

# World Bank Group Risk Mitigation Instruments for Climate Change *Presentation Slides*

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# Introduction

## Purpose of the study

- Provide an overview of all risk instruments offered by the World Bank Group (WBG) through its various institutional channels
- Highlight potential *gaps* in the coverage of risks
- Understand to what extent these instruments have been targeting *climate related* projects

### Why is it interesting?

- For the key role of risk instruments in mobilizing private finance
- For the key role of public institutions in supplying resources to those countries and sectors where the private sector cannot go
- As the first phase of a larger CPI effort towards in-depth analysis of risk mitigation instruments

# Key questions

## Institutional overview

- How is the WBG *organized* for risk mitigation?
- In which *countries* is the WBG investing?
- *What risks* does the WBG cover?

## Instrument-specific overview

- What are the instruments' *technical features*?
- What are the *pros* and *cons* of each instrument?
- What is the WBG commitment to risk mitigation for *climate related* projects?

# Methodology

- All data during this first phase of the project are retrieved from *publicly available data*
- Instrument and risk classification is based on *CPI's Risk Gaps* series
- Risks are analyzed from the perspective of both *investors* and *projects* depending on whose risk is mitigated
- Reported *committed amounts*, based on *maximum coverage* offered

## Climate related initiatives: definitions

Mitigation	Adaptation
<i>Projects and activities which directly target emissions reductions</i>	<i>Projects and activities targeting disaster risk mitigation and explicitly dedicated to adaptation purposes as stated in accompanying documentation</i>

## Key Findings

## Key findings

Theoretically most risk categories are covered by the WBG, principally to private debt investors, but only a few types of risk instruments appear to have been used at a significant scale to support climate related projects.

- On average *2 USD billion* is committed *every year* by the WBG in risk mitigation activities since 1990; in the last three years annual commitments rose to *4 USD billion*. So far the WBG has dedicated *10%* of these flows to *climate change*;
- Most instruments provided by the WBG *explicitly* focus on *counterparty / credit risks* and *political risk*. Other risks are *implicitly* covered mostly through *partial credit guarantees*;
- Most of commitments for climate related projects went to *established technologies*, mainly in *Latin America* and *East Asia & Pacific*, with the *Sub-Saharan* region also receiving significant interest;

## Key findings

- *MIGA* is the largest provider of risk mitigation instruments in terms of volume, but has a relatively low involvement in the climate change sector. A stronger formal engagement by MIGA would have the *most impact* on overall WBG support to climate related projects;
- *IBRD* provides the largest variety of risk mitigation instruments but its commitment to risk mitigation for climate change seems to have been gradually focusing on *contingent financing* provided to the *public* sector;
- *IFC* is significantly *increasing its commitment* to risk mitigation and climate change. It is the only institution to have products specifically *dedicated to climate change*, although most of the support is provided by its *risk sharing facilities*;
- Each WBG Institution seems to have gained a *distinctive expertise and technological focus* with regards to climate related initiatives.



# Conclusions

Despite the WBG's growing prioritization of climate related investment, more can be done to increase provision of climate specific risk mitigation products and keep pace with increasing green investment needs.

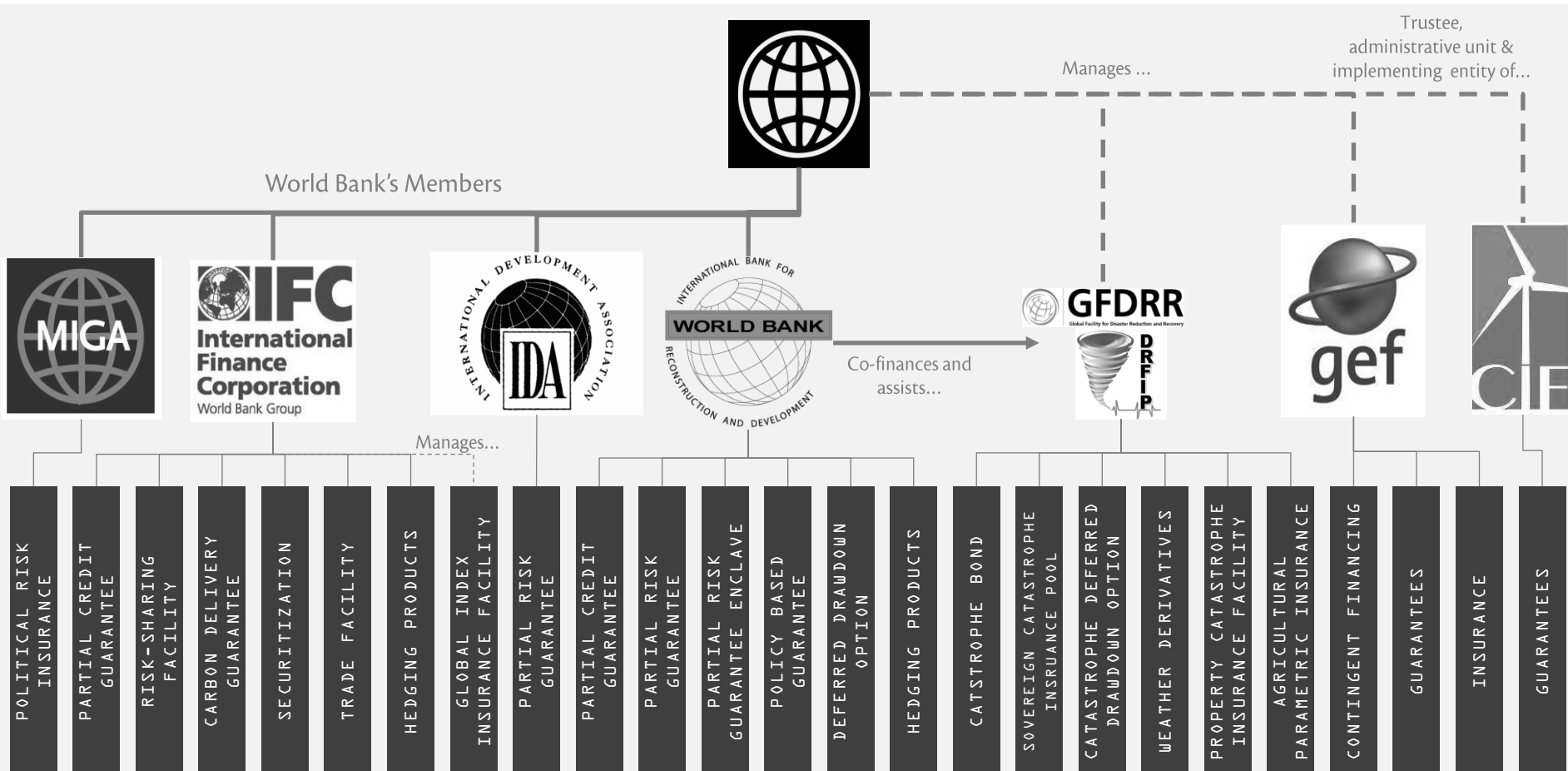
- A *mandate* of the World Bank Group on a wider use of *risk mitigation instruments* for climate change could help increase their availability to the climate investor;
- *Guarantees*, in particular, could be used more frequently to support climate related projects;
- *Index-based* instruments could *potentially be explored* for support to climate related sectors beyond disaster risk mitigation.
- More could be done to improve the transparency on *transaction* and *enforcement costs*.

*In the coming months CPI will remain actively engaged in its analysis of risk mitigation instruments and tools, with additional in-depth analysis of World Bank Group's risk mitigation instruments in dedicated case studies.*

# Institutional Overview

# What is the organization doing for risk mitigation?

- All WBG institutions include risk mitigation within their *mandates*
- WBG has at its disposal a *large range* of risk mitigation instruments
- Risk mitigation is offered through *exclusive product lines* or in the form of *institutional backing*
- The most diffused instrument types are *loan* and *credit guarantees*



# What risks are covered?

- Most WBG instruments *explicitly* cover *counterparty/credit risk* and *political risk*
- Other risks are *implicitly* covered mostly through *partial credit guarantees*
- The WBG helps *indirect mitigation* of additional risks

Types of Coverage: Explicit  Implicit  Indirect

	POLITICAL, POLICY, SOCIAL						TECHNICAL, PHYSICAL					COMMERCIAL, MARKET					OUTCOME			
RISKS	Public Governance	Legal and Ownership rights	Permitting/Siting	Policy	Private Governance	Reputation/Social opposition/Violence	Construction	Disaster/Catastrophe	Reliability of output	Operation and Management	Environmental impacts	Currency	Input/Output Price Volatility	Environmental Instr. Volatility	Access to Capital	Counterparty/Credit Default	Investment Liquidity/Exit	Emission Reduction Targets	Co-impacts (i.e. employment)	Financial sustainability (budget)
Credit Enhancement																				
Insurance																				
Contingent Financing																				
Contracts																				

NOTE: Coverage offered is a different concept than effectiveness of risk mitigation

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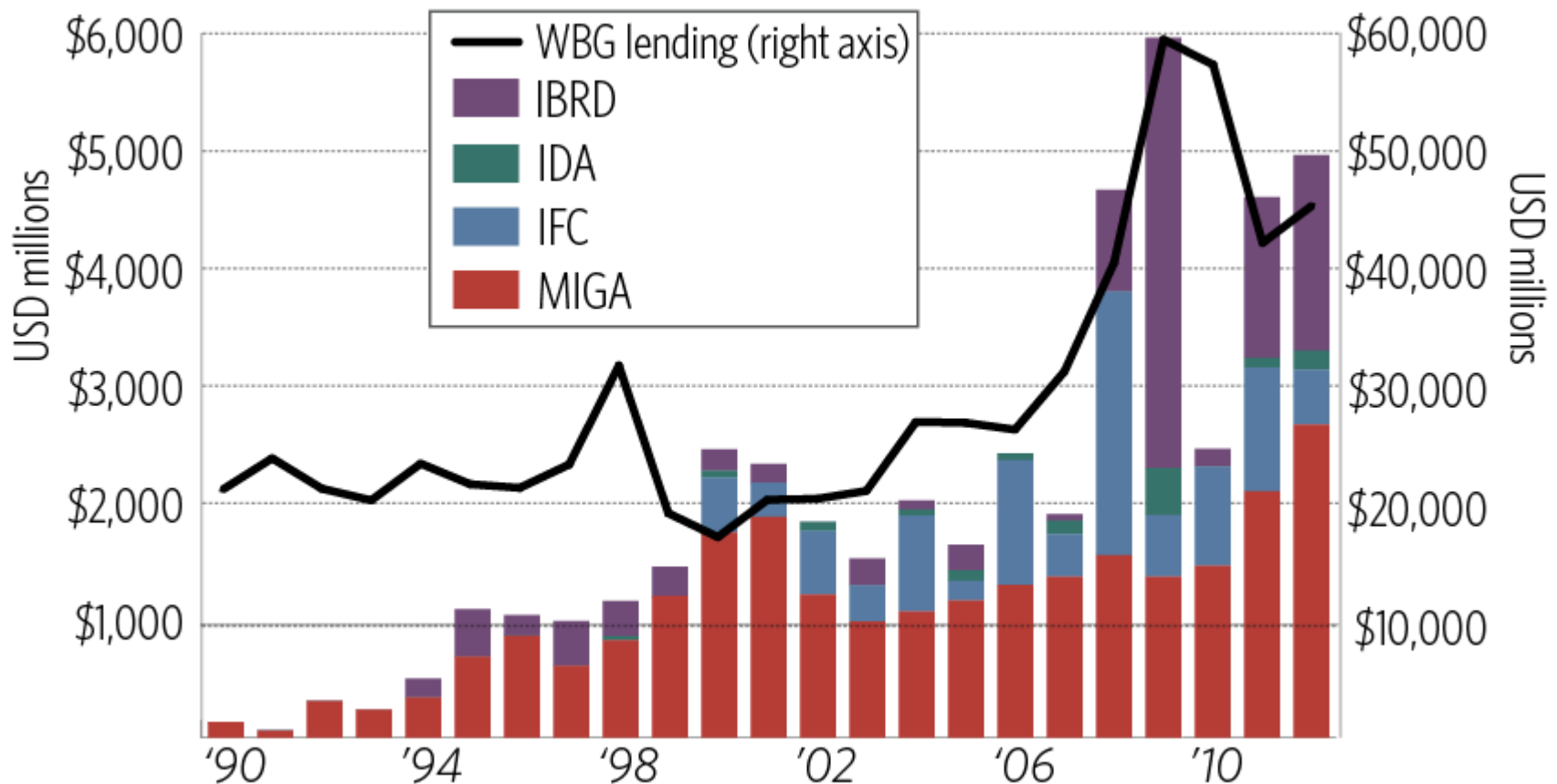
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MIGA																				
IFC																				
IDA																				
IBRD																				

