

RISK TRANSFER & DISASTER RISK MANAGEMENT PRODUCTS



THE WORLD BANK
Treasury

Philadelphia

June 2nd, 2015

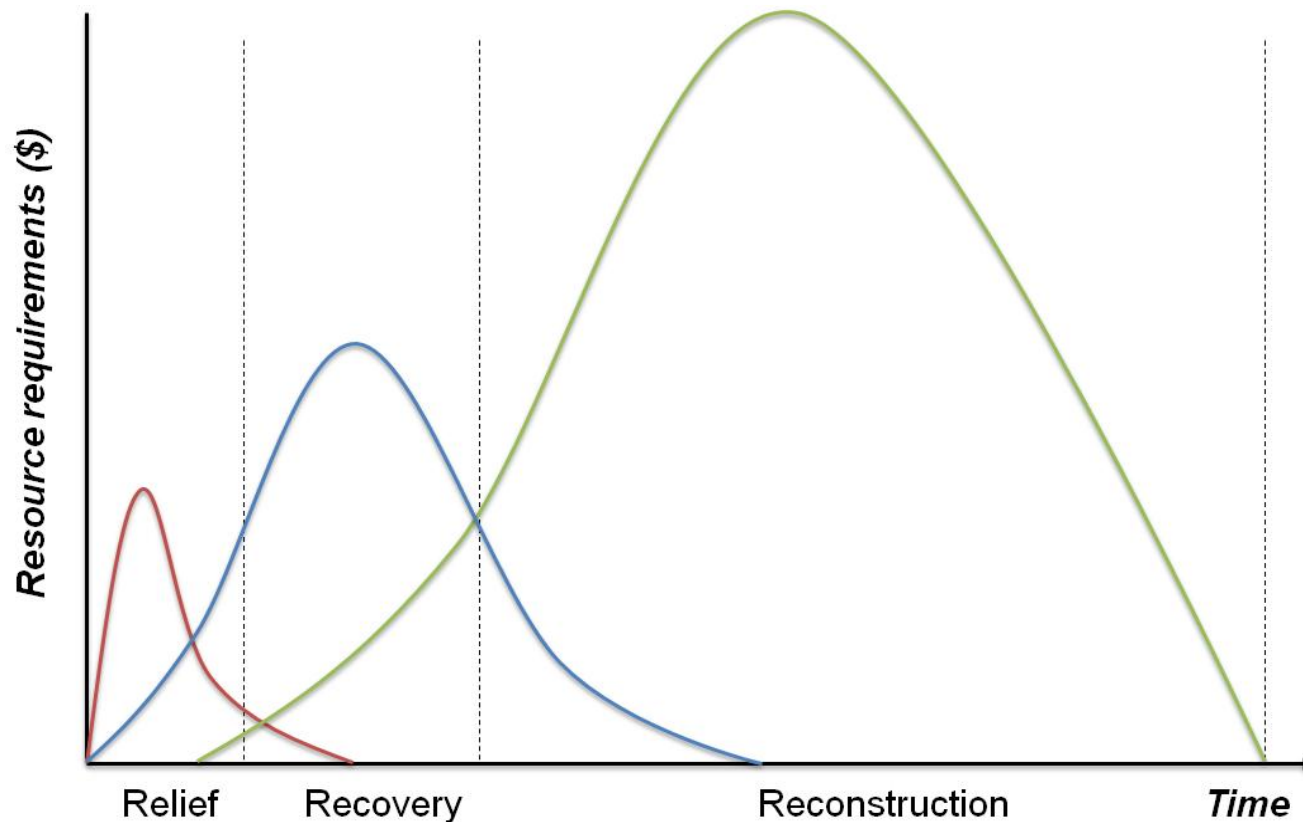
Main Message

- The World Bank Group (WBG) is a trusted and client-focused one-stop financial service provider with a powerful product platform and network of relationships
- The WBG offers clients a wide menu of innovative financial products and unique knowledge & advisory services
- Our goal is to help clients achieve their strategic objectives by offering tailored financial solutions

