Are Climate Policies conditional upon reforms of the Financial Systems?

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Cired

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Climate negotiations in an untimely context?

- Almost zero probability of an agreement on a global cap-and-trade system: diplomatic non-starter for emerging countries because of the «**entitlement** » issue
- **the Cancun *paradigm shift*** calls for «*substantial opportunities to ensure continued high growth and sustainable development*" but it requires a **prior scaling-up of the Green Climate Fund**
- **But,** the current context of ***'depression economics' ,' debt crisis'*** and ***rebalancing of the world economic equilibrium*** can only:
  - exarcerbate the **'donor fatigue'** in the Annex 1 countries
  - Reinforce the **social resistance** to carbon pricing (explicit or implicit)
- **Risk of reinforcing the circle of distrust between Annex 1 and non Annex 1 countries**

Turning the question upside/down

- **No debt bailout and lasting economic recovery w/o climate policy?**

- The question is **stupid if** you think that **climate finance** is doomed to remain a **marginal** department of global finance

- It is **not stupid if** you have in mind the G$ 100 circulated in negotiations for 2020, the 264-563 of up front investment costs appraised by the WB for 2030 and the induced investment demands

- The question is **dangerous** if you think that linking two sensitive issues is a **diplomatic non-starter** and demands a dialogue between too distinct intellectual cultures

- The question **is not dangerous** but **unavoidable** if you have in mind that ignoring the constraints leads to a **diplomatic dead-end**

Origins and aftermath of the financial crisis: sorry for the detour

- Debt crisis caused by lax public finance and/or unprecedented debt facilities allowed by accounting and financial innovation in the 80ies?

- The Greenspan's laxity: symptom of a structural problem in the current pattern of world globalisation: « *You do not have to have a losy home; the low income home buyers can have just as nice a home as everybody else* » (Bushjr 2006)

- Unleashed 'commerce of promises' resulting into a systemic shock, because « credits create deposits »

- The paradox of huge amounts of world savings and

- **The more the debtors pay, the more they owe (Irving Fisher, Econometrica 1933)**

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- **Unleashed 'commerce of promises'** resulting into a **systemic shock,** because « credits create deposits »

- The dictatorship of the shareholder value and the **Buridan's Donkey syndrom;** when savings do not know where to go (in industry)

Aftermath of the financial crisis: sorry for the detour

- Call for **strict public budgets** 'growth austerity' and debt bailout
- **Ben Bernanke's policy: interest rates close to zero**
- **Eurozone**: **injection of** a Trillion € at a 1% interest rate to avoid a credit crunch (fall 2011), injections to save the Spanish banks plus **.....**

- But the donkey still hesitates -> **savings glut** and negative interest rates for 'less risky' countries

- **History tells us** that:
  - **The more the debtors pay, the more they owe (I. Fisher, Econometrica 1933)**
  - **Post WWII** huge debts have been absorbed with a **growth rate higher than** the average real interest debt paid on the debt
  - The « **depression economics** » might be a trap hard to go out (Japan 90ies)

A thin pathway out of the depression economics

- The **« keynesian compact »** can no longer work although it contains some pieces of truth
- **Awaking the Buridan's Donkey:** 'some form of' public guarantee to lower specifically the risks of LC investments
- **Re-orienting saving** towards LC projects instead of speculative financial products, real estates etc ....
- Trigger a **wave of LCP in infrastructures in LDCs** to avoid their bifurcation towards energy intensive pathways
- Revitalizing the industrial fabric in OECD countries
- re **inward-oriented growth** in emerging economies and calming **tensions about « currency cold war »**