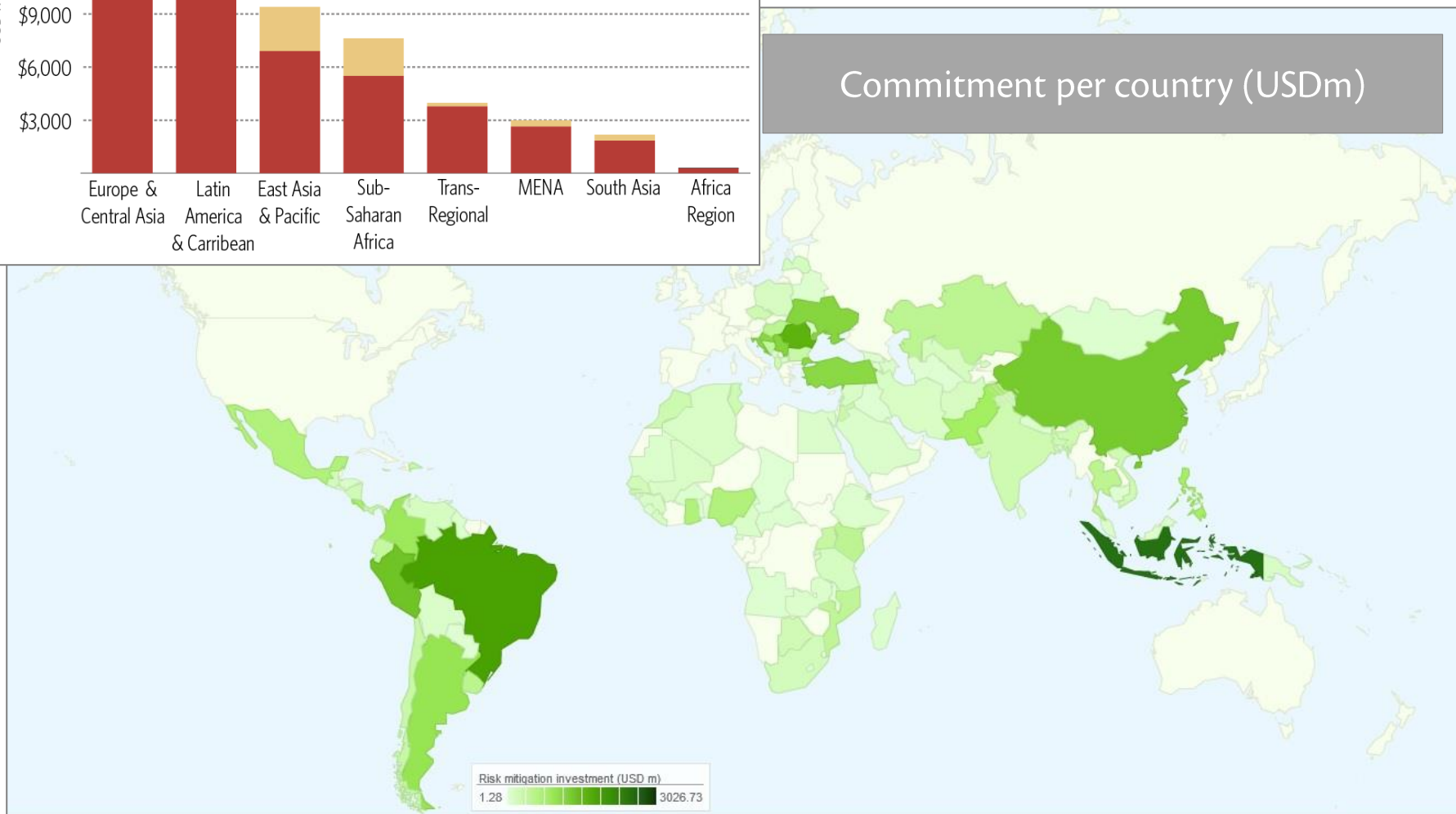
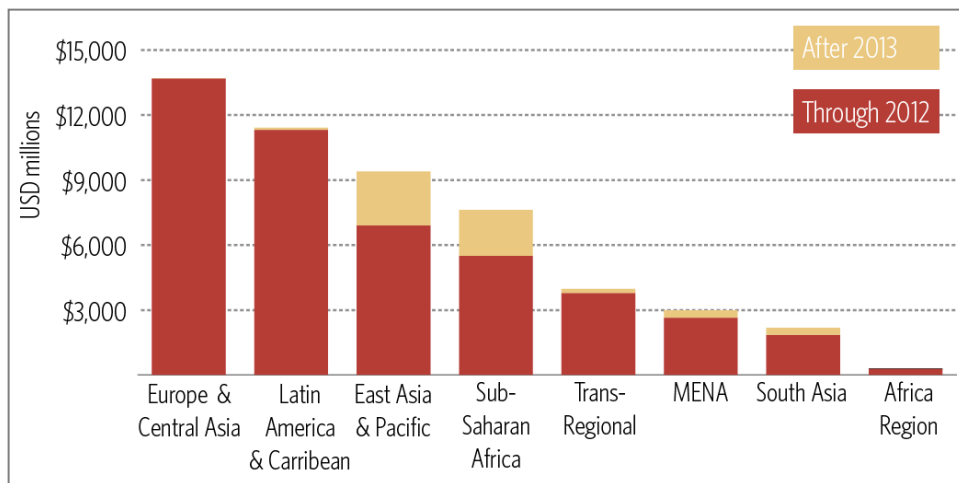
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## How much is the WBG committing to total risk mitigation?

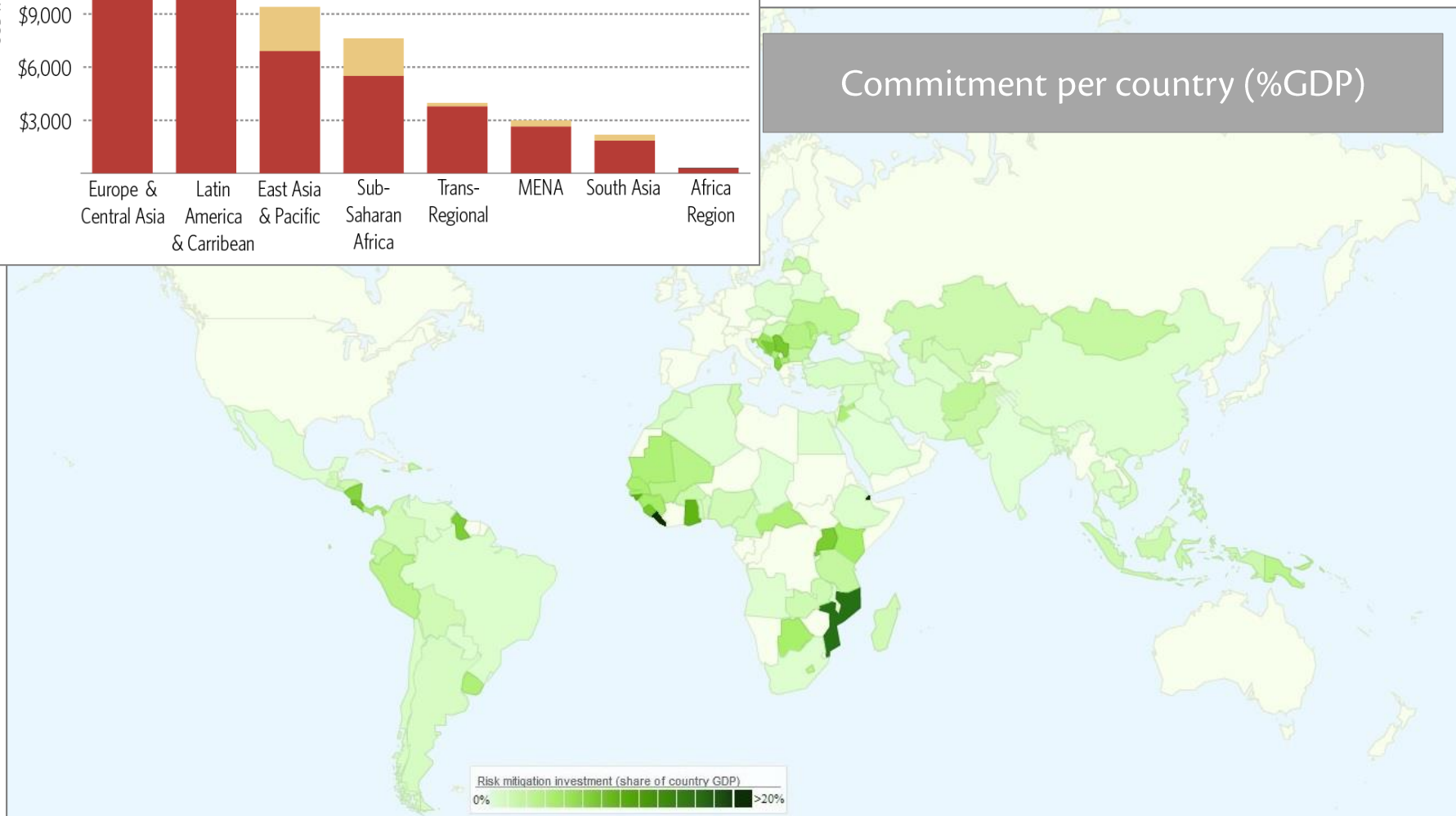
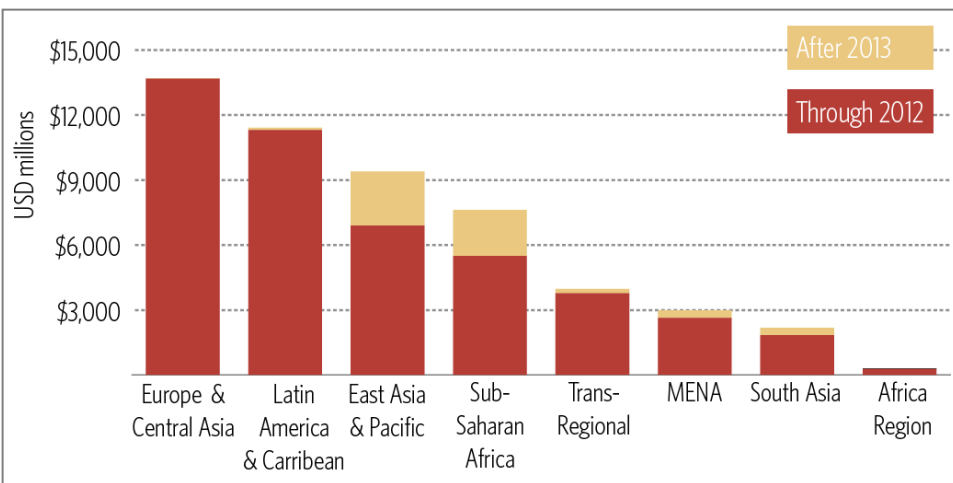
- On average **2 USD billion** is committed **every year** by the WBG to risk mitigation activities since 1990; in the last three years annual commitment rose to **4 USD billion**
- MIGA** provided most of the risk coverage with **55%** of overall cumulative commitments
- Increasing trend is occurring at a **slightly higher pace** than overall WBG lending activities



# Where is risk being mitigated (all projects)?



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# Product prices and transaction costs

- Information on *premia* available for almost all products
- *Limited and not comparable data* on transaction and enforcement costs
- *Index-based* instruments have lower transaction and enforcement costs if compared to guarantees and *indemnity-based* instruments
  - Certainty and promptness of repayments is a key issue for renewable investors!

	Product costs (front-end)*	Product cost (annual)*	Enforcement time
Parametric insurance	N/A	N/A	0-2 months
Deferred Drawdown Option	0.25% - 0.50%	0.50%**	0-1 months
MIGA guarantee	0%	0.50% - 1.75%	6-14 months
IFC partial risk guarantee	depending on project and borrower's risk profile		1 month
IFC risk sharing facility	depending on project and borrower's risk profile		6 months
WB credit guarantees	0.25%	0.50% - 0.70%	N/A
WB partial risk guarantees	0.15% - 0.40%	0.50% - 2.20%	N/A

Note: (\*) Percentages represent shares of insured amounts; (\*\*) DPL DDO only.