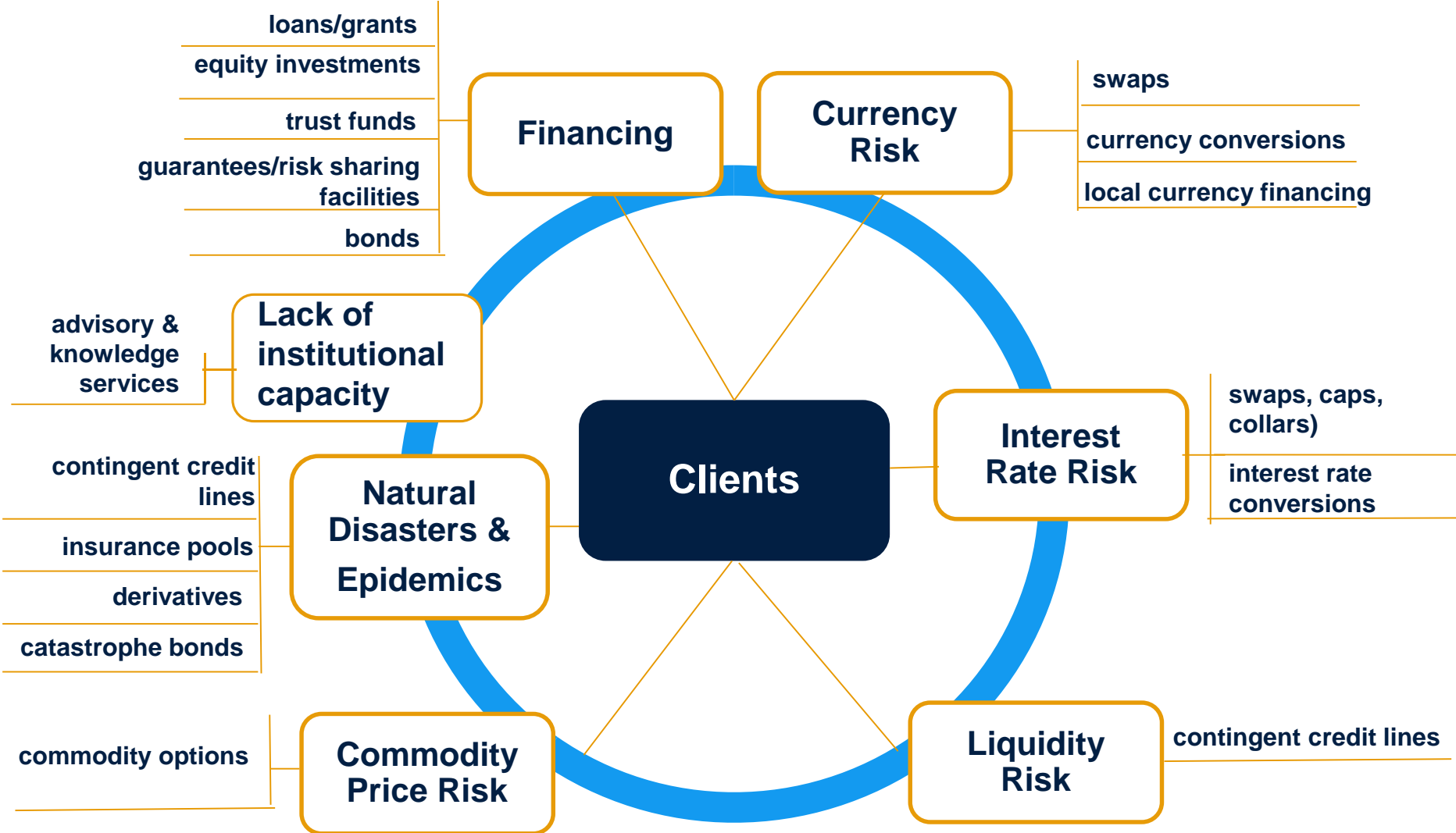
NO “ONE-SIZE FITS ALL”

