



Upgrading Climate Finance in adverse economic conditions

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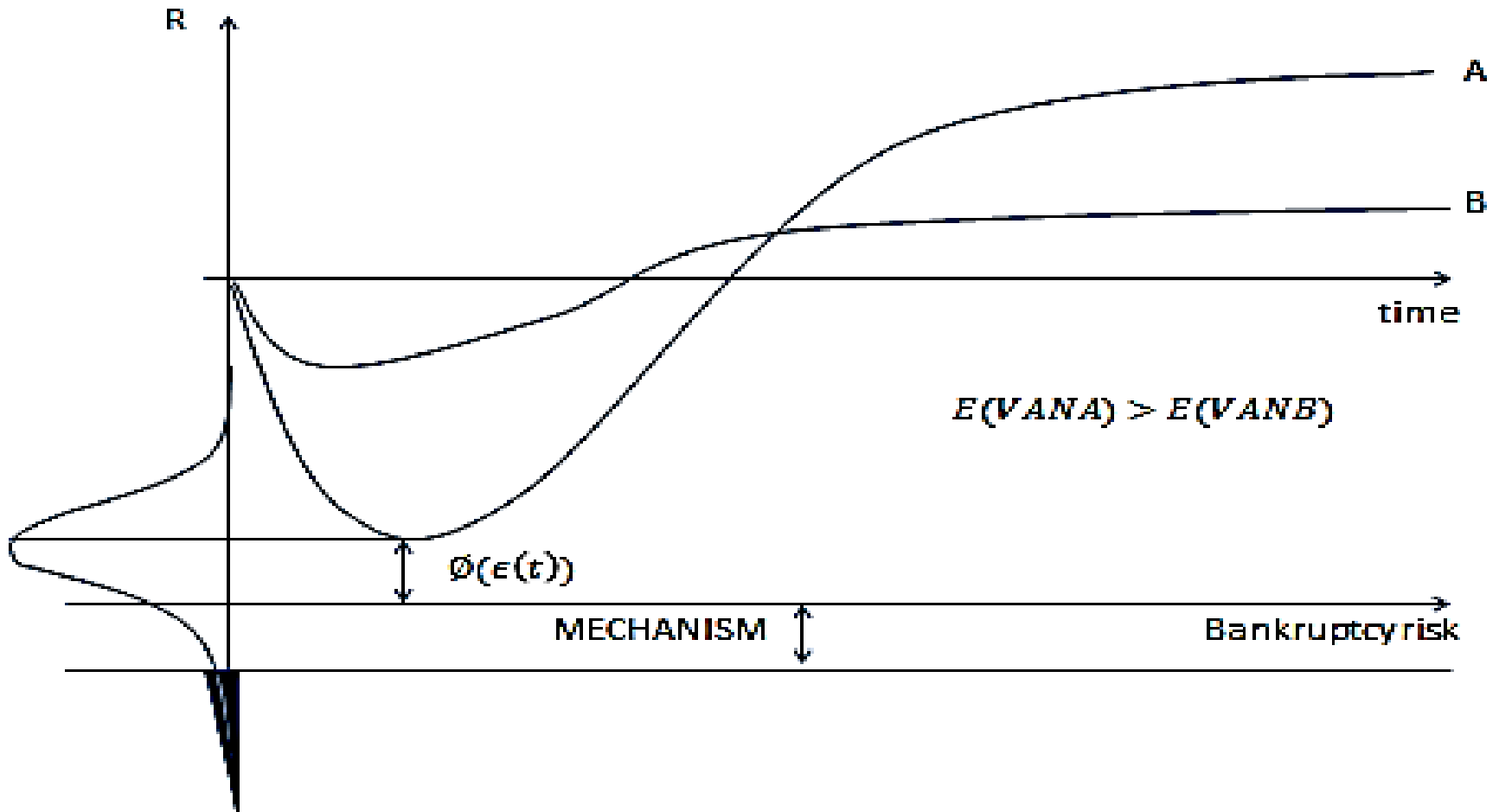
Seventh LCS-Rnet Annual Meeting

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How to help the deployment of more ambitious INDCs ?