# Risk Mitigation for Climate Change

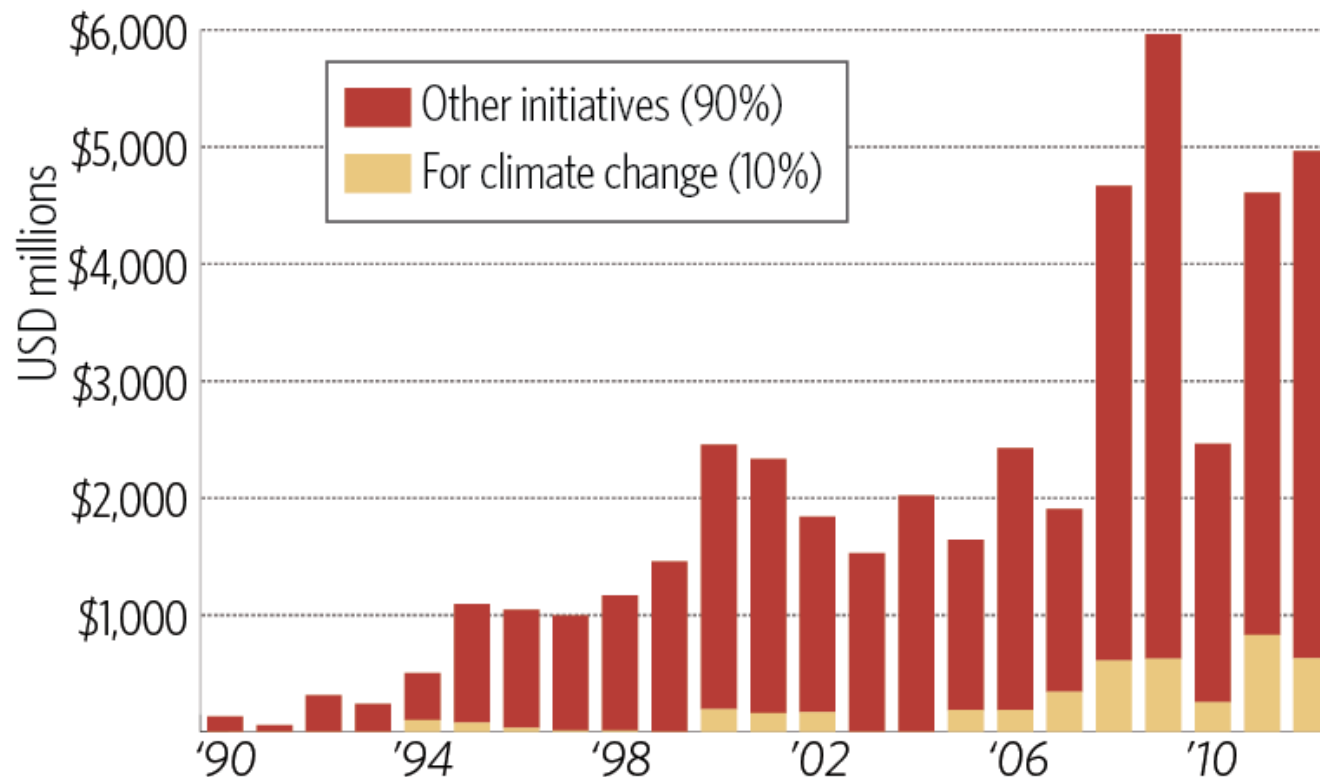
# Climate change: strategic view

- Strategic interest for climate change is increasing across all institutions, particularly IFC

Institution	Climate Change Focus
MIGA	<ul style="list-style-type: none"><li>• MIGA's institutional strategy on climate change <i>not publicly disclosed</i>.</li><li>• Prospective operational interest in <i>renewable energy</i> technologies (FY 2012-2014).</li></ul>
IFC	<ul style="list-style-type: none"><li>• Climate change is a strategic priority, supported by a <i>dedicated unit</i>, the Climate Business Group.</li><li>• Prospective increase of commitments, up to 20% of long term finance by 2015.</li></ul>
IBRD/IDA	<ul style="list-style-type: none"><li>• Financing low-carbon development and adaptation are <i>key priorities</i>.</li><li>• Lending to climate change projects has almost doubled from 2010 to 2011.</li><li>• The WB also has a <i>dedicated unit</i> for climate change, the Climate Policy and Finance Department.</li></ul>

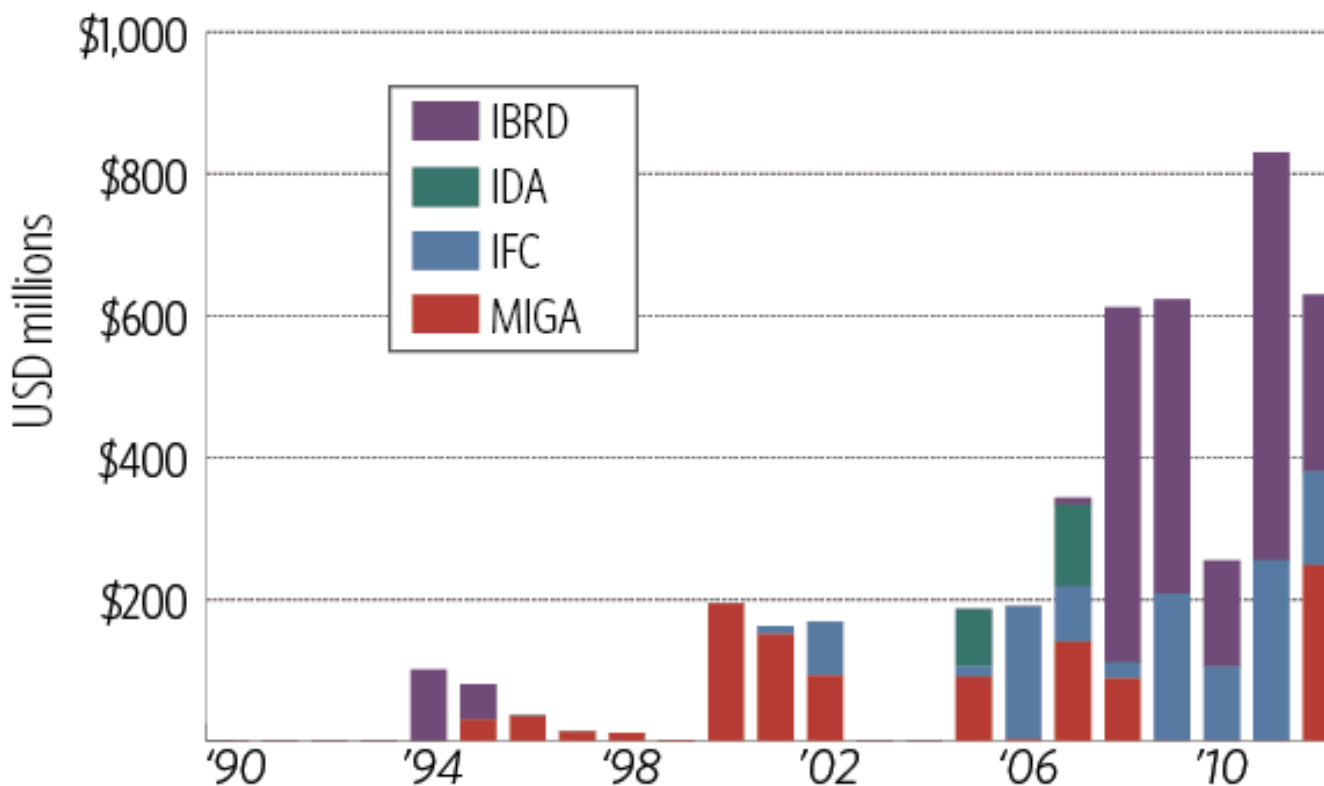
# Risk mitigation for climate change: trends

- **233 USD million** is committed every year by the WBG in risk mitigation activities for climate related projects since 1994; **571 USD million** in the last three years
- This corresponds to **10%** of WBG overall expense for risk mitigation; **14%** in the last three years

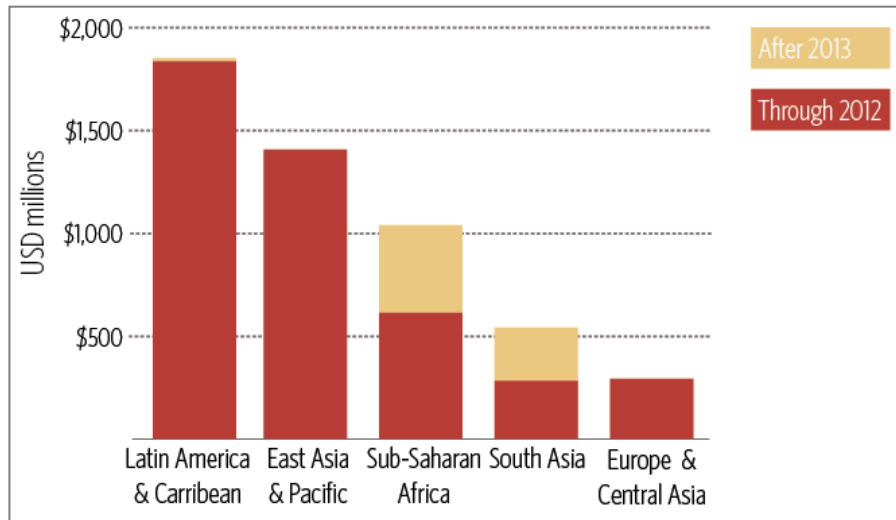


# Risk mitigation for climate change: trends

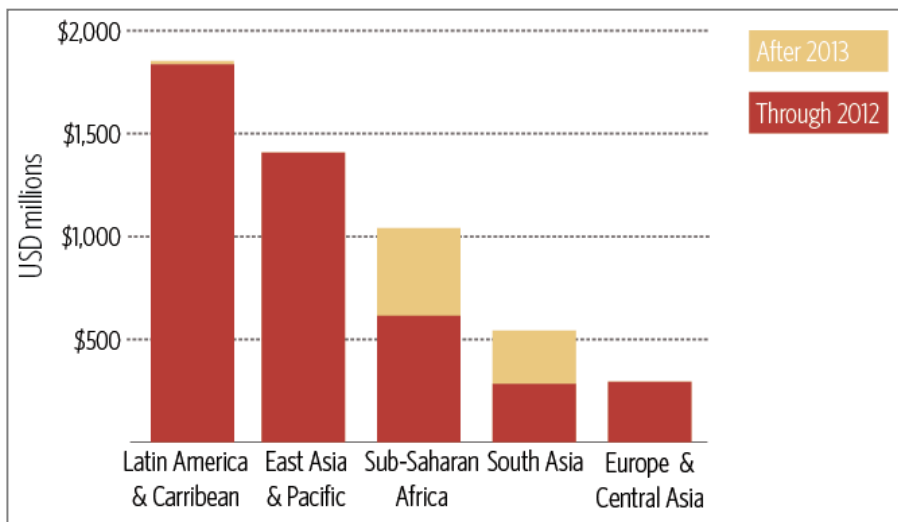
- **233 USD million** is committed every year by the WBG in risk mitigation activities for climate related projects since 1994; **571 USD million** in the last three years
- This corresponds to **10%** of WBG overall expense for risk mitigation; **14%** in the last three years
- Growing interest for climate change since **2005**, with a stronger involvement of **IBRD** and **IFC** from **2008** onward



# Where is risk being mitigated for climate change projects?

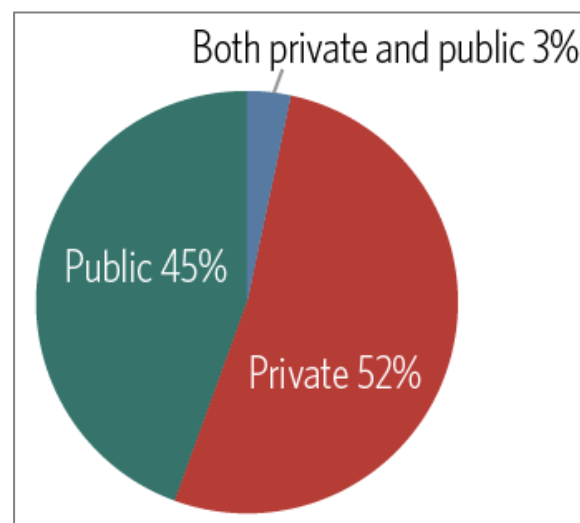
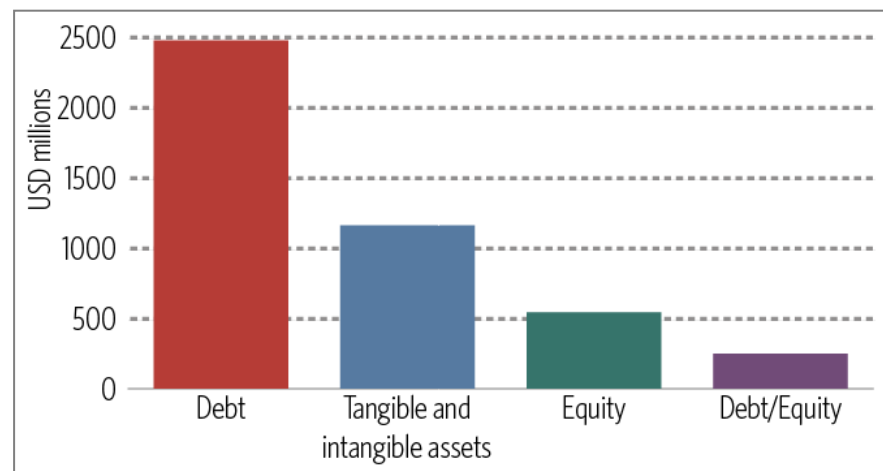


