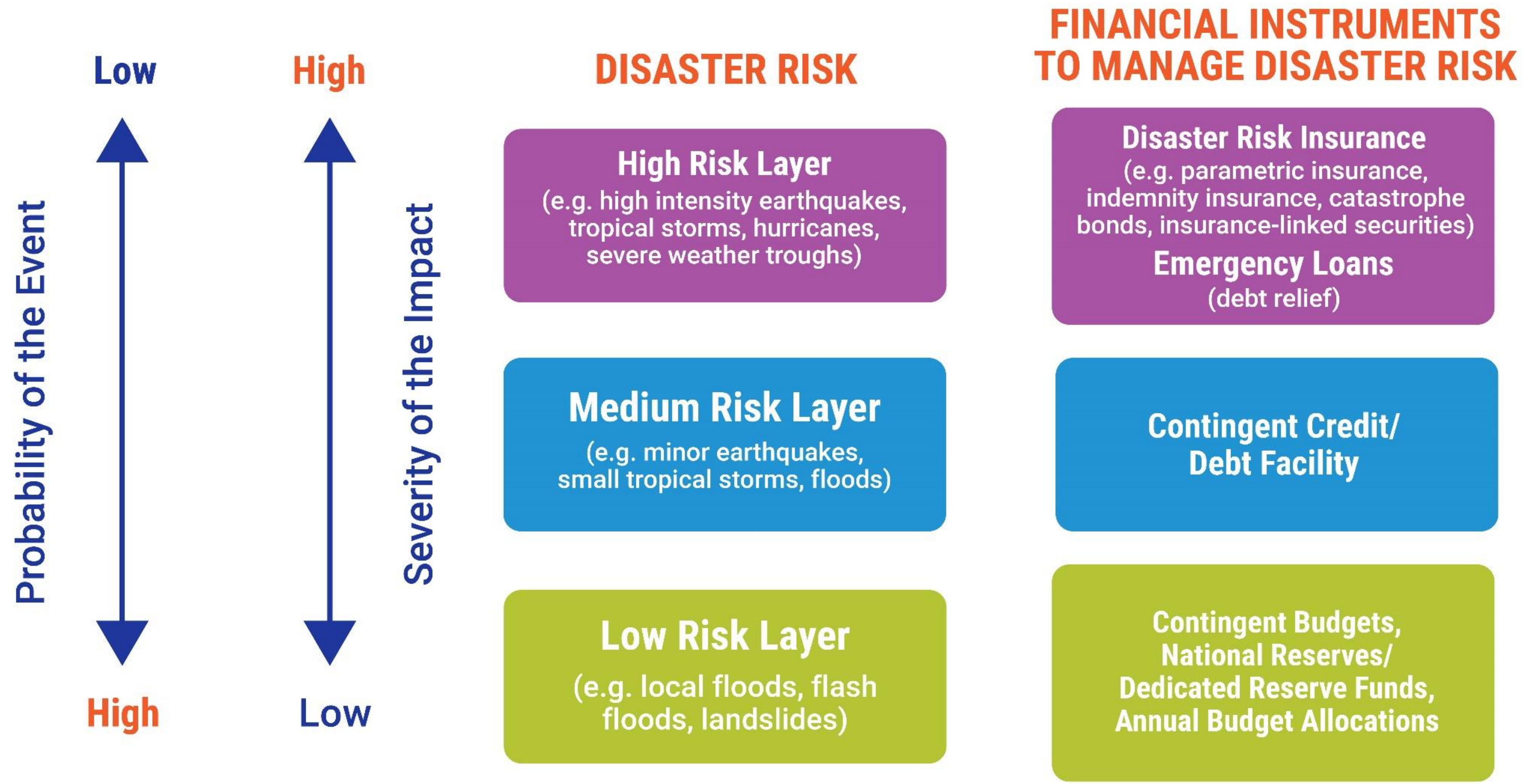
Introduction to Disaster Risk Financing and CCRIF Parametric Insurance