- **why carbon prices only policies might not do the job?**
- **Why we need some form of valuation of the social benefits of mitigation activities?**
- **Why climate finance has to come into play?**
- **How to upgrade Climate Finance in an adverse context while respecting the CBDR principle?**

'Finance' and energy prices in an uncertain world



CBDR and GCF at risks of the distrust?

- How to pass from 3G\$ per year to 100G\$ and 500G\$ in a context of *'depression economics'*, *'public debts'* and *rebalancing of the world economic equilibrium*:
 - exacerbates the **'donor fatigue'** in the Annex 1 countries
 - Reinforces the **resistance** to carbon pricing (explicit or implicit)
- A problem of **orders of magnitude**
 - **Incremental Investments < 0,5% of the GDP in non O&G countries**
 - **leveraged inv costs < upfront inv costs < induced inv costs**
 - **Redirected investment = 8 to 9% of the Gross Capital Formation**

Turning the question upside down; listen to the 'climate agnostic' policy-makers

Post 2008: between instable growth and depression economics

- « *Saving glut* » and « *Buridan's Donkey* » dilemma for investors
- Risks of *depression* vs risks of re-unleashing speculative bubbles
- *Banking systems* still *fragile* and in process of *deleveraging*
- Tensions due to a « *currency cold war* »

(see Fault Lines by Rajan Raghuran)

Responding the questions of climate agnostics

- ***Because*** a massive redirection of investments ***concerns 40% of the economic sectors:***
 - *Climate policies can stimulate an inclusive growth recovery*
 - *Climate finance can't stay a marginal section of global finance*

Low carbon finance: a good candidate

- To redirect savings towards infrastructure and industry
- ***Revitalize the industrial fabric*** in OECD countries (and in the EU)
- ***More inward-oriented growth*** in emerging economies
- A more resilient financial and monetary order



A C.R.A. device

(Climate Remediation Assets)

The agenda

- *Inject liquidity conditionnal upon its use for low-carbon investments*
- *Awake the Buridan's Donkey*: public guarantee to lower the risks
- *Enhance the solvency of low-carbon entrepreneurs'*
- Make the *Banking System interested* in an easier conformity to their prudential constraints and a higher **RWA (risk-weighted asset)**
- **Make institutional investors** interested in carbon-based financial products to attract savings
- Trigger a *wave of LCI in infrastructure*
 - *Revitalizing the industrial fabric* in OECD countries
 - *More inward-oriented growth* in emerging economies