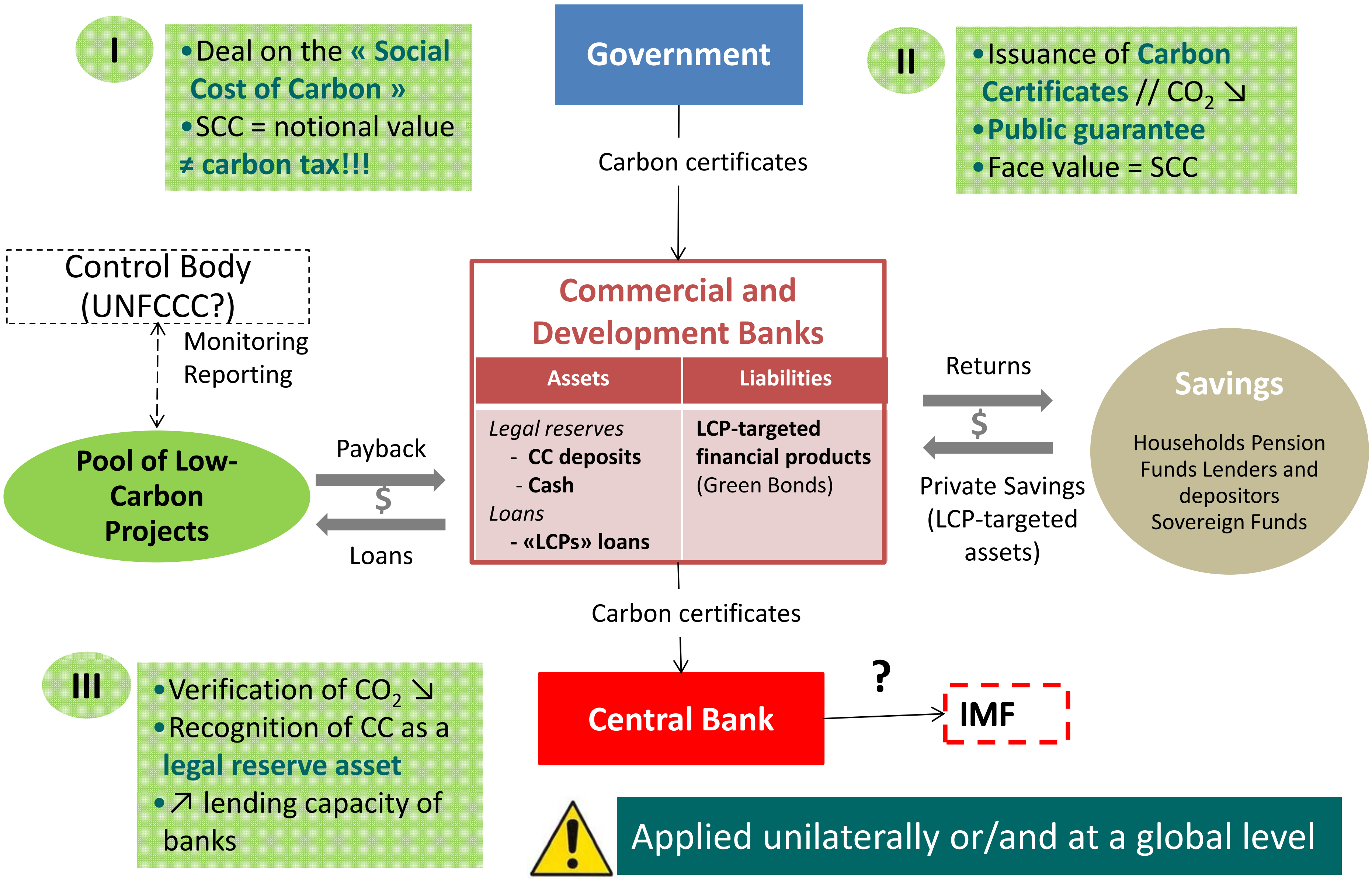
An agreement on the Social Value of Carbon

1. **Surrogate of a « price signal »** to avoid the risk of fragmentation of climate finance

2. **↘ risk-adjusted perceived costs** of LCPs (= ↘ credit interest rate and leverage global **private savings**)

3. **Politically acceptable** in climate negotiations

Sketching a Climate-Friendly Financial Architecture



An illustration of the accounting circuit of carbon-based assets

T_0 : Loan signature

CC = α $E_A[Abat_{CO2}]$.SCC, with SCC = US\$ 50/tCO_2

Government

Investment and Development Banks

Assets	Liabilities
Legal reserves +\$ 0 *Loan A_{LCP}* \$ 1000 6 CC * 50 = \$ 300	*A_{LCP} deposits* \$ 1000 6 CC * 50 = \$ 300

Project A_{LCP}

Assets	Liabilities
Cash \$ 1000 *CC balance* 6 CC * 50 = \$ 300	*Debt* \$ 1000 *Carbon Debt* 6 CC * 50 = \$ 300

T_1 : Start of Operation phase

Central Bank

Assets	Liabilities
Social Carbon Asset (based on the SCC)	*Bank's deposit* *+\$ 150*

Investment and Development Banks

Assets	Liabilities
Legal reserves +3 CC = \$ 150 *Loan A_{LCP}* \$ 1000 3 CC * 50 = \$ 150	*A_{LCP} deposits* \$ 3 CC * 50 = \$ 150

Project A_{LCP}

Assets	Liabilities
Equipment \$ 1000 *CC balance* 3 CC * 50 = \$ 150	*Debt* \$ 1000 *Carbon Debt* 3 CC * 50 = \$ 150