Development Challenge

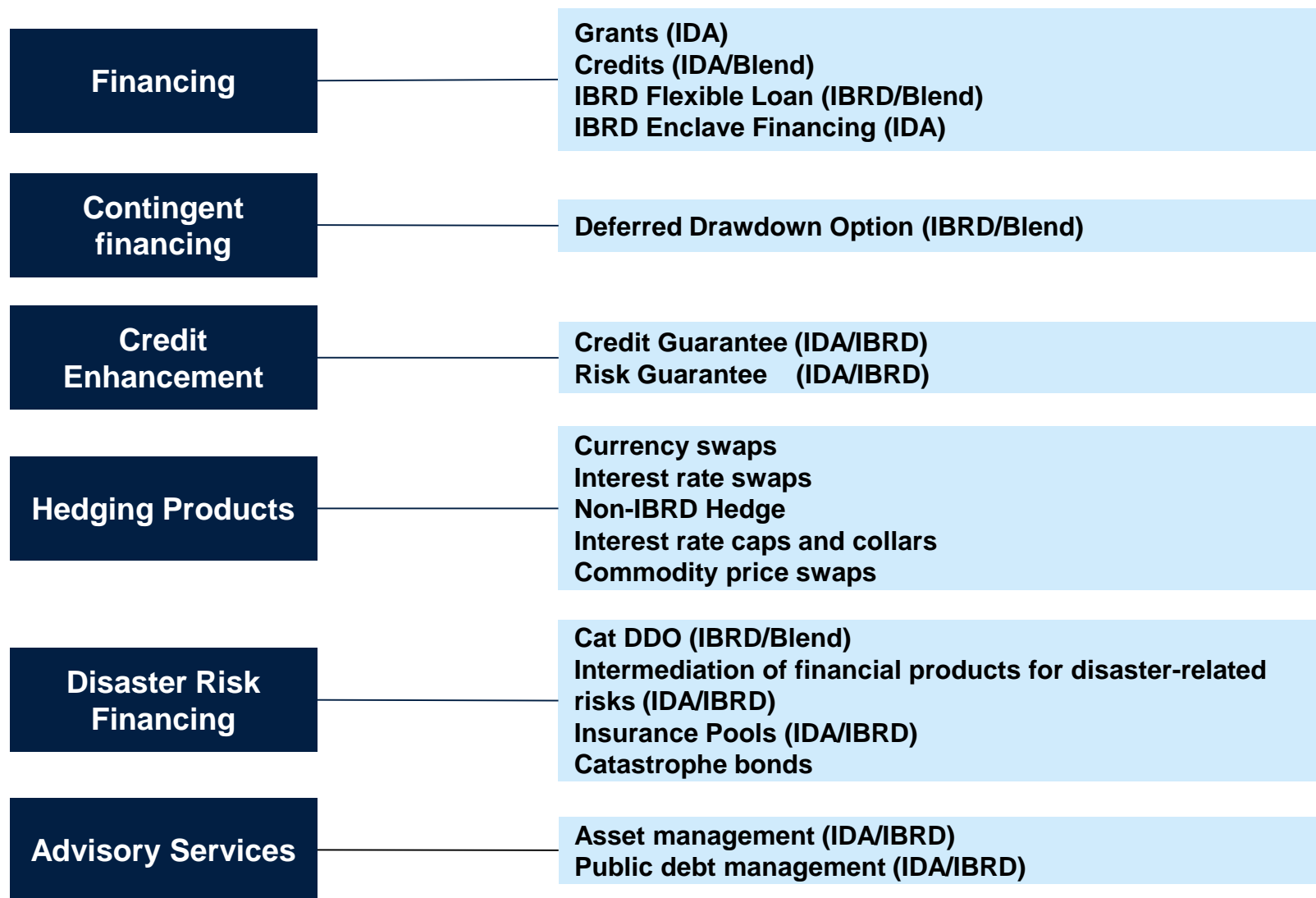
- The Treasury of the World Bank focuses natural disaster Risk Transfer Solutions
- The main objective is to enable Governments to respond quickly to emergencies



