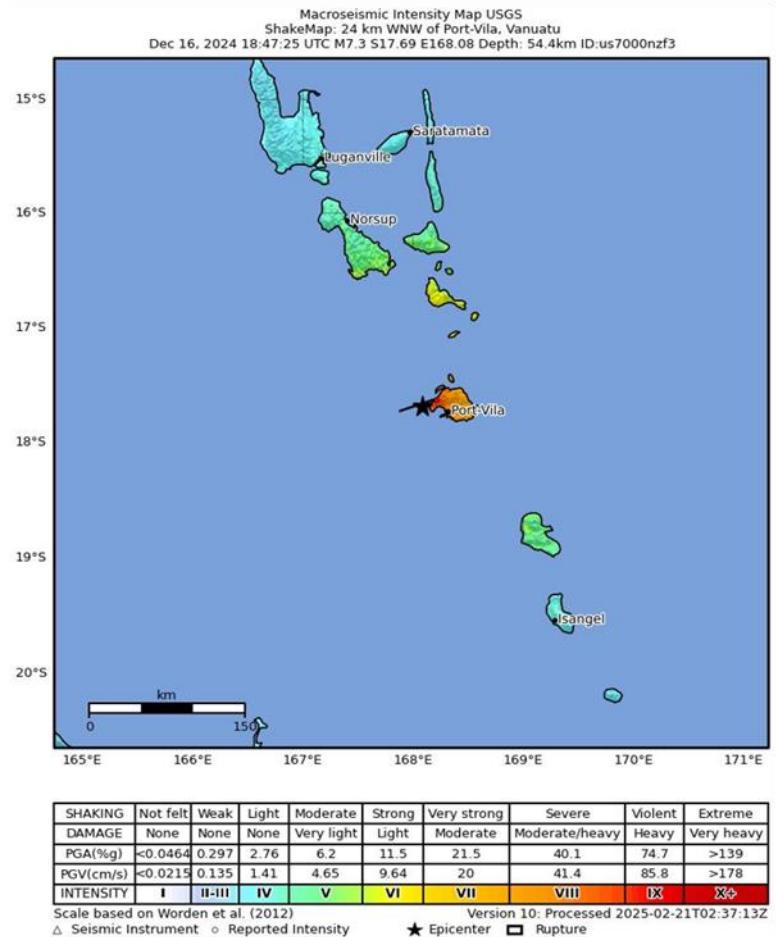
■ Cook Islands ■ Fiji ■ Samoa ■ Solomon Islands ■ Tonga ■ Vanuatu

## Mechanism

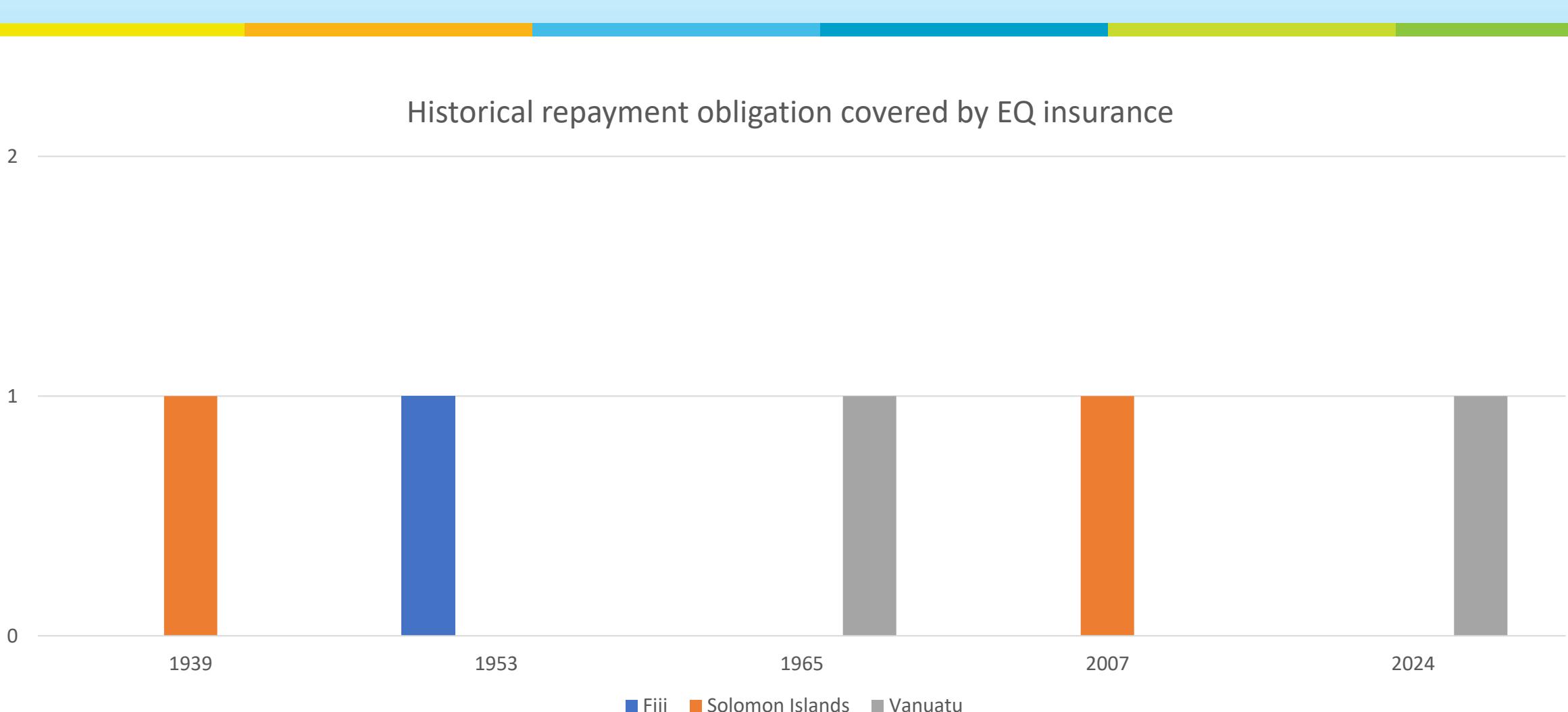
- Payouts designed only for when a strong earthquake affects people
- The stronger the shaking and the more people affected in each country, the larger the payout
- This ensures that the DRL responds to the events that create the biggest fiscal stress for governments