# Where is risk being mitigated for climate change projects?



# What investments were covered?

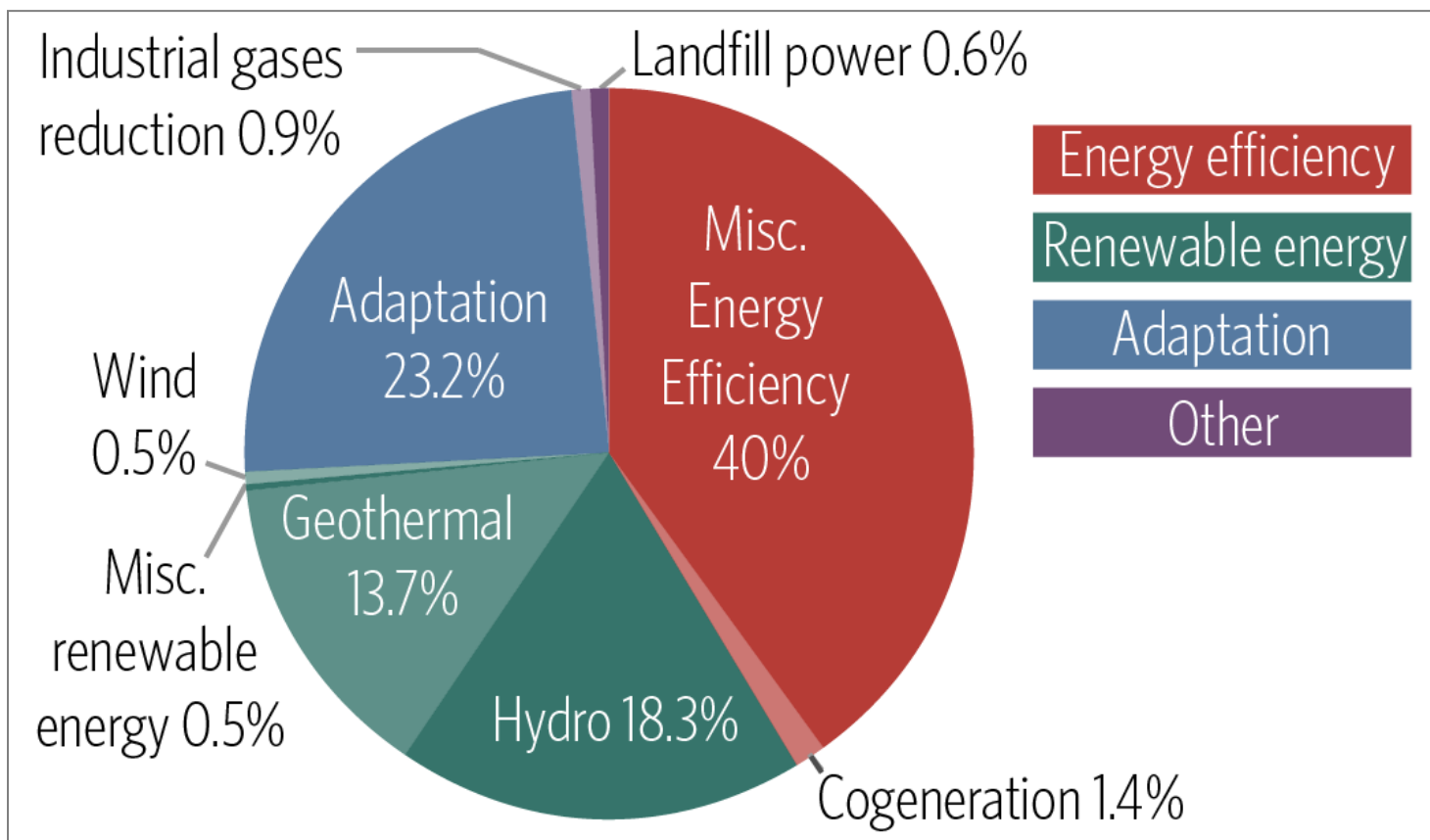
- Most of the WBG products have covered *private debt investors*
- This reflects the high availability of *credit enhancement instruments* within the institutions
- This is also in line with a strategy aiming at leveraging resources on *private investment*; although public sector support still represents a *significant* share and has been rising in recent years





# What technologies do WBG institutions support?

- Predominant interest for *energy efficiency* and renewable energy



# What measures do WBG institutions support?

- Predominant interest for *energy efficiency* and renewable energy
- Each institution seems to have gained a *distinctive expertise and technological focus* with regards to climate related initiatives

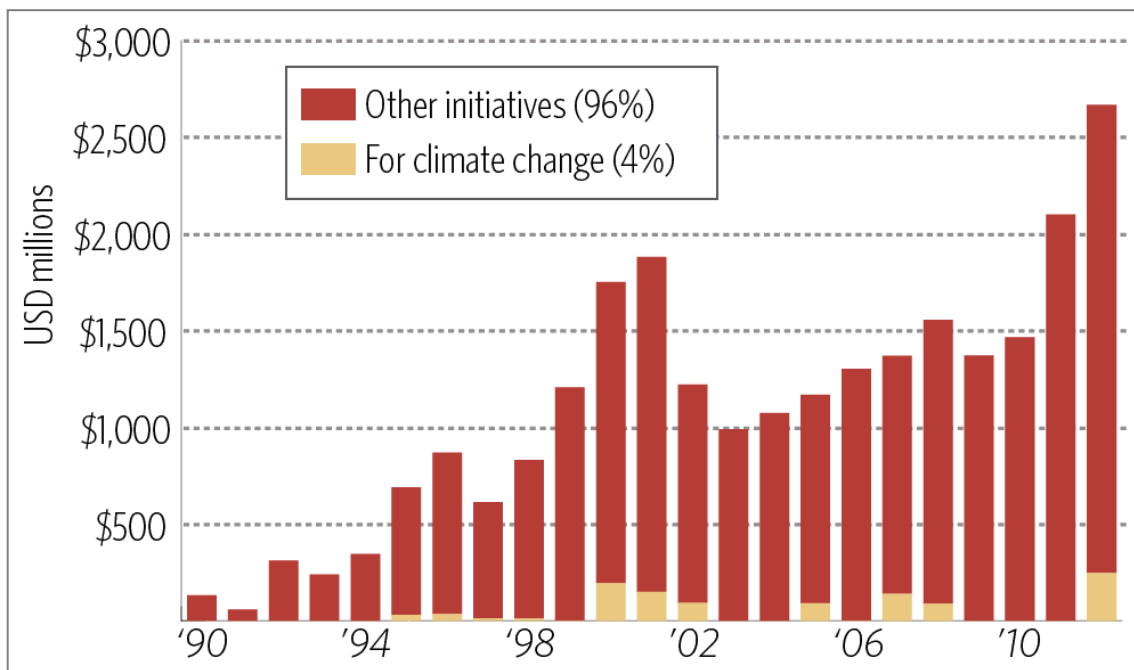
TECHNOLOGY		IBRD	IBRD/ DRFI	IDA	IFC	MIGA	Total
Adaptation	Disaster risk mitigation		1071				1071
	Cogeneration				61		61
Energy efficiency	Miscellaneous EE	831			942		1773
	Geothermal	100				507	607
Renewable energy	Hydro	50		195	5	562	812
	Miscellaneous RE				21		21
	Wind				20		20
	Industrial gases reduction				39		39
Other	Landfill power					27	27

Note: values expressed in USDm; figures

# Instruments Overview

# Multilateral Investment Guarantee Agency - MIGA

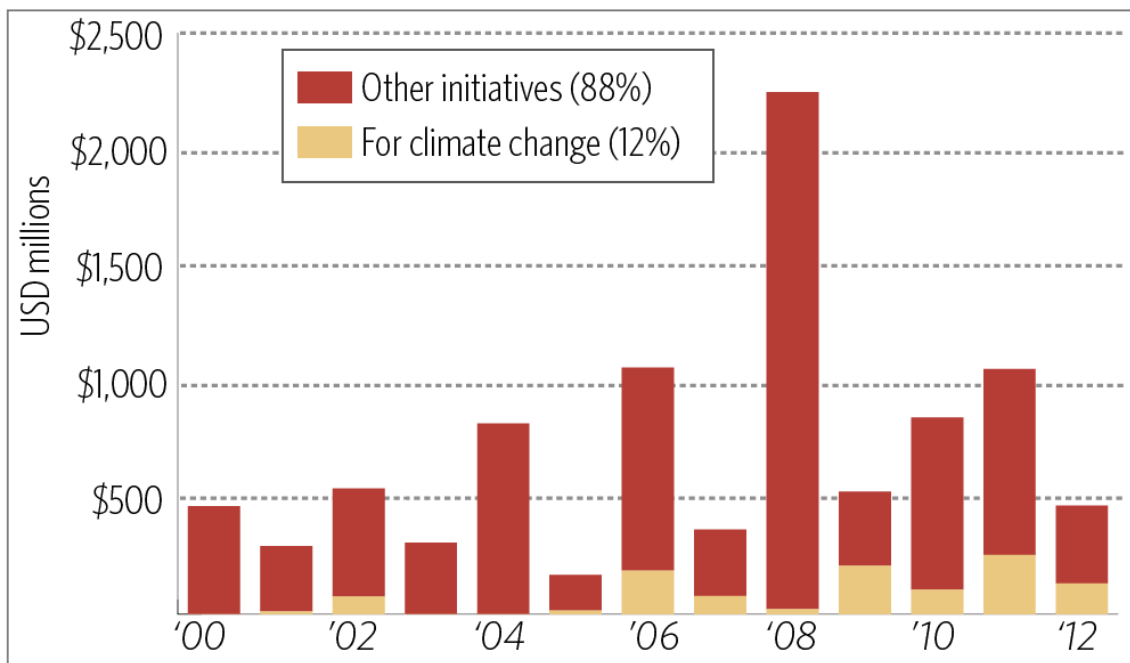
- MIGA is the *largest provider* of risk mitigation within the World Bank Group
- Its point of strength is its ability in *mediating disputes*
- MIGA has a *relatively low* involvement in climate change risk mitigation



Risk Instrument	USDm committed	Climate projects
<a href="#">Political Risk Insurance</a>	25,208	4%

# International Finance Corporation - IFC

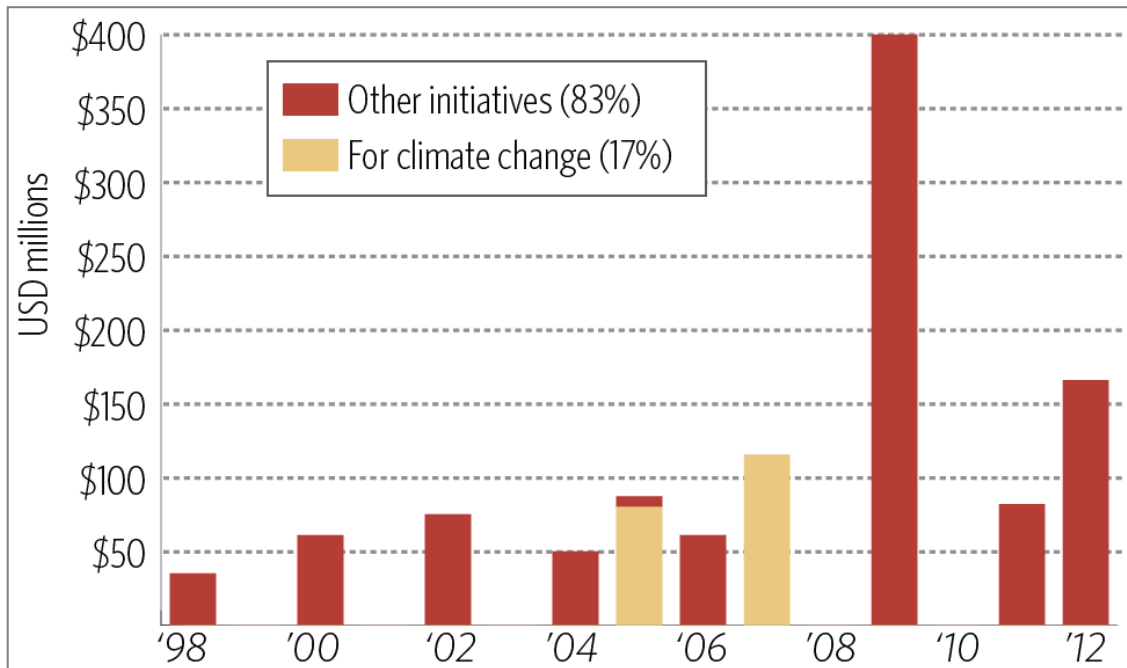
- Use of risk mitigation instruments has *increased* in the last five years, partly driven by the significant *rise in climate-related risk mitigation initiatives*.
- Risk sharing facilities for *energy efficiency* programs are the only instrument that has reached a significant scale for climate related investments.