Introduction to Disaster Risk Financing

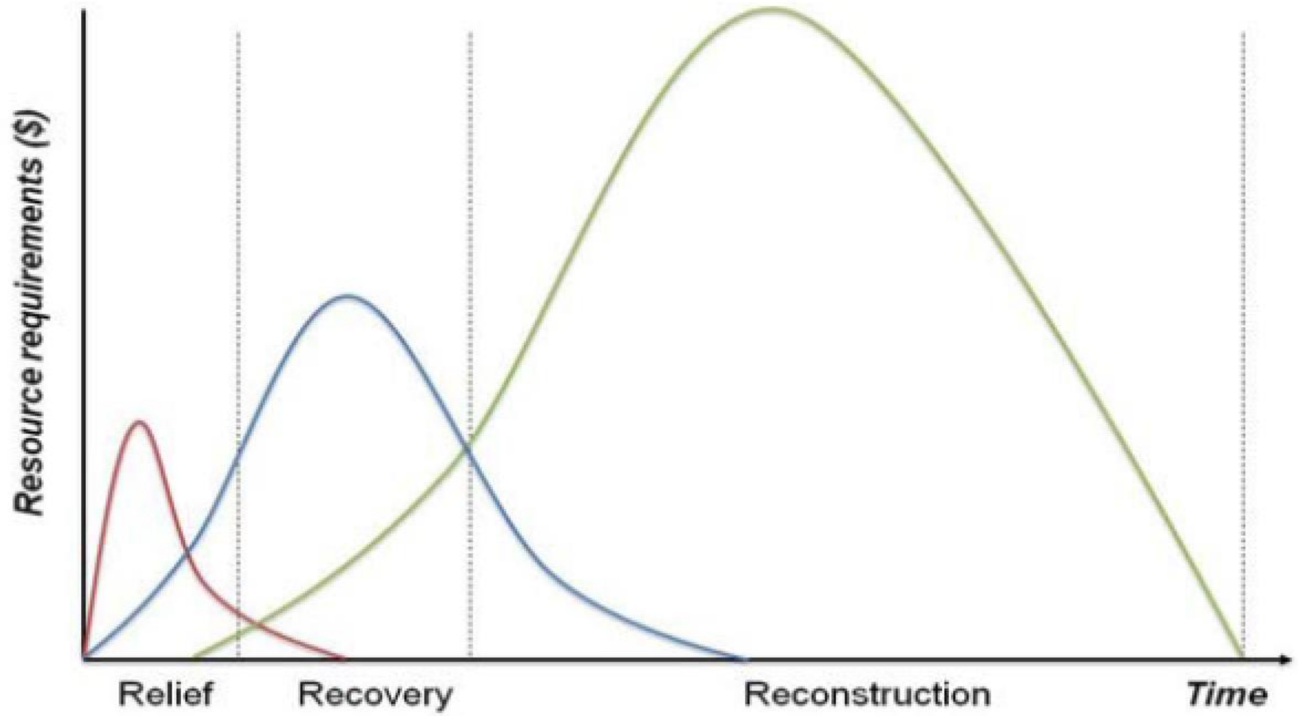
Prepared by: CCRIF SPC

Disaster Risk Financing Layering Approach



Governments should build a financial protection strategy that combines a number of instruments that address different layers or types of risk.

Main Phases of Post Disaster Funding Needs



The design of an efficient financial protection strategy must consider this time dimension to ensure that funding requirements are matched with the capacity to disburse

An introduction to some DRF Tools

- Parametric Insurance
- Catastrophe (Cat) Bonds
- Contingent Lines of Credit
- Dedicated Reserve Funds
- Microinsurance

Parametric Insurance

- Covers the probability of a predefined event happening (e.g., a major hurricane or earthquake), instead of indemnifying actual loss incurred and pays out according to a predefined scheme.
- Insures a policyholder against the occurrence of a specific event by paying a set amount based on the magnitude of the event, as opposed to the magnitude of the losses in a traditional indemnity policy.
- Makes a payment upon the occurrence of a triggering event and is detached from a specific underlying physical asset or piece of infrastructure.
- Make payments based on the intensity of an event (for example, hurricane wind speed, earthquake intensity, volume of rainfall) and the amount of loss calculated in a pre-agreed catastrophe model caused by these events.