T_2 : Payback period

Central Bank

Assets	Liabilities
Social Carbon Asset (based on the SCC)	*Bank's deposit* *+\$ 200*

Investment and Development Banks

Assets	Liabilities
Legal reserves +4 CC = \$ 200 *Loan A_{LCP}* \$ 500 2 CC * 50 = \$ 100	*A_{LCP} deposits* \$ 2 CC * 50 = \$ 100

Project A_{LCP}

Assets	Liabilities
Equipment \$ 1000 – depreciation *CC balance* 2 CC * 50 = \$ 100	*Debt* \$ 500 *Carbon Debt* 2 CC * 50 = \$ 100

T_3 : End of payback period

Central Bank

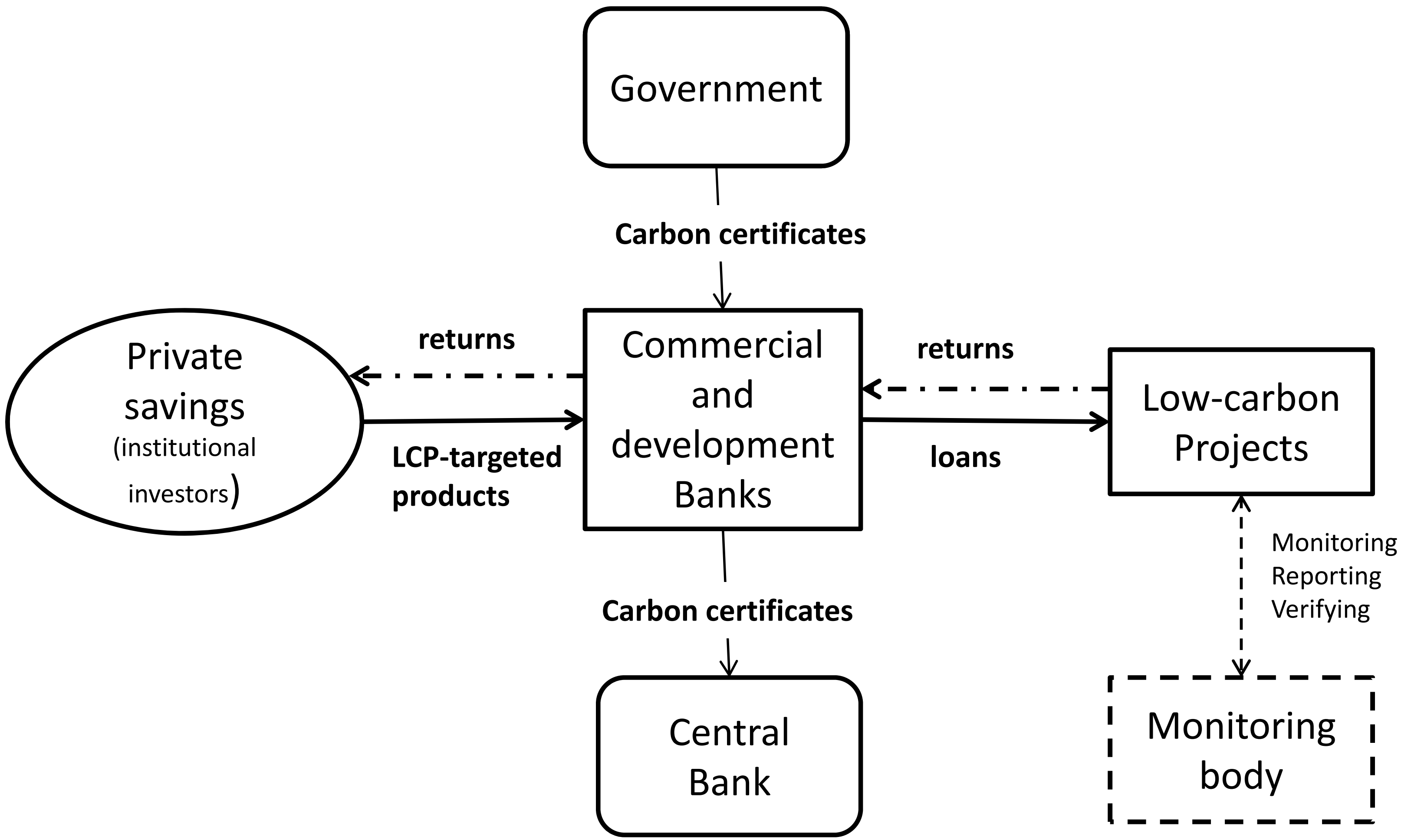
Assets	Liabilities
Social Carbon Asset (based on the SCC)	*Bank's deposit* *+\$ 300*