Risk Instrument	USDm committed	Climate projects
<a href="#">Carbon Delivery Guarantee</a>	99.5	100%
<a href="#">Risk Sharing Facilities</a>	2,021	48%
Hedging Instruments	155	6%
<a href="#">PCG and Securitization</a>	1,919	1%
<a href="#">Trade Facilities</a>	4,959	N.A.
Global Index Insurance Facility	capacity building	N.A.

# International Development Association - IDA

- Currently IDA only issues Partial Risk Guarantees, but the introduction of *credit guarantee* products is foreseen for the end of the year.
- IDA is showing an *increasing commitment* to risk mitigation for climate change.

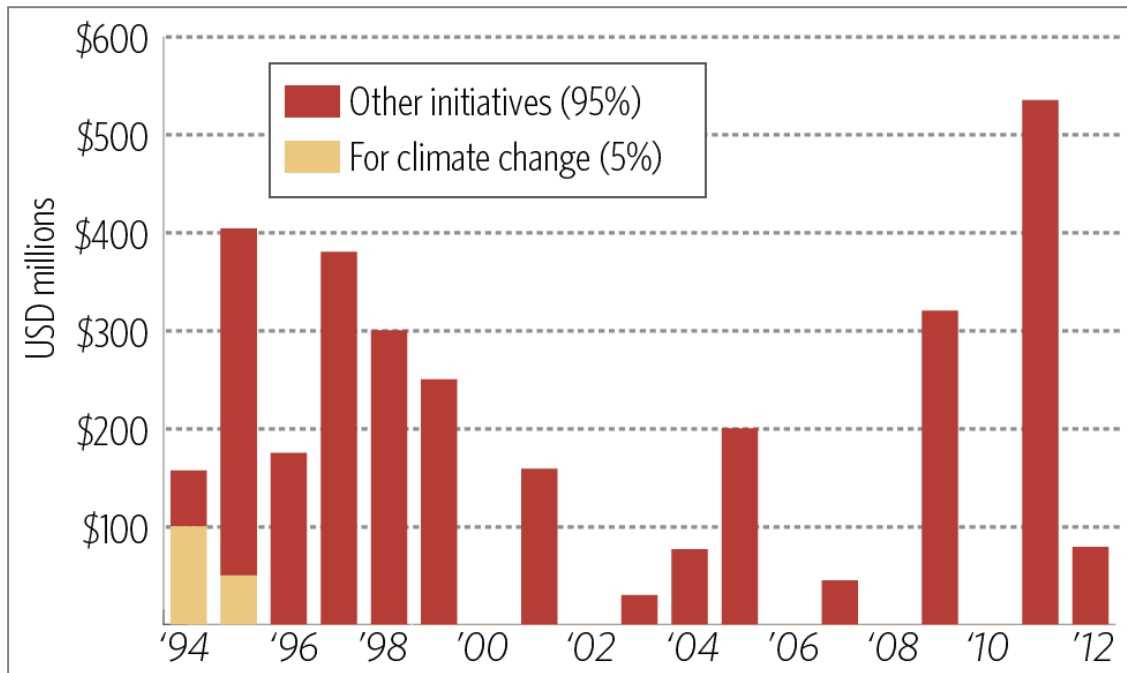


Risk Instrument	USDm committed	Climate projects
<a href="#">Partial Risk Guarantees</a>	1,097	17%

# International Bank for Reconstruction and Development - IBRD

## -Guarantees

- IBRD guarantees are *long-established* instruments for risk mitigation, but have been used *occasionally*.
- IBRD guarantees have not supported climate change projects *since 1995*.

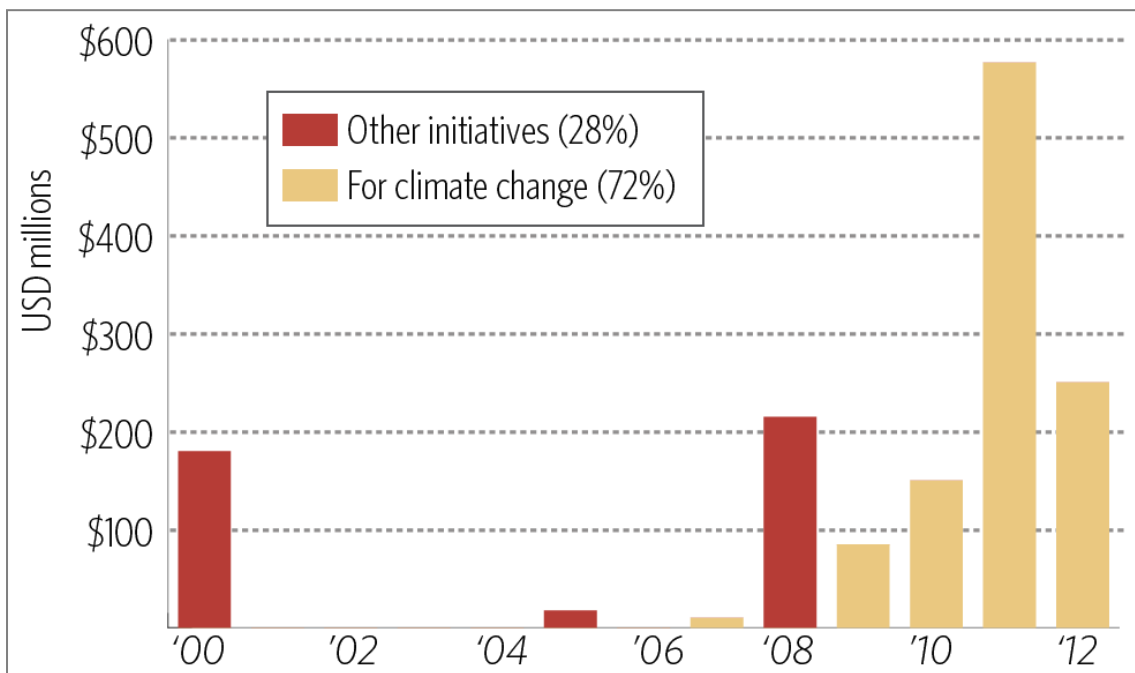


Risk Instrument	USDm committed	Climate projects
<a href="#">Partial Credit Guarantees</a>	963	16%
<a href="#">Partial Risk Guarantees</a>	1,095	0%
<a href="#">Policy Based Guarantees</a>	1,023	0%
<a href="#">Enclave Partial Risk Guarantees</a>	30	0%

# International Bank for Reconstruction and Development - IBRD

## -Disaster Risk Finance and Insurance – DRFI

- Promotes *ex-ante* financial risk management of natural disaster risk.
- Offers a line of *event-triggered disaster risk financing* for direct budget support.
- In many cases support from the WBG only consists in *technical assistance*.



Risk Instrument	USDm committed	Climate projects
<a href="#">Sovereign Catastrophe Risk Insurance</a>	10	100%
<a href="#">CAT DDO</a>	1,266	83%
<a href="#">Property catastrophe risk insurance</a>	190	5%
<a href="#">Parametric Agricultural Insurance</a>	18	0%
<a href="#">CAT Bonds</a>	capacity building	-
<a href="#">Index-based weather derivatives</a>	capacity building	-



# The WBG as implementing agency for funds

The World Bank is responsible for creating project proposals and for managing projects on the ground for funds such as the GEF and CIF.

- In addition to concessional financing, the GEF provides also *non-grant risk mitigation instruments*, such as guarantees, contingent financing and insurances. *Guarantees* are the most used instrument.
- *Climate change* is a *focal area* of GEF. *94%* of GEF resources committed to risk mitigation target climate related projects.
- GEF is *prioritizing* the use of risk mitigation instruments for the period 2010-2014.
- The CIFs also promote the use of risk mitigation instruments, but related funding to date is still *limited*.
- All CIF funding windows are *dedicated to climate change* as per its mandate.
- CTF has identified the need of adopting *more innovative instruments* enabling the engagement of the private sector at scale.

# Conclusions

Despite the WBG's growing prioritization of climate related investment, more can be done to increase provision of climate specific risk mitigation products and keep pace with increasing green investment needs.

- A *mandate* of the World Bank Group on a wider use of *risk mitigation instruments* for climate change could help increase their availability to the climate investor;
- *Guarantees*, in particular, could be used more frequently to support climate related projects;
- *Index-based* instruments could *potentially be explored* for support to climate related sectors beyond disaster risk mitigation.
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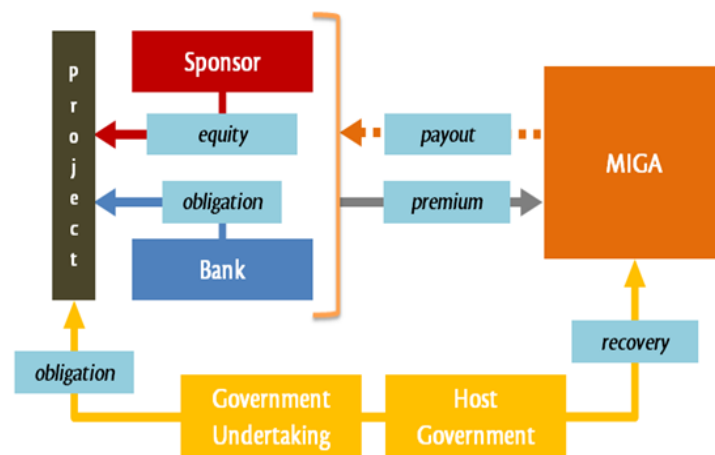
*In the coming months CPI will remain actively engaged in its analysis of risk mitigation instruments and tools, with additional in-depth analysis of World Bank Group's risk mitigation instruments in dedicated case studies.*

## Backup Slides - Instruments

# MIGA – Political Risk Insurance

- Political Risk Insurance provides protection to foreign direct investments in developing countries against losses arising from adverse actions - or inactions - of governments.
- Despite the large diffusion of the instrument and its relevance for green investors, its use in the sector is still below the average of other risk mitigation instruments.

MAX length of coverage	20 years
MAX coverage percentage	90 - 95% of the underlying asset
Covered risks	Political Physical Market Outcome
Average WBG commitment	USD 35 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private and public sector, NGOs</li> <li>• Debt, equity and tangible assets</li> </ul>
Countries/region supported	Europe and Central Asia (41%), Latin America (27%)
Climate tech. supported	Renewable Energy

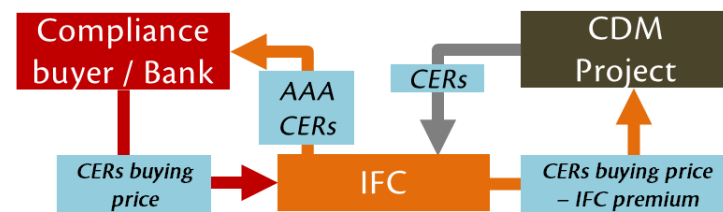


PROS	CONS
<ul style="list-style-type: none"> <li>• The ability of MIGA in mediating disputes and finding amicable solutions.</li> <li>• Only WBG instrument to cover risks for equity investors.</li> </ul>	<ul style="list-style-type: none"> <li>• Processing times considered too long.</li> <li>• MIGA lacks of a publicly disclosed mandate on climate change.</li> </ul>

# IFC – Carbon Delivery Guarantees

- The only instrument specifically designed for climate change mitigation
- Carbon Delivery Guarantees (CDGs) are potentially effective risk mitigation for sellers and buyers of carbon credits, but low carbon prices have made them much less critical.