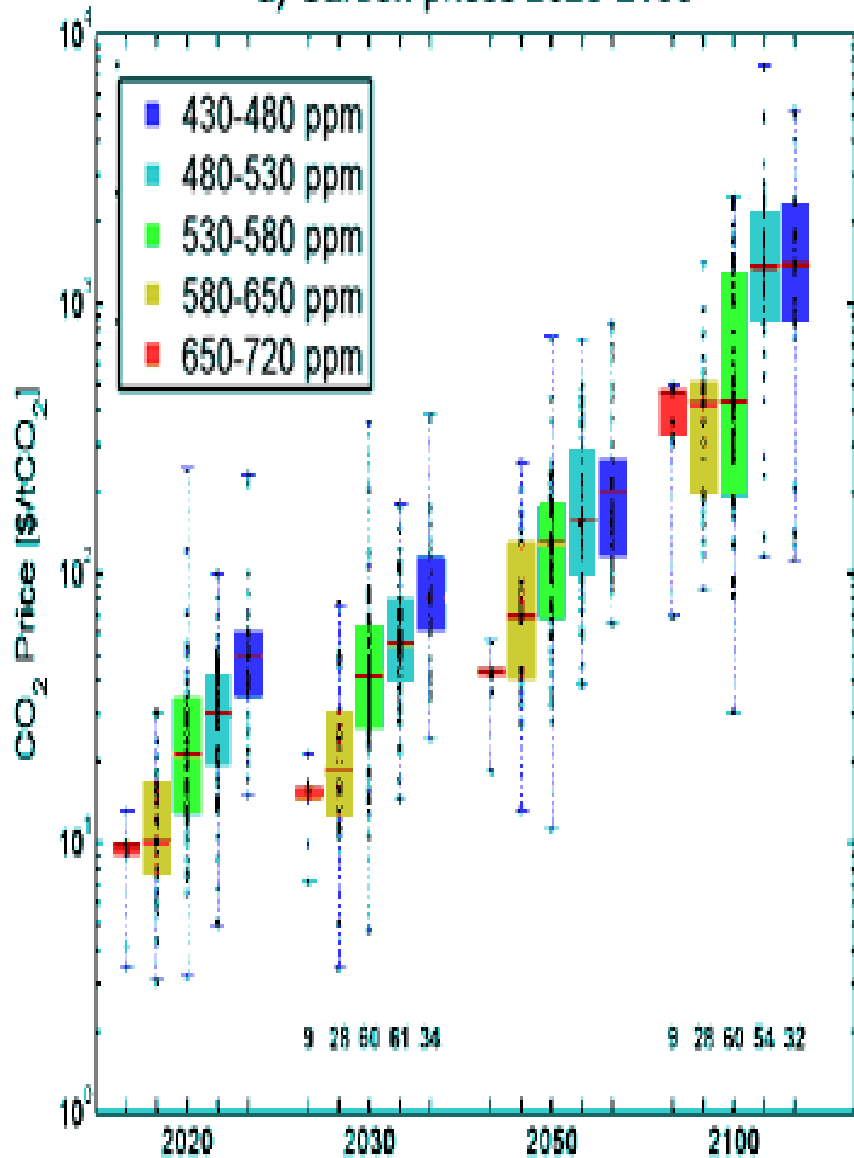
Sketching a possible mechanism

1. ***Its anchor*** : an agreement, under UNFCCC on ***a Value of Climate Remediation*** (per ton of avoided carbon emissions)
2. ***Voluntary commitments, by 'clubs' of governments***, to back a quantity of ***C.R.As*** over every five years
3. Central banks open ***credit lines*** and accept as repayment ***carbon certificates (CC)*** to fund LCIs