Affected population threshold						
	Cook Islands	Fiji	Samoa	Solomon Islands	Tonga	Vanuatu
Total Population	17,564	896,444	198,410	686,878	105,697	307,150
Return Period for 1 payment	56	19	65	10	33	8
Return Period for 2 installments	84	100	102	101	117	99

Shakemap for the 2024 Earthquake in Vanuatu



# Historical “As-if” DRL payouts for Earthquake



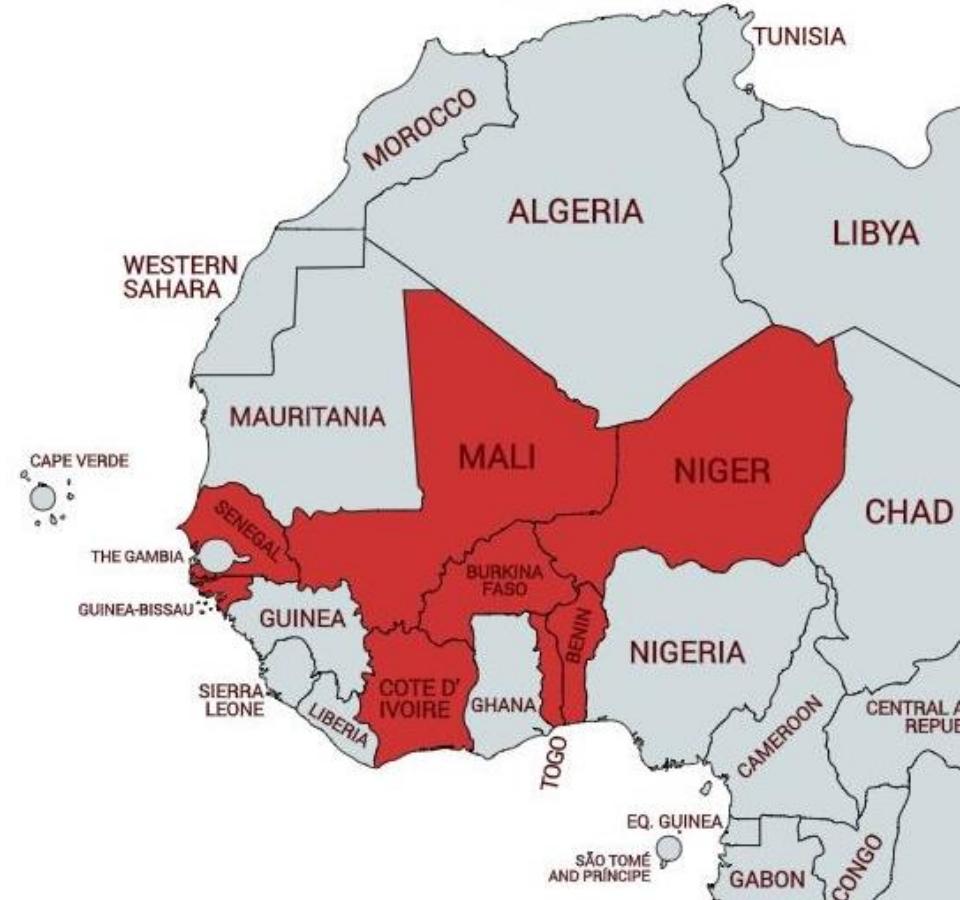
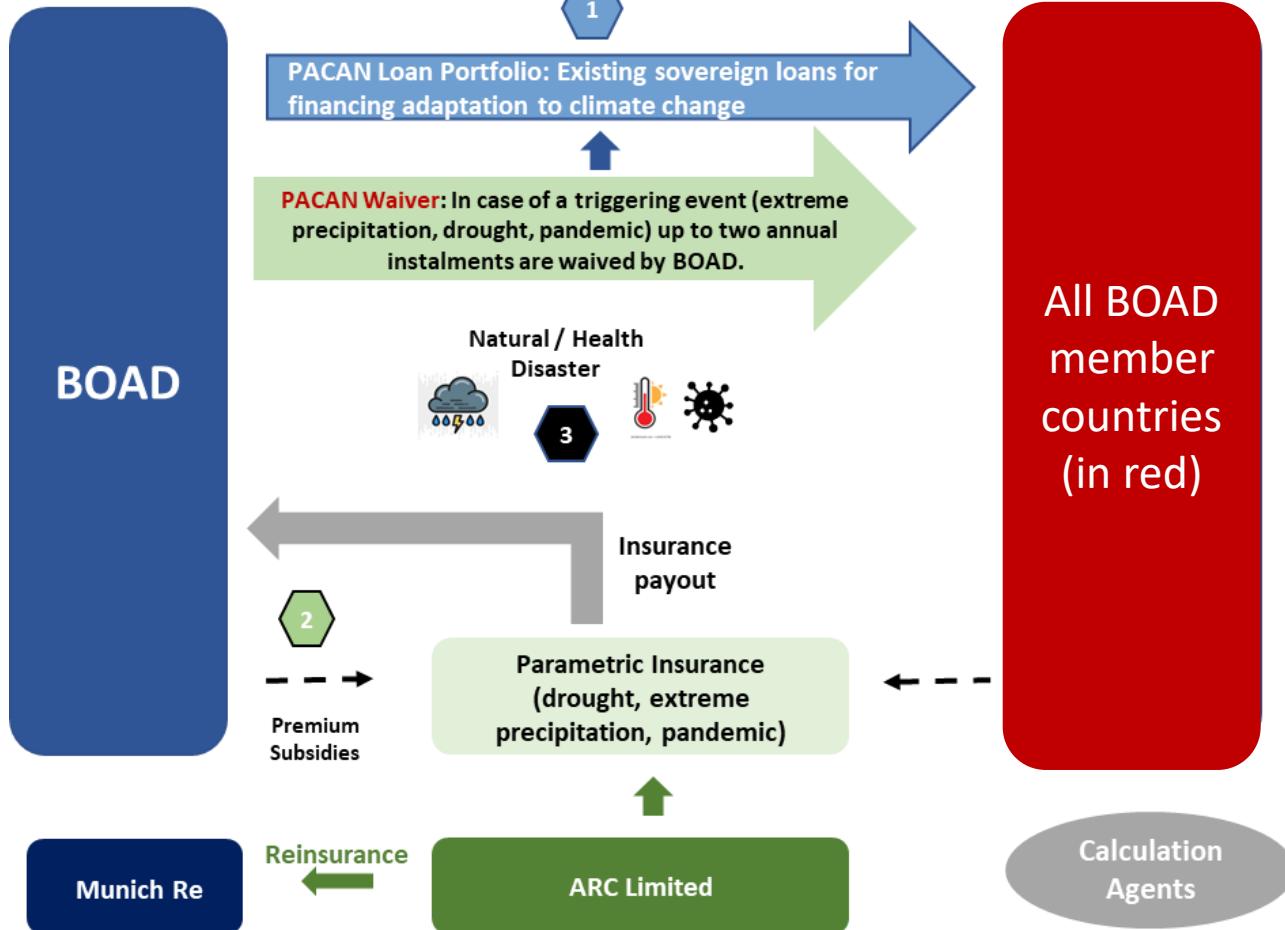
# Cost - Benefit Overview of DRL