MAX length of coverage	5 years
MAX coverage percentage	100% of the underlying asset
Covered risks	Political   Physical   Market   Outcome
Average WBG commitment	USD 33 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private sector (project developers)</li> <li>• Certified Emission Reductions</li> </ul>
Countries/region supported	India (60%), South Africa (40%)
Climate tech. supported	Energy Efficiency and Industrial Processes

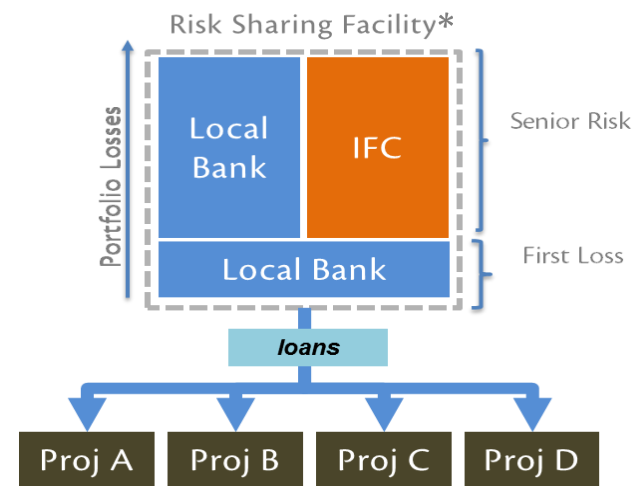


PROS	CONS
<ul style="list-style-type: none"> <li>• Very effective tool to mitigate risks perceived by both sellers and buyers.</li> <li>• Possibility to mitigate several risks at once such as counterparty, project creditworthiness, trade and revenues' uncertainty.</li> </ul>	<ul style="list-style-type: none"> <li>• Very limited use and experience with its effectiveness.</li> <li>• Uncertainty on post-2012 international carbon markets and resulting low carbon prices have made carbon finance less relevant for projects.</li> </ul>

# IFC – Risk Sharing Facilities

- Risk sharing facilities are particularly adequate to support lending programs for small scale projects/initiatives.
- Risk sharing facilities have been successful supporting energy efficiency investments from local commercial banks.

MAX length of coverage	10 years			
MAX coverage percentage	40 - 50% of the losses			
Covered risks	Political	Physical	Market	Outcome
Average WBG commitment	USD 37 million			
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private sector (commercial banks)</li> <li>• Debt (bank loans)</li> </ul>			
Countries/region supported	China (21%), World Region (15%)			
Climate tech. supported	Energy Efficiency			



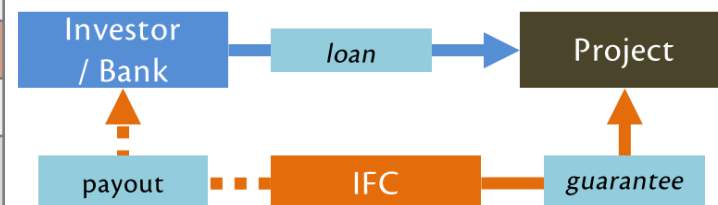
\* Several variations to this basic structure can occur

PROS	CONS
<ul style="list-style-type: none"> <li>• Useful and efficient for portfolios of several small loans.</li> <li>• There is a lot of interest from local financial institutions to partner with IFC to enter these new markets.</li> </ul>	<ul style="list-style-type: none"> <li>• High first-loss requirements can be prohibitive for local financial institutions and often make a third party donor necessary but lead to high transaction costs.</li> <li>• IFC's fee structure favors booking of single large transactions instead of several small projects.</li> </ul>

# IFC – Credit Guarantees and Securitization

- Partial Credit Guarantees (PCGs) are established risk instruments at IFC
- So far, very rarely used for climate related projects.

MAX length of coverage	20 years
MAX coverage percentage	50% of the underlying asset
Covered risks	Political   Physical   Market   Outcome
Average WBG commitment	USDm 18 for PCG, USDm 42 for Securitization
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Commercial Banking and Microfinance</li> <li>• Debt</li> </ul>
Countries/region supported	Brazil, Colombia, Mexico, India
Climate tech. supported	Energy Efficiency and Renewable Energy

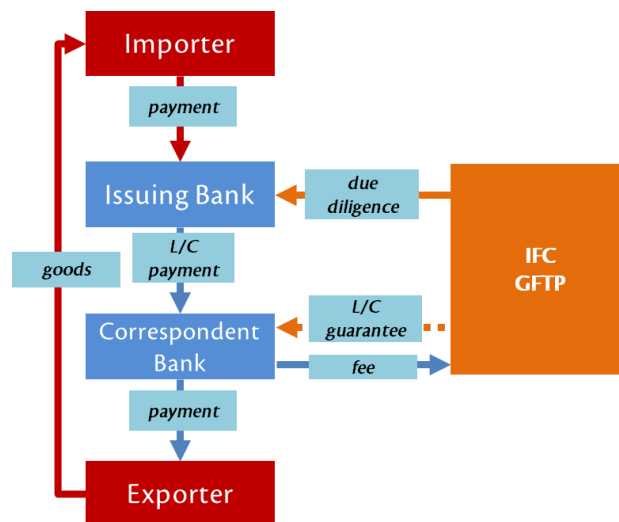


PROS	CONS
<ul style="list-style-type: none"> <li>• Very flexible and established tools; as comprehensive guarantees, they are very effective in credit enhancement.</li> <li>• Guarantees allow a more efficient use of regulatory capital for IFC and expand the range of instruments and investors' types in developing countries.</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive risk coverage and the “loan equivalence” approach have made them expensive when compared to loans.</li> <li>• IFC incentive structure favors large investments (equity and loans) instead of guarantees.</li> </ul>

# IFC – Trade Finance Facilities

- Trade Finance Facilities have very quickly become the most used risk mitigation instrument at IFC.
- Through the Climate Smart Trade Initiative, IFC aims to offer better pricing and terms for the trade of climate-friendly goods and services.

MAX length of coverage	5 years			
MAX coverage percentage	100% of trade credit			
Covered risks	Political	Physical	Market	Outcome
Average WBG commitment	USD 155 million			
Sectors/assets supported	<ul style="list-style-type: none"> <li>Private-sector trade transactions (SME, 80%; Agriculture, 33%)</li> </ul>			
Countries/region supported	Trans-regional (70%), East Asia (10%), MENA (9%)			
Climate tech. supported	N/A			



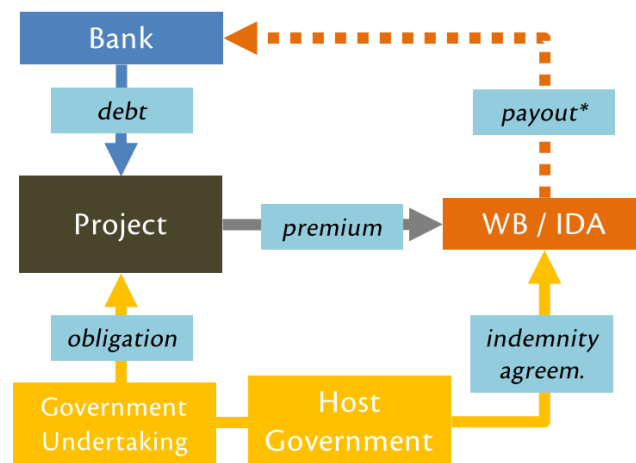
PROS	CONS
<ul style="list-style-type: none"> <li>• Significant growth and uptake of facility.</li> <li>• Banks' pre-approval framework lowers transaction costs for single trades and promotes liquidity of market.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of data prevents an assessment of their success in promoting climate friendly goods and services.</li> <li>• Approval procedures and covenants might still be quite rigid and limit the attractiveness of the facility.</li> </ul>



# IDA – Partial Risk Guarantee

- Partial Risk Guarantees cover debt instruments provided by private entities for private projects dependent on certain government contractual undertaking, against the risk of a public entity failing to perform its obligations.
- The product successfully protects from political risks in the poorest countries, where they are considered particularly significant.

MAX length of coverage	20 years
MAX coverage percentage	100% of the underlying asset
Covered risks	Political Physical Market Outcome
Average WBG commitment	USD 87 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private projects dependent on certain government contractual undertaking</li> <li>• Debt</li> </ul>
Countries/region supported	Nigeria (35%), Kenya (15%)
Climate tech. supported	Renewable Energy



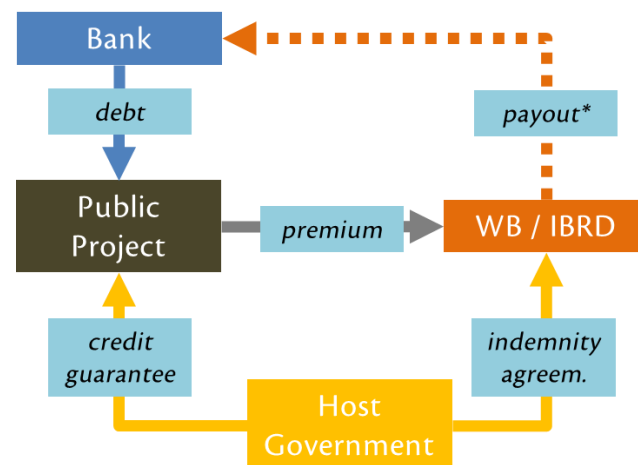
\*Guarantee agreement

PROS	CONS
<ul style="list-style-type: none"> <li>• Helps projects in high-risk sectors and countries reach financial closure.</li> <li>• Requirement of government counter-guarantee makes the instruments more attractive with respect to other risk guarantees.</li> </ul>	<ul style="list-style-type: none"> <li>• Processing and due diligence times can be a disincentive for the private sector.</li> <li>• In certain cases the counter-guarantee requirement discourages government engagement</li> </ul>

# IBRD – Partial Credit Guarantee

- Partial Credit Guarantees cover private lenders against the risk of debt service default by government or typically public sector borrowers, regardless of the cause of the default.
- Protection of private lending in state-owned investments allows governments the access to financial markets for the financing of climate related projects.

MAX length of coverage	20 years
MAX coverage percentage	Partial coverage of the underlying asset
Covered risks	Political   Physical   Market   Outcome
Average WBG commitment	USD 120 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• State-owned companies with private participation</li> <li>• Debt</li> </ul>
Countries/region supported	Thailand (31%), Botswana (25%)
Climate tech. supported	Renewable Energy



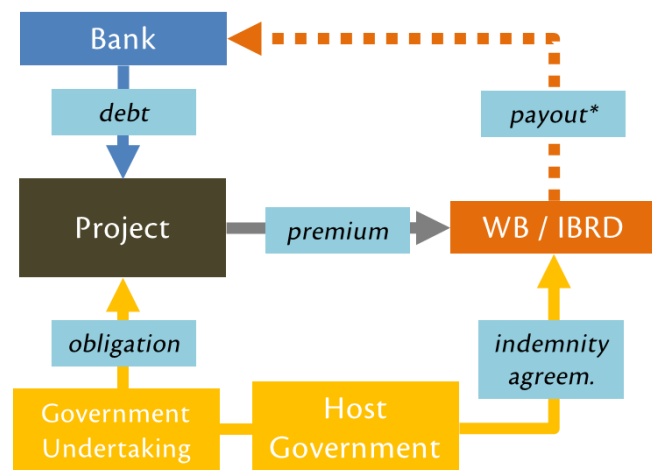
\*Guarantee agreement

PROS	CONS
<ul style="list-style-type: none"> <li>• Provide coverage regardless of the nature of the default and have a flexible structure.</li> <li>• Specifically designed to extend maturity and improve market terms with long term benefits.</li> <li>• The product is particularly meaningful during market downturns.</li> </ul>	<ul style="list-style-type: none"> <li>• PCGs cover only a portion of the debt.</li> <li>• Liquid capital markets reduce demand for PCGs</li> <li>• PCGs have been under-utilized, probably due to competition with WBG's loans.</li> </ul>

# IBRD – Partial Risk Guarantee

- Partial Risk Guarantees cover private debt to private projects dependent on government contractual obligations, against the risk of a public entity failing to perform its obligations.
- The product specifically protects debt from political risks, which is considered the highest barrier to low-carbon investment.

MAX length of coverage	20 years
MAX coverage percentage	100% of the underlying asset
Covered risks	Political Physical Market Outcome
Average WBG commitment	USD 137 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private projects dependent on certain government contractual undertaking</li> <li>• Debt</li> </ul>
Countries/region supported	Pakistan (29%), Perú (18%)
Climate tech. supported	No green technologies supported



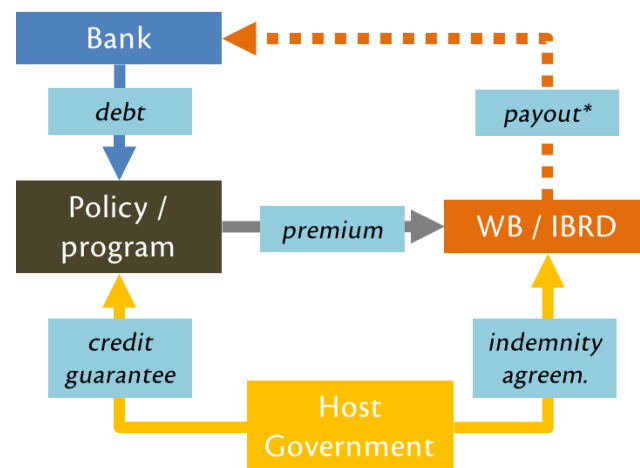
\*Guarantee agreement

PROS	CONS
<ul style="list-style-type: none"> <li>• Have a flexible structure.</li> <li>• Helped projects in high-risk sectors with untested regulatory frameworks reach financial closure.</li> <li>• Have the added value of benefiting of WBG policy dialogue with governments and mediation capabilities.</li> </ul>	<ul style="list-style-type: none"> <li>• No climate related projects have been supported at this time.</li> <li>• They are under-utilized due to the “last resort” principle and constrained to projects with heavy public engagement.</li> <li>• Demand may be further limited by the lower risk profile of IBRD-only countries</li> </ul>

# IBRD – Policy Based Guarantee

- Policy Based Guarantees are a useful instrument to support governments in accessing capital markets to finance national policies and reforms programs.
- Potentially, PBGs have the power to support national programs for climate change adaptation.