4. ***An Independent Supervisory Body*** to certify the eligibility of the projects in function of the ***NAMA's*** list and secure the ***statistical additivity*** of the system through the allocation rules of the CC
5. ***Asset swap after certification*** of project completion: ***CC <-> C.R.A***
C.R.As appear on the balance sheet of central banks (like gold)

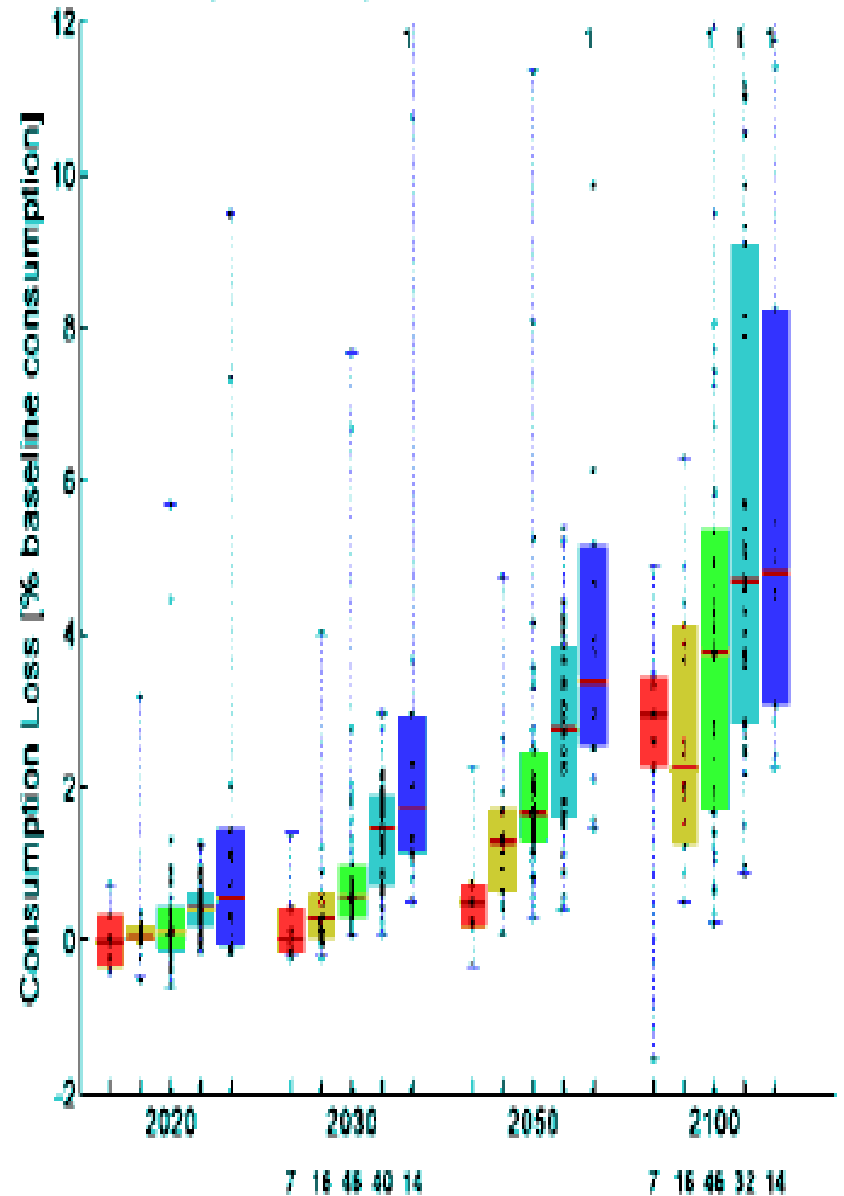
The VCRA: a notional value, not a carbon price