Mapping Clients' Needs to Financial Solutions



World Bank Product Menu



Natural disaster and weather risk management

Long-standing and strong partnership across WB Bank units

- **Disaster Risk Management** (DRM) in Social, Urban, Rural and Resilience GP (GSURR) leads disaster risk management dialogue with clients in collaboration with sector colleagues and specialists to define vulnerabilities and programs for disaster risk prevention and management
- **Global Facility for Disaster Reduction and Recovery** (GFDRR) in the Climate Change CCS can provide grants and seed financing to enable the engagement with clients and the technical studies and knowledge solutions to help define a disaster risk management framework
- **Disaster Risk Financing and Agriculture Insurance** (DRFAI) in Finance and Markets leads the technical dialogue with clients regarding disaster risks and helps countries in define a disaster risk financing framework based on severity vs. frequency
- **Treasury** (TRE) leads the discussions with the markets, structures and executes the financial transactions for clients

Disaster risk financing instruments

- Address immediate liquidity needs
- Manage and transfer financial risks to the market

Probability of Event ↑ Low ↓ High	Severity of Impact ↑ Major ↓ Minor	Insurance-linked Securities	Catastrophe bonds	MultiCat program Capital-at-Risk program	Risk Transfer
			Natural Disaster Derivatives	Insures against weather or geologic losses, based on an index	
		Insurance Pools	Caribbean & Pacific	Regional facilities pooling risks to cover against natural disasters in 16 Caribbean countries and 5 Pacific countries	
		Contingent Loans	Cat DDO	Provides immediate liquidity following a natural disaster	

Technical Assistance in budget planning for natural disasters

- Analysis of fiscal impact of natural disasters
- Ex ante budget planning

Catastrophe Deferred Drawdown Option

Contingent credit line, the Cat DDO

- Provides immediate liquidity following natural disaster to IBRD country
- Secures access to up to US\$500 million or 0.25% of GDP (whichever is less) before an event occurs
- Following declaration of a state of emergency due to a natural disaster, funds immediately available for disbursement

Case Study

Philippines

Development Challenge

- Philippines is highly exposed to natural disasters.
- Disaster risk management is a government priority.

Financial Solution

- In 2012 the Philippines signed its first Cat DDO – first outside of LCR, largest to-date.
- After tropical storm 'Sendong' hit the country, the government withdrew the \$500 million Cat DDO for recovery and reconstruction activities.



The World Bank

Risk Transfer Products

Derivatives

- Cat Swap
- Fully Collateralized Cat Swap

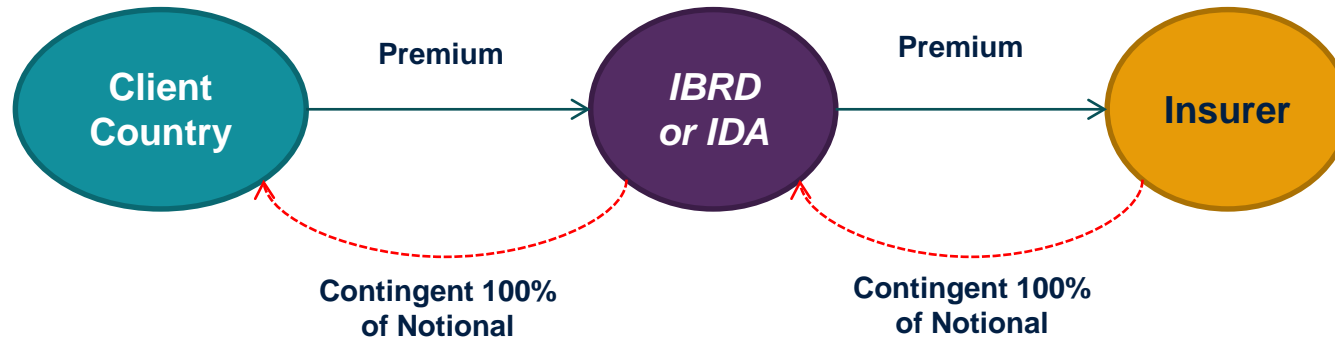
Bond Format

- MultiCat Program
- Capital-at-Risk Notes

Perils/Risks

- Wind (hurricanes and tropical cyclones)
- Earthquakes
- Tsunamis
- Excess rain
- Drought
- Longevity/mortality
- Excess mortality