MAX length of coverage	N/A
MAX coverage percentage	Partial coverage of the underlying asset
Covered risks	Political   Physical   Market   Outcome
Average WBG commitment	USD 205 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private participation in policies and reforms</li> <li>• Debt</li> </ul>
Countries/region supported	Serbia (39%), Argentina (24%)
Climate tech. supported	No green technologies supported



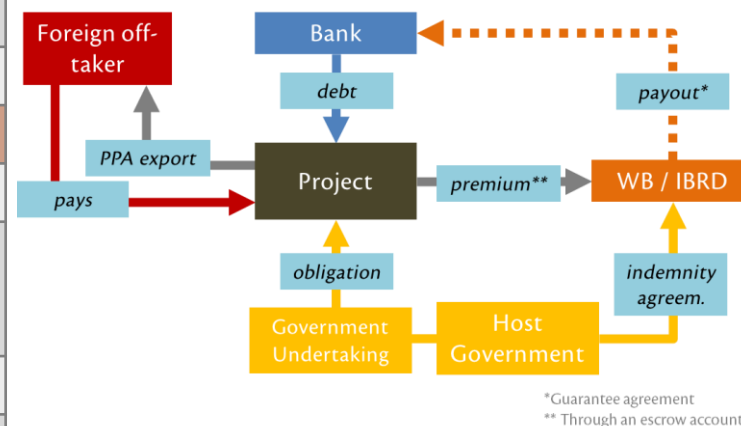
\*Guarantee agreement

PROS	CONS
<ul style="list-style-type: none"> <li>• Sustain developing countries in finding financing for their reforms.</li> <li>• Attract private financiers to support public interest policies and reforms. This can be potentially useful to develop adaptation national plans in developing countries, co-financed by public and private funds.</li> </ul>	<ul style="list-style-type: none"> <li>• PBGs cover only a “part” of the investment (principal and/or interest).</li> <li>• Have been under-utilized and no climate related programs have been supported at time.</li> </ul>

# IBRD – Enclave Partial Risk Guarantee

- Enclave Guarantees are Partial Risk Guarantees which apply to projects dependent on government contractual obligations.
- Offers coverage to power producers distributing electricity abroad.

MAX length of coverage	20 years
MAX coverage percentage	100% of the underlying asset
Covered risks	Political Physical Market Outcome
Average WBG commitment	USD 30 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private projects dependent on certain government contractual undertaking</li> <li>• Debt</li> </ul>
Countries/region supported	Mozambique (100%), IDA countries
Climate tech. supported	No green technologies supported

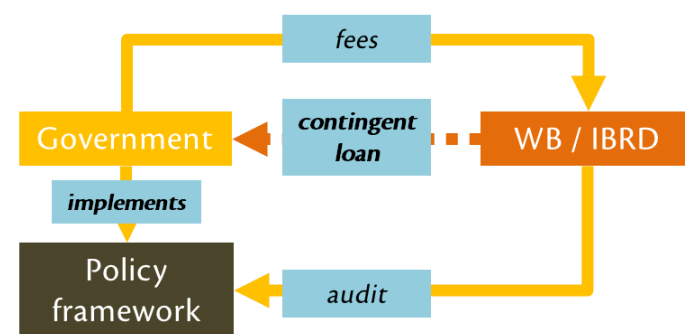


PROS	CONS
<ul style="list-style-type: none"> <li>• Enclave PRGs protect investments located in the poorest countries, based on concessions or contracts with the host government.</li> </ul>	<ul style="list-style-type: none"> <li>• Structuring enclave projects requires longer times and higher fees from investors.</li> <li>• Only one project have been supported at time.</li> </ul>

## IBRD – Development Policy Loan Deferred Drawdown Option

- The Deferred Drawdown Option (DDO) allows governments to better respond to temporary financial shocks by providing an immediate source of liquidity to governments when needed.
- DDOs have supported two programs for improving the energy efficiency of beneficiary countries.

MAX length of coverage	6 years
MAX coverage percentage	100% of the underlying asset
Covered risks	Political Physical Market Outcome
Average WBG commitment	USD 570 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Public (government's policies and reforms)</li> <li>• Debt (Development Policy Loans)</li> </ul>
Countries/region supported	Indonesia (35%), Romania (23%)
Climate tech. supported	Energy Efficiency

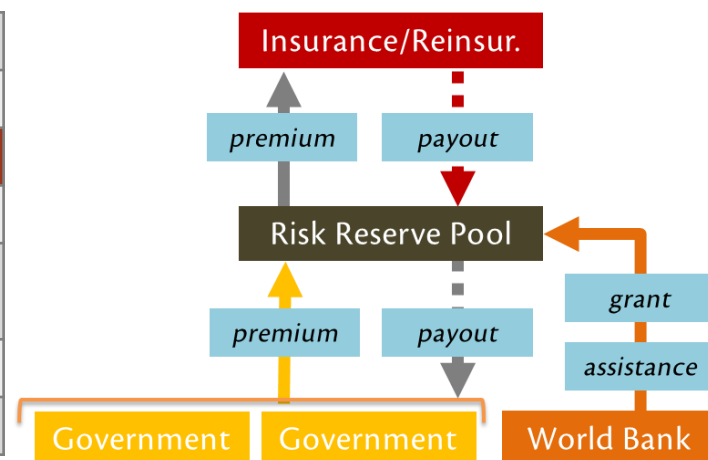


PROS	CONS
<ul style="list-style-type: none"> <li>• Provides access to an immediate source of liquidity to respond to financial shocks.</li> <li>• Importance of the instrument for supporting the financial credibility of countries during crisis.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited use since its inception. Available only to developing countries with a satisfactory level of creditworthiness.</li> </ul>

# IBRD/DRFI – Sovereign Catastrophe Risk Insurance Pool

- Allows governments to **pool resources** for insuring against major catastrophic events.
- Suitable for addressing disaster risk mitigation particularly in **small countries**.

MAX length of coverage	N/A
MAX coverage percentage	Partial coverage of the underlying asset
Covered risks	Political <b>Physical</b> Market Outcome
Average WBG commitment	Technical support
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Public budget allocated to disaster risk</li> <li>• Tangible assets impacted by catastrophes</li> </ul>
Countries/region supported	Caribbean countries
Climate tech. supported	Adaptation

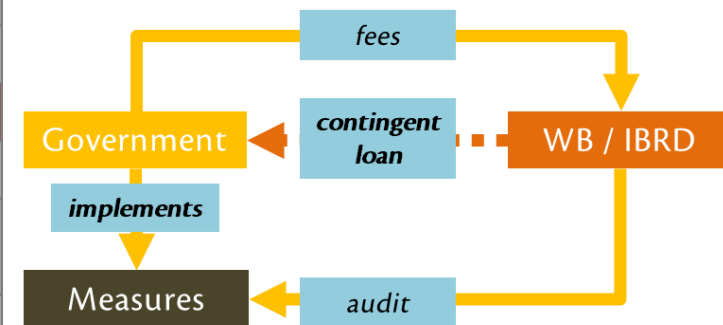


PROS	CONS
<ul style="list-style-type: none"> <li>• A central catastrophe risk aggregator vehicle across countries or regions allows for diversification and is thus more cost-efficient.</li> <li>• Risk pooling creates new business opportunities for the private reinsurance market.</li> </ul>	<ul style="list-style-type: none"> <li>• Time required to set up the facility can be excessive.</li> <li>• Guarantee an amount of donor support enough to provide initial claims-paying capacity.</li> </ul>

# IBRD/DRFI – CAT DDO (Catastrophe Deferred Drawdown Options)

- Enables the borrower to rapidly access **bridge financing** in the aftermath of a natural disaster.
- It is the WBGs most used instrument for disaster risk mitigation.

MAX length of coverage	15 years
MAX coverage percentage	Partial coverage of the underlying asset
Covered risks	Political <b>Physical</b> Market <b>Outcome</b>
Average WBG commitment	USD 158 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Public budget allocated to disaster risk</li> <li>• Tangible assets impacted by catastrophes</li> </ul>
Countries/region supported	Latin America (61%) and Philippines (39%)
Climate tech. supported	Adaptation



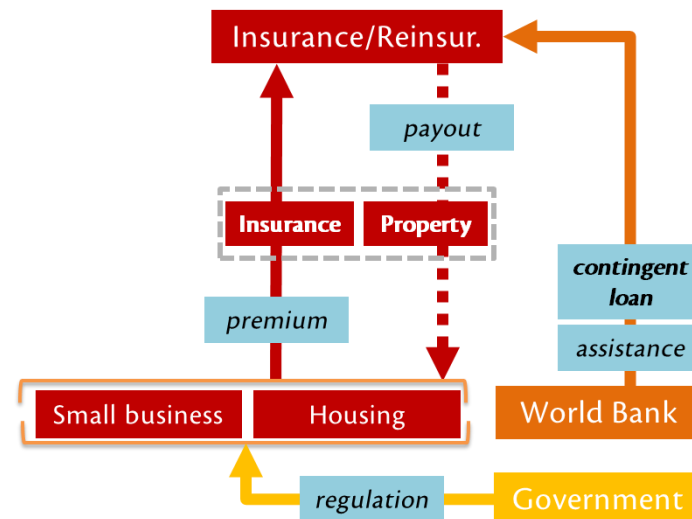
PROS	CONS
<ul style="list-style-type: none"> <li>• CAT DDOs ensure quick access to finance.</li> <li>• CAT DDOs have lower costs than other risk mitigation instruments.</li> </ul>	<ul style="list-style-type: none"> <li>• Requirements of appropriate macroeconomic policy framework may constrain the amount of contingent credit provided to governments.</li> <li>• Current financial crisis may add burdens to countries' borrowing capacity, limiting access to the instruments.</li> </ul>



# IBRD/DRFI – Property Catastrophe Risk Insurance

- Allows for a wider coverage of population against catastrophe risks by transferring part of them to the private insurance market sector.
- The mechanism represents an efficient solution to reduce governments' budget support allocated to climate change adaptation.

MAX length of coverage	1 year (renewable)
MAX coverage percentage	100 % of the underlying asset
Covered risks	Political Physical Market Outcome
Average WBG commitment	Technical and financial support
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private and public assets</li> <li>• Tangible assets impacted by catastrophes</li> </ul>
Countries/region supported	East Europe
Climate tech. supported	Adaptation

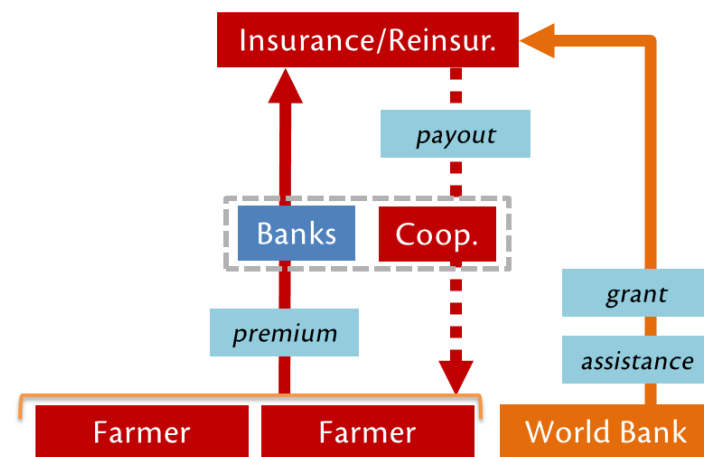


PROS	CONS
<ul style="list-style-type: none"> <li>• Relieves governments from massive disbursement in case of catastrophes and enables the population to access lower premiums.</li> <li>• Develops domestic insurance market.</li> </ul>	<ul style="list-style-type: none"> <li>• Claims payments require proper allocation of time for their determination.</li> <li>• Prerequisites of sufficiently developed non-life insurance market(s), including highly technical modeling techniques.</li> </ul>

# IBRD/DRFI – Agricultural Parametric Insurance

- Agricultural Parametric Insurances lessen losses to **private farmers** in case of adverse natural event and improve their access to credit.
- Product use in relation to **adaptation** will become more important in the future.