How CCRIF Parametric Insurance Policies Work

Parametric insurance disburses funds based on the occurrence of a pre-defined level of hazard and impact	Policy triggered on the basis of exceeding a pre-established trigger event loss
	Estimated based on wind speed and storm surge (tropical cyclones) or ground shaking (earthquakes) or volume of rainfall (excess rainfall)
	Hazard levels applied to pre-defined government exposure to produce a loss estimate
	Payout amounts increase with the level of modelled loss, up to a pre-defined coverage limit

CCRIF makes payouts within 14 days after an event.

ARTEMIS
www.artemis.bm

Olympics sponsor uses Guernsey captive to buy $120m parametric pandemic cover

29TH JULY 2024 - AUTHOR: STEVE EVANS

A large corporation that is a sponsor of the 2024 Paris Olympics has purchased a parametric insurance coverage to protect against exposure to any restrictions enforced, postponement, or a complete cancellation of the games caused by a pandemic and used its Guernsey domiciled captive vehicle to access sources of risk capital efficiently.

The risk of the Olympic games being disrupted, postponed, or cancelled were seen as too great to not have insurance in place, so it seems a parametric solution was deemed a viable option in this case.

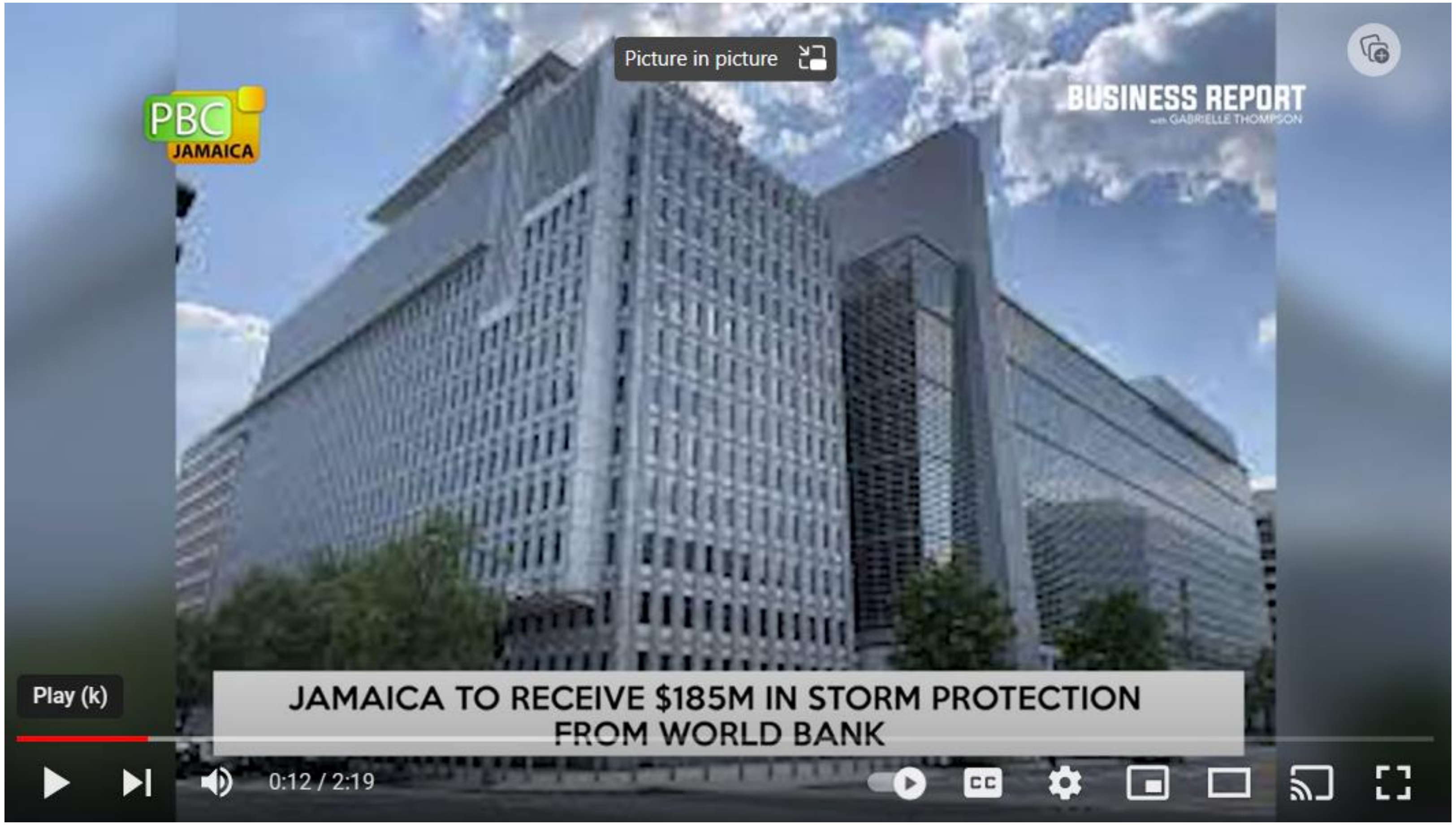
A dual-trigger system was developed for the parametric pandemic coverage, with a first trigger being a WHO declaration of a pandemic and a second being an International Olympic Committee (IOC) announcement of a cancellation, or other disruption, to the Paris games.