1. A signal of the political will 'to do sth' against climate change
2. It increases over time -> counterbalance the role of discount rate against investing in long lived capital stocks
3. Surrogate of a « global price signal »: it does not hurt existing capital stock and *avoids the fragmentation* of climate finance
4. Politically negotiable :
 - The cost of cement in India will not be doubled by a 50\$/t VCRA
 - The VCRA differs across countries but is conditional upon the content of their development policies
 - Hence countries may accept *similar VCRA for different reasons*, including various views of the co-benefits of climate mitigation

a) Carbon prices 2020-2100



c) Consumption losses 2020-2100



Governments

I

Agreement on the « SCC »

II

Monetary policy announcement

III

Monitoring \searrow CO₂

Supervisory Body

MRV

Low-carbon projects

Repayment

\$ et CC

Loans

IV

Redirecting long term saving

Central Bank

Asset	Liability
Gold	Currency
SDR	Bank's deposits

\searrow CO₂

Liquidity

CC

\$

Banks

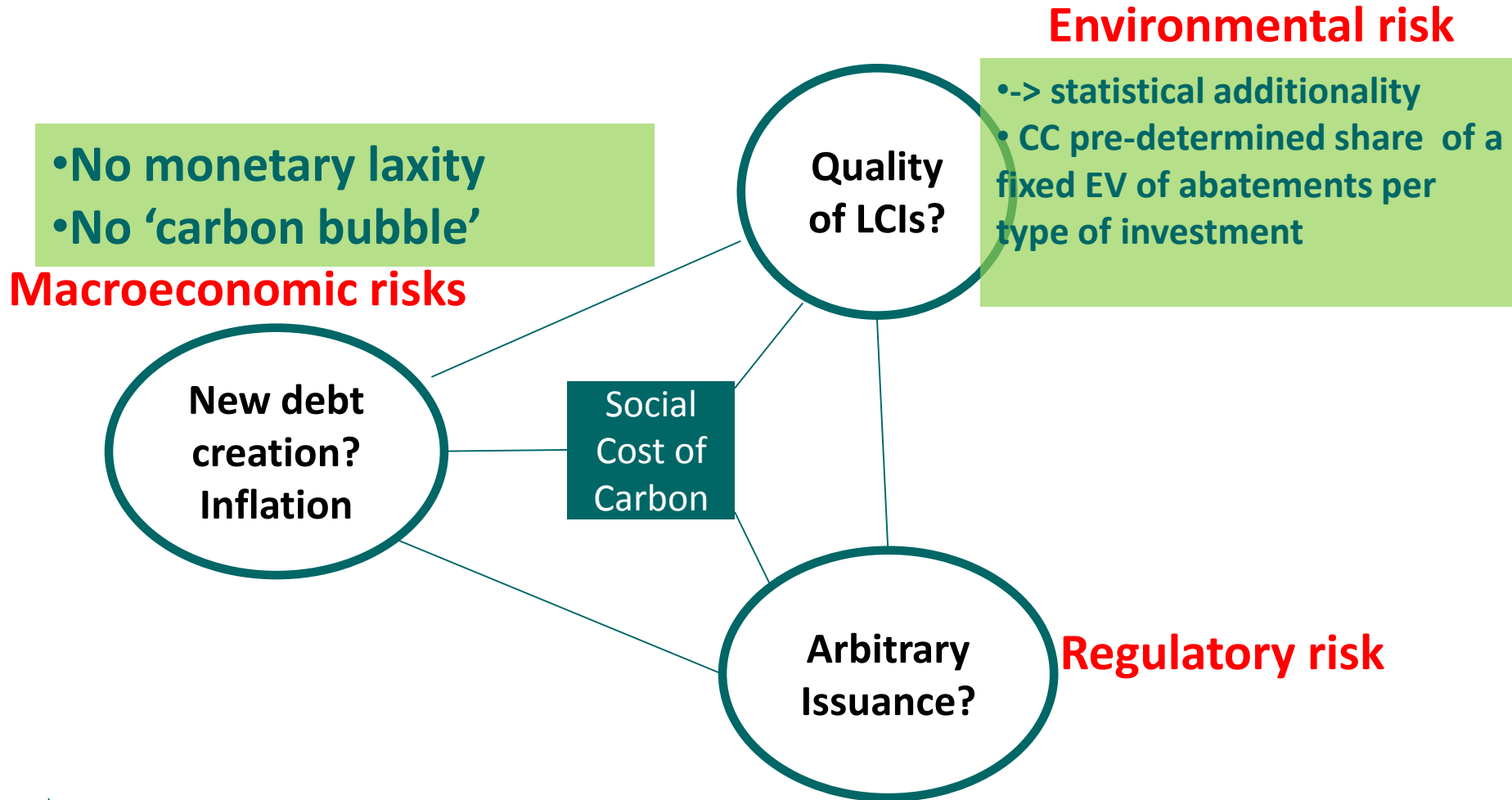
Asset	Liabilities
Loans - low-carbon loans - BAU loans	Climate bonds Deposits -\$
	Net worth

interests

\$

Saving
Households
Institutional Investors

Addressing potential risks of the system



➔ To be weighed against the benefits of redirecting part of (misused) savings toward a « green growth » recovery

Orders of magnitude

based on last 'World Energy Outlook' and
macroeconomic simulations from Imaclim – R

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The nature of the funding challenge

- 1. Cumulated Energy Related Investments in the US up to 2035**
 - BAU: between **5,5** and **6,05** trillions US\$
 - 450 ppm: between **5,83** and **6,39** trillion US\$
- 2. Cumulated Energy Related Investments in the EU up to 2035**
 - BAU++: between **4,94** and **5,25** trillions US\$
 - 450 ppm: between **5,29** and **6,61** trillion US\$
- 3. Cumulated Energy Related Investments in the world up to 2035**
 - BAU: between **47,44** and **54,7** trillions US\$
 - 450 ppm: between **39,68** and **43,17** trillion US

Orders of magnitude of the C.R.A.s issuance (in 2035)

	OECD	DC (Middle East Excl)
Total Energy INV	988	1143
Redirected INV	494	571
Need of Carbon Assets		
Leverage 5	98	114
Leverage 10	49	57
% of the total GDP	between 0.19 and 0.30	

The full study available at <http://www.centre-cired.fr>

See also

Venturing into uncharted financial waters: an essay on climate-friendly finance finance JC Hourcade, BP Fabert, J Rozenberg, ***International Environmental Agreements: Politics, Law and Economics*** 12 (2 ...

Can indebted Europe afford Climate Policy? Can it bail out its debt without Climate Policy? M Aglietta, JC Hourcade ***Intereconomics*** 47 (3), 81-87