MAX length of coverage	N/A
MAX coverage percentage	90 -100% of the underlying asset
Covered risks	Political Physical Market Outcome
Average WBG commitment	Technical support
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private and public owners of tangible assets (crops, livestock)</li> <li>• Loans</li> </ul>
Countries/region supported	India and other asian and african countries
Climate tech. supported	Adaptation

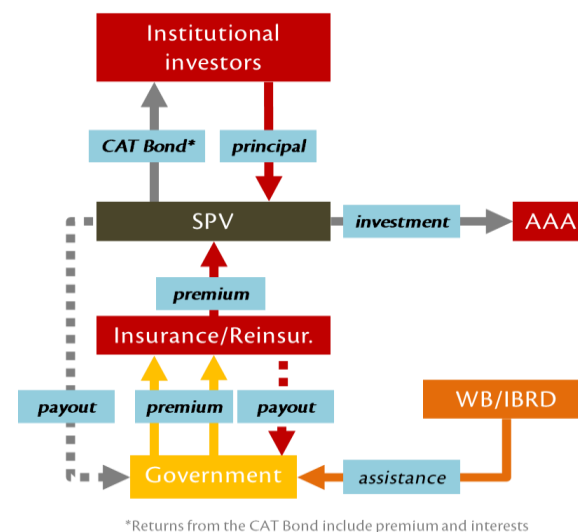


PROS	CONS
<ul style="list-style-type: none"> <li>• Index-based insurances guarantee fast payouts and prevent moral hazard.</li> <li>• The product has the potential for a more extensive implementation for adaptation purposes.</li> </ul>	<ul style="list-style-type: none"> <li>• High efforts/costs needed to set up the system.</li> <li>• There's a risk that payout may be insufficient to cover actual losses.</li> </ul>

# IBRD/DRFI – CAT Bonds (Catastrophe Bonds)

- Stabilize government budgets by transferring disaster risks to **capital markets**.
- The instrument could focus more on the reduction of **adaptation** related risks.

MAX length of coverage	10 years
MAX coverage percentage	Partial coverage of the underlying asset
Covered risks	Political <b>Physical</b> Market Outcome
Average WBG commitment	Technical support
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Public budget allocated to disaster risk</li> <li>• Tangible assets impacted by catastrophes</li> </ul>
Countries/region supported	Mexico
Climate tech. supported	Adaptation

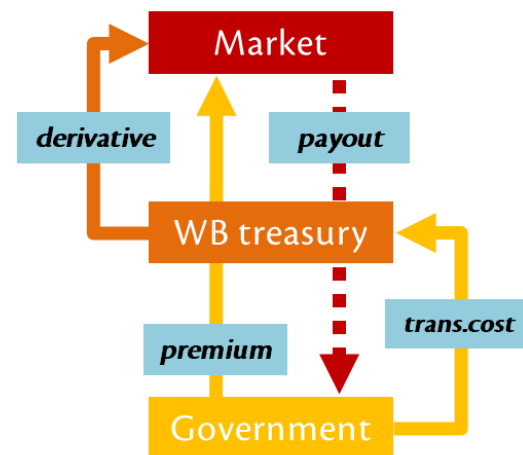


PROS	CONS
<ul style="list-style-type: none"> <li>• The instrument allows governments to access capital markets, which hold large amounts of funds.</li> <li>• Pooling multiple perils in multiple regions helps diversify risks, reducing overall insurance costs.</li> </ul>	<ul style="list-style-type: none"> <li>• May not be sufficient to cover all financial needs arising from covered risk events.</li> <li>• The financial crisis has reduced the confidence of investors in bonds.</li> </ul>

# IBRD/DRFI – Index-based weather derivatives

- Provides a **hedge** to protect governments financially against adverse weather events.
- The product has the potential to support disaster risk mitigation for **adaptation**.

MAX length of coverage	1 year (renewable)
MAX coverage percentage	100% of the underlying asset
Covered risks	Political Physical Market Outcome
Average WBG commitment	Technical support
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Public budget allocated to disaster risk</li> <li>• Tangible assets impacted by catastrophes</li> </ul>
Countries/region supported	Malawi
Climate tech. supported	Adaptation

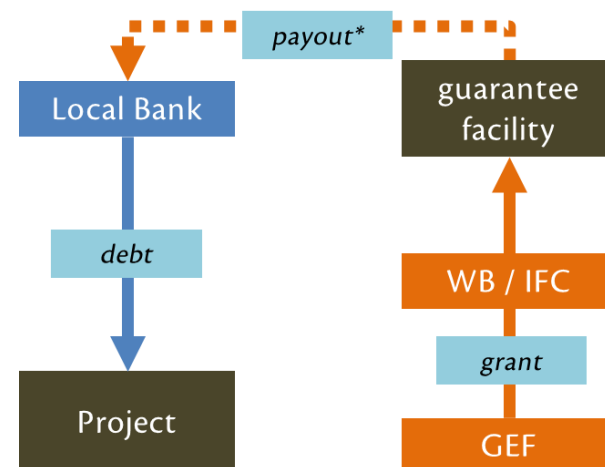


PROS	CONS
<ul style="list-style-type: none"> <li>• Allows countries to transfer weather-related risk to market counterparts.</li> <li>• Potential channel for financial risk management tools to IDA countries</li> </ul>	<ul style="list-style-type: none"> <li>• Limited experience.</li> <li>• The use of the instrument in agriculture in developing countries is new and the market is still evolving.</li> </ul>

# GEF – GEF supported guarantees

- The GEF has provided guarantees to its clients, directly to single projects or indirectly to a pool of projects through the establishment of local dedicated guarantees or risk-sharing facilities.
- GEF Guarantees encouraged private sector lenders to provide loans for energy efficiency and renewable energy projects that otherwise would not be possible.

MAX length of coverage	N/A			
MAX coverage percentage	50 - 80% of the underlying asset			
Covered risks	Political	Physical	Market	Outcome
Average GEF commitment	USD 19 million			
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Mainly private projects</li> <li>• Debt</li> </ul>			
Countries/region supported	India (24%), China (19%)			
Climate tech. supported	Energy Efficiency and Renewable Energy			



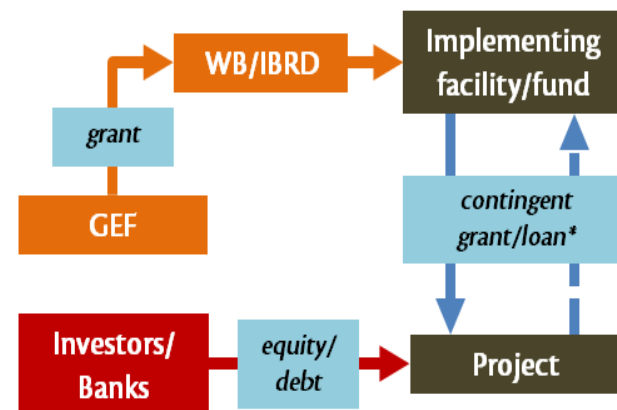
\*Guarantee agreement

PROS	CONS
<ul style="list-style-type: none"> <li>• Guarantees allow the involvement of private lenders for the correct implementation of sovereign interest programs.</li> <li>• Almost all GEF guarantees have been used to support climate related projects.</li> </ul>	<ul style="list-style-type: none"> <li>• Suitable in countries with a developed banking sector, in which the local banks are prepared to undertake the risks related with new business opportunities.</li> <li>• Small incentive for GEF clients to opt for a risk mitigation instrument rather than a grant.</li> </ul>

# GEF – Contingent Financing

- The GEF has provided contingent grants and loans to its projects, as well as performance-based grants. These products can provide multiple benefits to the GEF itself and to its clients.
- All the projects in which contingent finance instruments have been involved were climate related.

MAX length of coverage	N/A
MAX coverage percentage	N/A
Covered risks	Political Physical Market Outcome
Average GEF commitment	USD 5 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Private projects (developers)</li> <li>• Debt/Equity</li> </ul>
Countries/region supported	Romania (40%)
Climate tech. supported	Renewable Energy and Energy Efficiency



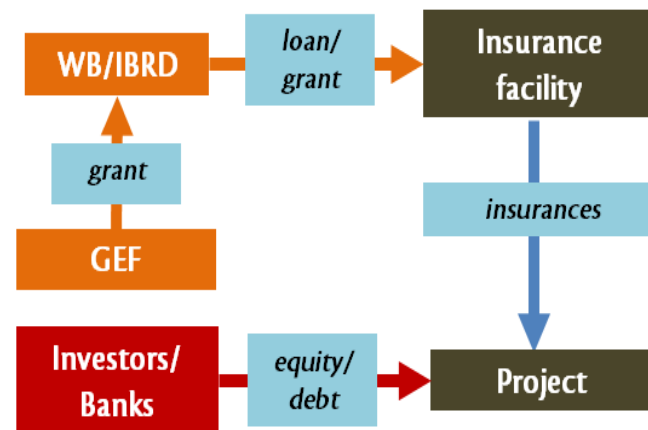
\* Repaid only if the project is successful

PROS	CONS
<ul style="list-style-type: none"> <li>• Attractive when there is substantial uncertainty about the existence and amount of incremental costs.</li> <li>• All the projects supported by these instruments are climate related.</li> </ul>	<ul style="list-style-type: none"> <li>• Non repayments to the GEF, if the project is not successful.</li> <li>• Small incentive for GEF clients to opt for a risk mitigation instrument rather than a grant.</li> </ul>

# GEF – GEF supported insurances

- The GEF has supported the implementation of insurance facilities for regional assistance of geothermal projects and agricultural sector projects.
- All the projects in which insurances have been involved were climate related. This can be a useful base to create efficient instruments for the adaptation to climate-change.

MAX length of coverage	N/A
MAX coverage percentage	N/A
Covered risks	Political Physical Market Outcome
Average GEF commitment	USD 7 million
Sectors/assets supported	<ul style="list-style-type: none"> <li>• Mainly private</li> <li>• Tangible assets</li> </ul>
Countries/region supported	Turkey (50%)
Climate tech. supported	Adaptation and Renewable Energy



PROS	CONS
<ul style="list-style-type: none"> <li>• Insurances offer protection to their holders against specific natural risk, at lower premiums than market.</li> <li>• Offer a solution to shift costs for climate-change adaptation to the private sector.</li> </ul>	<ul style="list-style-type: none"> <li>• Small incentive for GEF clients to opt for a risk mitigation instrument rather than a grant.</li> </ul>

## Backup Slides – Key slides



# What are covered risks? – project level analysis

		POLITICAL, POLICY AND SOCIAL						TECHNICAL, PHYSICAL				COMMERCIAL, MARKET				OUTCOME					
		Public Governance	Legal and Ownership rights	Permitting/Siting	Policy	Private Governance	Reputation/Social opposition/Violence	Construction	Disaster/Catastrophe Risks	Reliability of output	Operation and Management	Environmental impacts	Currency Risk	Input / Output Price Volatility	Environmental Instr. Volatility	Access to Capital	Counterparty/Credit Risk	Investment Liquidity/Exit	Emission Reduction Targets	Co-impacts (i.e. employment)	Financial sustainability (budget)
MIGA	Political Risk Insurance																				
IFC	Carbon Delivery Guarantee																				
	Global Index Insurance Facility																				
	Hedging Products																				
	Partial Credit Guarantee																				
	Risk Sharing Facility																				
	Securitization																				
	Trade Finance Facility																				
IDA	Partial Risk Guarantee																				
IBRD	Policy Based Guarantee																				
	Partial Credit Guarantee																				
	Partial Risk Guarantee																				
	PRG Enclave for IDA Countries																				
	Development Policy Loan DDO																				
	Hedging Products																				
IBRD/DRFI	Agricultural Parametric Insurance																				
	CAT Bond																				
	CAT DDO																				
	Property Catastrophe Insurance																				
	Sovereign Catastrophe Risk Insurance Pool																				
	Index-based Weather Derivatives																				
GEF	Contingent Financing																				
	Guarantees																				
	Insurance Facility																				

Types of Coverage:

Explicit

Implicit

Indirect

# Methodology

## Methodological approach

- Identification of *climate change* commitments looking at *climate related* initiatives.

Mitigation	Adaptation
<p>Projects and activities which directly target emissions reductions</p> <ul style="list-style-type: none"><li>• Cogeneration</li><li>• Miscellaneous Energy Efficiency</li><li>• Single-cycle to combined-cycle</li><li>• Geothermal power</li><li>• Hydro power</li><li>• Miscellaneous Renewable Energy</li><li>• Photovoltaic power</li><li>• Wind power</li><li>• Industrial gases reduction</li><li>• Landfill composting</li><li>• Landfill power</li></ul>	<p><i>Projects and activities targeting disaster risk mitigation and explicitly dedicated to adaptation purposes as stated in accompanying documentation</i></p>