https://www.artemis.bm/news/olympics-sponsor-uses-guernsey-captive-to-buy-120m-parametric-pandemic-cover/

Catastrophe (CAT) Bonds

- First introduced in the mid-1990s
- A financial instrument to help governments finance disaster relief and post-disaster reconstruction without over-stressing their fiscal budgets
- A debt instrument that allows governments to tap the capital market and raise money from investors willing to bet against the likelihood of a disaster occurring in a particular place during a particular time period.
- Are an example of insurance securitization, creating risk-linked securities which transfer a specific set of risks (typically catastrophe and natural disaster risks) from an issuer or sponsor (ceding company/development partner such as World Bank) to capital market investors.
- Cat bonds, allows the transfer of risks to bond investors. For the issuer—typically governments, insurers, and reinsurers—cat bonds signify financial protection in case of a major natural catastrophe, such as a hurricane or an earthquake. For the investor, buying the bonds means they may get high returns for their investment, which is not subject to financial market fluctuations.

Cat Bonds – Video on Jamaica



https://www.youtube.com/watch?v=fyHBwuk0crw

Catastrophe (CAT) Bonds

- Catastrophe bonds utilize triggers with defined parameters which have to be met to start accumulating losses.
- Only when these specific conditions are met do investors begin to lose their investment.
- Triggers can be structured in many ways – in the case of from a sliding scale of actual losses experienced by the issuer (indemnity) to a trigger which is activated when industry wide losses from an event hit a certain point (industry loss trigger) to an index of weather or disaster conditions which means actual catastrophe conditions above a certain severity trigger a loss (parametric index trigger).

Catastrophe (CAT) Bonds – Advantages

- Effective tool to address the risk of loss and damage from climate change as it allows countries to raise capital that can be disbursed quickly in the event of a catastrophe.
- Cat bonds can be structured to allow payouts as soon as pre-defined trigger events occur.
- Cat bonds can also provide multi-year coverage to the issuing governments.
- Provide another dimension to diversify and manage catastrophe risk

Contingent Credit Facilities

- The Contingent Credit Facility is a DRF tools to help countries develop effective strategies for natural disaster financial risk management.
- The CCF offers contingent loans that are prepared in advance but are disbursed after the entity providing the loan has verified the occurrence of a disaster event in terms of type, location, and intensity
- The CCF's objective is to provide countries with cash following a natural disaster of severe to catastrophic proportions for humanitarian relief and to restore basic services.
- Proceeds from CCF Loans are used to cover extraordinary government expenditures incurred six months after the disaster. Examples of eligible expenditures include emergency sanitation equipment, medications and vaccines, temporary shelter equipment and installations, water and foodstuffs for displaced or distressed populations, and debris removal, among others.

Contingent Credit Facility

- **What is the amount of the CCF?**
  - The coverage limit of the CCF per country is up to US$300 million or 2% of the borrowing member country's GDP, whichever is less.
- **How is a CCF loan triggered?**
  - The country, through the project executing agency, submits to the IDB a Request for Verification of Eligibility of the disaster event. The IDB will then apply a previously agreed calculation methodology to produce an Eligibility Verification Report. If the assessment concludes the event is eligible for disbursement, the IDB will include in the Eligibility Verification Report the maximum disbursement amount. The borrowing country must confirm in writing its intention to disburse.
- **What is the cost for the Borrower if the CCF loan is never triggered?**
  - There is no cost for the Borrower if there is no disbursement of funds.
- **What are the terms of the CCF?**
  - The same as an Investment Loan. Typically, these loans have a maturity period of 25 years, a grace period of 5.5 years and an interest rate based on LIBOR.