DMC	Repayment Obligation (Benefit)	Earthquake Premium	Tropical Cyclone Premium	Total Premium (Cost)
Cook Islands	1.2	0.04	0.05	0.09
Fiji	1.9	0.12	0.31	0.43
Samoa	5	0.13	0.34	0.47
Solomon Islands	3.8	0.42	0.08	0.5
Tonga	1.8	0.07	0.20	0.27
Vanuatu	3.5	0.49	0.62	1.11

# Existing Example

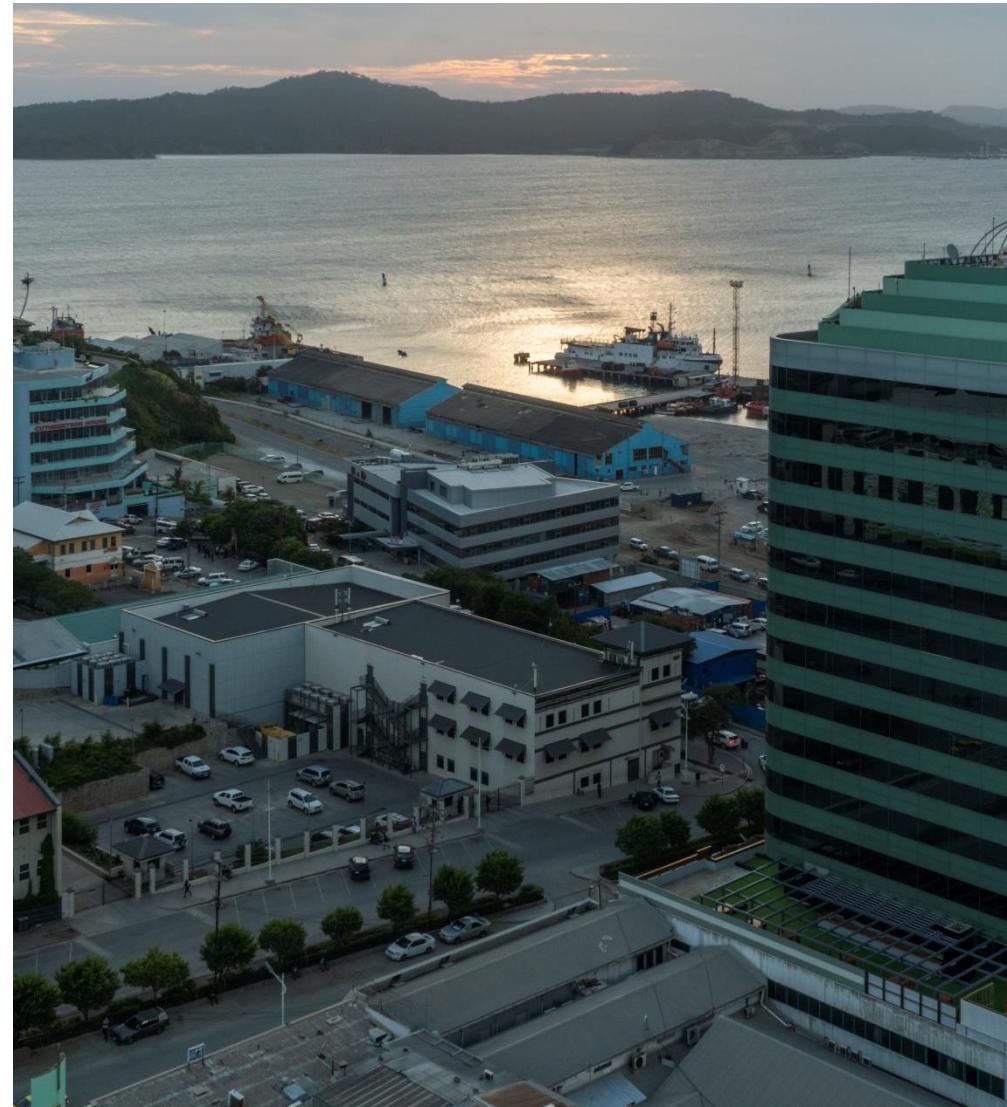
# Existing Examples – BOAD PACAN

Prêts Adaptés aux catastrophes naturelles (PACAN) Pilot  
Project in the WAEMU



# Update & Recommendations

- Pilot DRLs with the selected Pacific DMCs
- Stakeholder engagement on premium funding and operational support
- Further work on the design of DRL payout rules on earthquake and tropical cyclone
- Integration of DRLs with DDCs and Crisis Response Toolkit





Thank you!