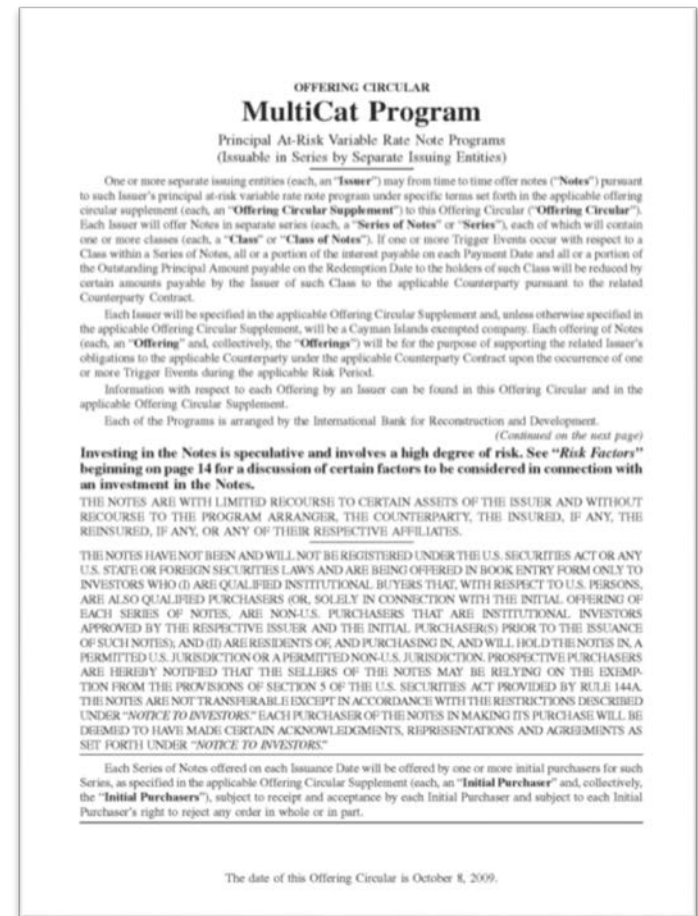
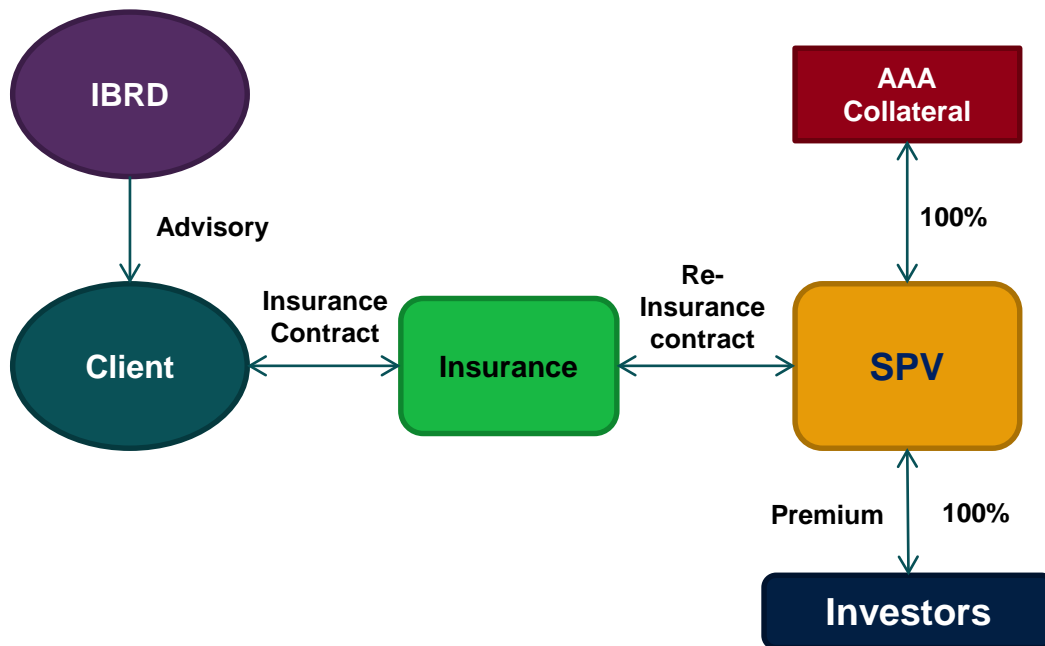
Cat Swap