Jamaica's Contingency Fund – Example of a Dedicated Reserve Fund

- The Government of Jamaica in keeping with the requirement of the Fiscal Responsibility Framework in 2019 transferred funds to the Contingencies Fund to specifically provide for the possibility of natural disaster.
- The Contingencies Fund is provided for in the Jamaican Constitution and was established under Section 13 of the Financial Administration and Audit Act to provide for unforeseen expenditure of any kind. The aggregate ceiling of the Contingencies Fund was raised to J$100 million in 1992 and it has a balance of J$94 million as at March 25, 2019.
- In 2019, GOJ moved a resolution to raise the ceiling of the Contingencies Fund from J$100 million to J$10 billion – US$73.6 to provide space for future transfers related to natural disaster risk coverage
- And in 2019 a transfer J$2 billion (US$15 million) was made to the Contingencies Fund which is seen as be an important layer in our financing of natural disaster risk -– note use of the fund for COVID-19

Microinsurance

Microinsurance – A Risk Financing Mechanism at the Individual Level

- Microinsurance refers to insurance services offered primarily to clients with low income and limited access to mainstream insurance services and other means of effectively coping with risk.
- Microinsurance is the protection of low-income people against specific perils/risks in exchange for premium payments proportionate to the likelihood and cost of the risk involved
- Factors such as financial illiteracy, lack of education, poverty prevent many from properly mitigating this risk – making them perpetually poor.
- Microinsurance helps to shield vulnerable people with inadequate earnings against certain risks such as death of family members, accidents, diseases and natural disasters.
- Today, microinsurance is recognized as a means of providing financial security and enable lower income families to access insurance against natural disasters and other exogenous shocks
- A key component of country's financial inclusion policy
- Microinsurance can be considered as an effective risk transfer mechanism and an integral part of an overall disaster risk management strategy.

Microinsurance Further Explained

- Microinsurance combines social protection and microfinance
- It is a financial service offered by different types of providers while also having an element of a social protection approach for protecting people against risks.
- It is an element of a social protection system that comprises public social protection programmes, like social insurance, community-based insurance (often in health insurance), and private/commercial insurers.
- These systems aim at providing coverage against risks to the entire population, but especially to the poor.
- Very few countries have formally discussed or even defined the role of microinsurance within their social protection system.

Importance of Microinsurance and Key Benefits

Often the only option available to protect against setbacks

- Example: Farmer has crop losses, smoothes consumption, prevents the sale of productive assets