- **Cat Swaps are simple vehicle used by the Bank to transfer risks to the reinsurance sector**
- **Used to transfer cat risk including earthquakes, wind, tsunami but also rainfall and drought**
- **The Bank has used Cat Swaps under the following transactions**
 - Caribbean Catastrophe Risk Insurance Facility (CCRIF), pooling risk transfer for EQ and TC for 16 countries in the Caribbean
 - Pacific Catastrophe Risk Insurance Pilot program, also a pooling risk transfer for EQ, TC and Tsunami for 5 island countries in the Pacific
 - Uruguay Weather Derivative, the largest ever weather derivative linked to drought and oil prices to hedge the Electric Utility Company of Uruguay
 - Malawi weather option to cover the country against drought

MultiCat Bond

- The coverage sourced through the MultiCat is passed to the Insured through an insurance company
- Proceeds of the cat bond are kept in a collateral account invested in US Treasuries or other AAA liquid assets
- Used for Mexico MultiCat 2009 and 2012



WB Capital-at-Risk notes

- Approved in February 2014 by the Bank's management
- Documentation is an addendum to the World Bank Global Debt Issuance Facility (May 2008), our standard bond issuance program
- It enables the issuance of non-principal protected World Bank bonds, thus rated less than our AAA
- It also allows our smaller client countries a flexible vehicle to transfer risks leveraging on our issuance platform
- Can issue in several forms, from 144a to RegD

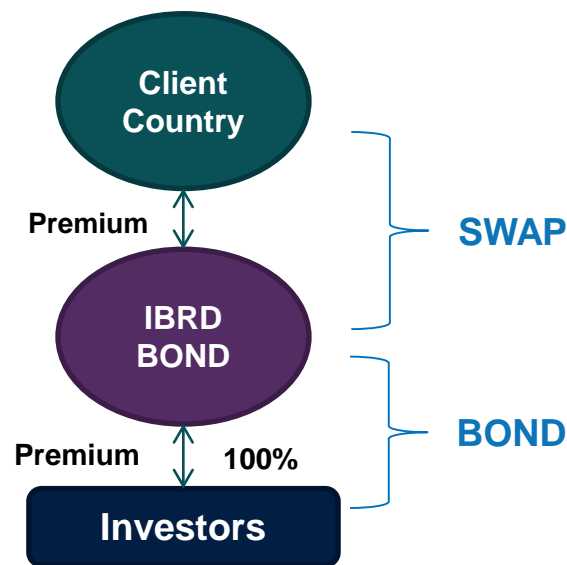
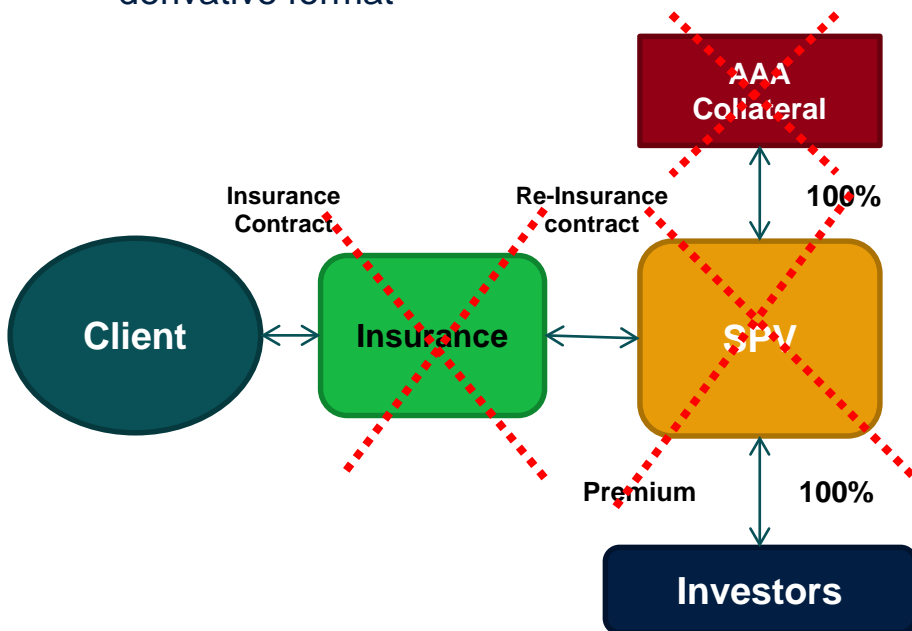
WB Capital-at-Risk (CAR)

Typical Cat Bond Structure

- The coverage sourced through a Cat Bond is passed to the Insured through an insurance company
- Proceeds of the cat bond are kept in a collateral account invested in US Treasuries or other AAA liquid assets
- Basically the investors act as the insurers, with the insurance company intermediating in the derivative format

WB Cat Bond

- The Bond is issued under the World Bank Global Debt Issuance Facility Special Program, and thus not rated AAA
- The Proceeds of the cat bond are kept in balance sheet of the World Bank at US Treasuries plus our funding spread
- If the Bond triggers, the WB would pass the proceeds to Client Country.



Main Benefits of CAR Notes

- **IBRD bonds will be rated separately from our AAA rating**
- **Benefits from the existing infrastructure of the World Bank's MTN program + our existing tax and SEC exemptions**
- **An efficient and cost effective solution for clients and small institutions that do not have the ability to access the market directly**
 - Fewer parties involved
 - Collateral in IBRD balance sheet at US\$ LIBOR rates
 - Less documentation
 - No SPV
 - Leverage on World Bank for communication with investors and the public
 - Partial indemnification by World Bank
- **Builds off our experience as Arranger of the MultiCat Program, but will significantly reduce transaction and time to market**

First IBRD CAT Note – CCRIF

Caribbean Catastrophic Risk Insurance Facility (CCRIF)

Issuer:	World Bank
Nominal amount:	USD 30,000,000
Redemption amount:	The nominal amount reduced by all principal reductions as a result of applicable Caribbean tropical cyclone or earthquake events (as defined in the terms of the notes)
Settlement date:	June 30, 2014
Coupon:	6 month LIBOR + 6.30%, floored at 6.50%, quarterly
Maturity date:	June 7, 2017
Listing:	Luxembourg



World Bank sells first ever 'Cat Bond'

“The World Bank has issued first ever catastrophe bond as hunger for yield allows developing countries to transform their fiscal position.

“The \$30m deal will help provide earthquake and hurricane coverage for a group of 16 Caribbean island nations over the next three years.

“This is the first time the World Bank has issued a catastrophe bond and the first time it is doing a non-AAA bond,” said Madelyn Antoncic, Treasurer of the World Bank Group. It is likely to be a model for future deals.”

-- Financial Times



CCRIF Bond Specifics

Perils	Earthquake and Hurricane
Trigger Type:	Modeled Loss AEL @ 3.65% (cumulative) and 1.78 multiple
Agencies:	Automated Tropical Cyclone Forecast (ACTF) National Earthquake Information Center (NEIC/USGS)
Agents:	CCRIF as Calculation Agent PWC as Calculation Validation Agent and Reset Agent Modeling by: KINETIC Analysis Corp.
Reset:	Annually based on countries change in coverages
Partners:	Guy Carpenter – Lead Swiss Re and Munich Re - Advisors

Other Applications

- Longevity and mortality
- Infrastructure finance
- Weather
- Now epidemic and pandemic (health bonds)
- Social impact bonds
- Credit derivatives

The World Bank Group

IBRD

International Bank
for Reconstruction
and Development



Lends to governments
of middle-income and
creditworthy low-
income countries.

Issuer of
World Bank
(IBRD) Bonds

IDA

International
Development
Association



Provides interest-free
loans —called credits—
and grants to
governments of the
poorest countries

Funds raised
from donors

IFC

International
Finance
Corporation



Promotes development
by financing private
sector enterprises in
developing countries.

Issuer of
IFC Bonds

MIGA

Multilateral
Investment
Guarantee Agency



Promotes foreign direct
investment into
developing countries by
offering political risk
insurance (guarantees) to
investors and lenders.

ICSID

International Centre
for the Settlement of
Investment Disputes



Provides international
facilities for conciliation
and arbitration of
investment disputes.

IBRD and IFC both issue bonds in the capital markets. They share the same overall development goals, but are legally separate entities. Each entity has its own risk profile and capital structure.