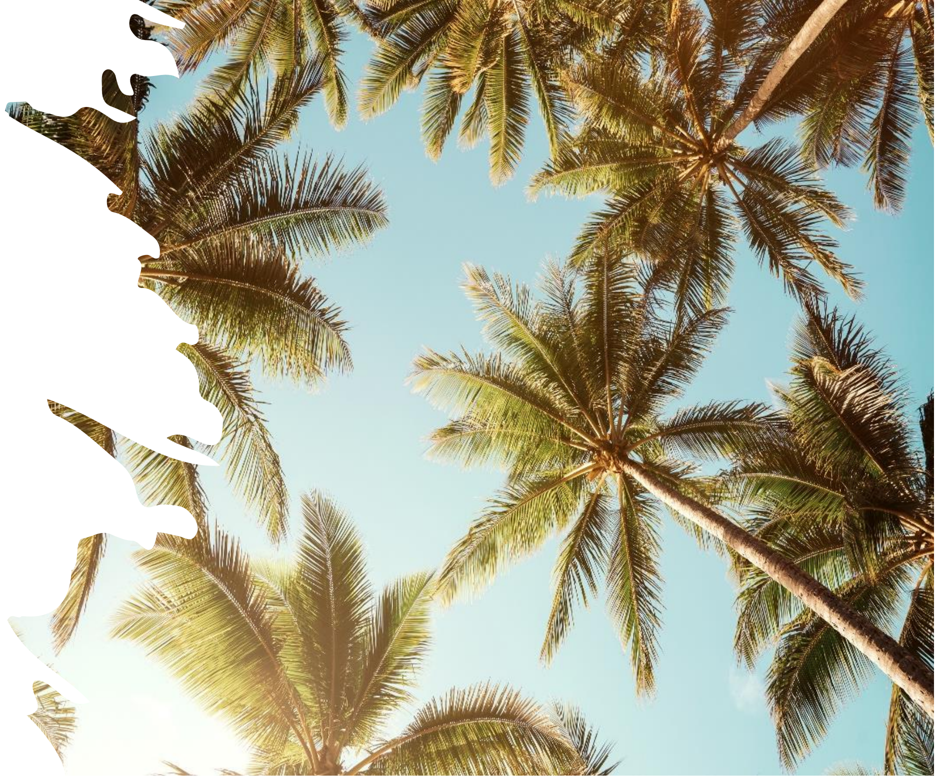
Opens up investment opportunities

- Insured entrepreneurs are able to better manage their financial situation and can take riskier productive decisions
- Example: Tourist operators can expand their business via a loan knowing that if something unexpected were to occur and impact their income, the insurance will provide a safety net

Importantly – it helps avoid the poverty trap

Disaster Risk Finance Solutions

Let's Consider



Country "**AlwaysSummer**" is a small island developing state located in the Caribbean region with a population of about 1.2 million. Like its neighbours, "**AlwaysSummer**" is vulnerable to natural disasters - such as hurricanes and flooding - and the effects of climate change. The macroeconomic profile of the country shows low growth, high public debt, and exposure to external shocks such as rising oil prices. As the country advances beyond the legacies of the global financial crisis it has bolstered international reserves and strengthened its financial sector through legal and regulatory improvements.

Exercise

Using the diagram below, show how different financial instruments may be combined for Country “**AlwaysSummer**”

Low Frequency
High Severity

Financing Instruments

High Risk:

Medium Risk:

Low Risk:

High Frequency
Low Severity

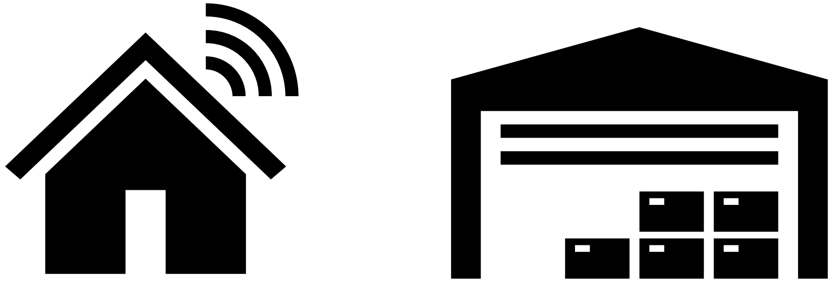
Financing Instruments

a. Contingent Budgets
b. Contingent Credit Facility
c. Catastrophe Bonds
d. Taxation
e. Parametric Insurance
f. Dedicated reserve fund
g. Microinsurance

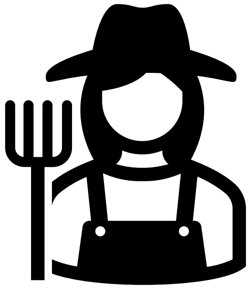
Exercise

Governments normally seek to strengthen the financial resilience of four different groups - national and local governments; homeowners and SMEs; farmers; and the poorest.

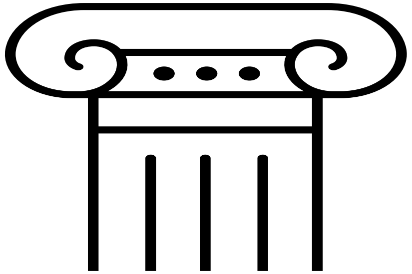
Briefly describe the disaster risk financing instruments best suited to address the challenges faced by each group mentioned above.



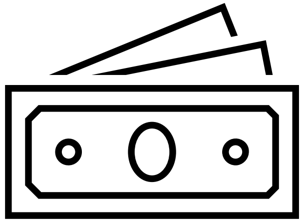
Homeowners and Small Businesses



Agriculture



Resilient livelihoods



National Disaster Response and Budget Protection