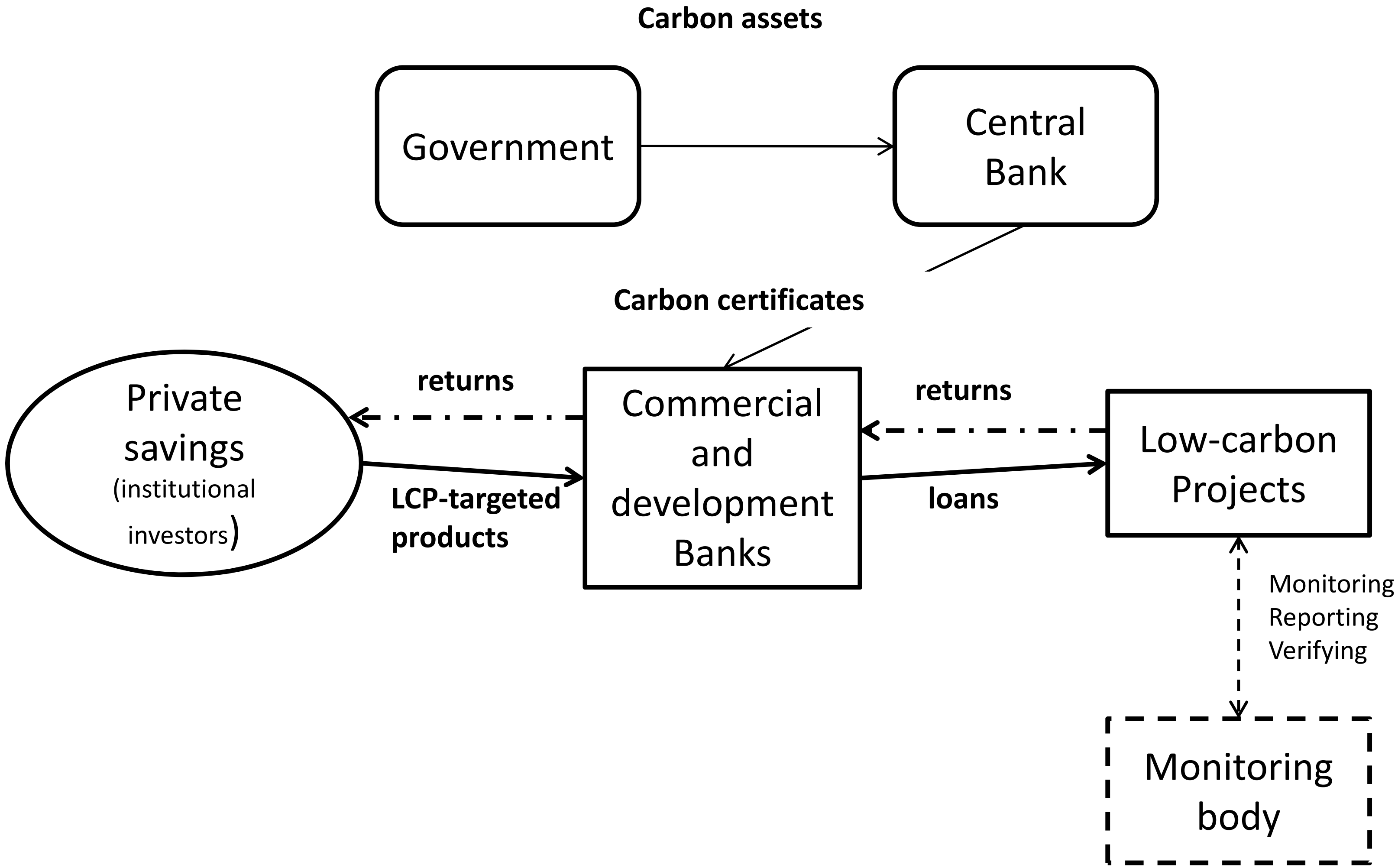
Investment and Development Banks

Assets	Liabilities
Legal reserves +6 CC = \$ 300 *Loan A_{LCP}* \$ 0 0 CC	*A_{LCP} deposits* \$ 0 CC

Project A_{LCP}

Assets	Liabilities
Equipment \$ 1000 – depreciation *CC balance* 0	*Debt* \$ 0 *Carbon Debt* 0


Government
Carbon certificates
returns
Private savings
(institutional investors)
LCP-targeted products
Commercial and development Banks
returns
loans
Low-carbon Projects
Monitoring
Reporting
Verifying
Carbon certificates
Central Bank
Monitoring body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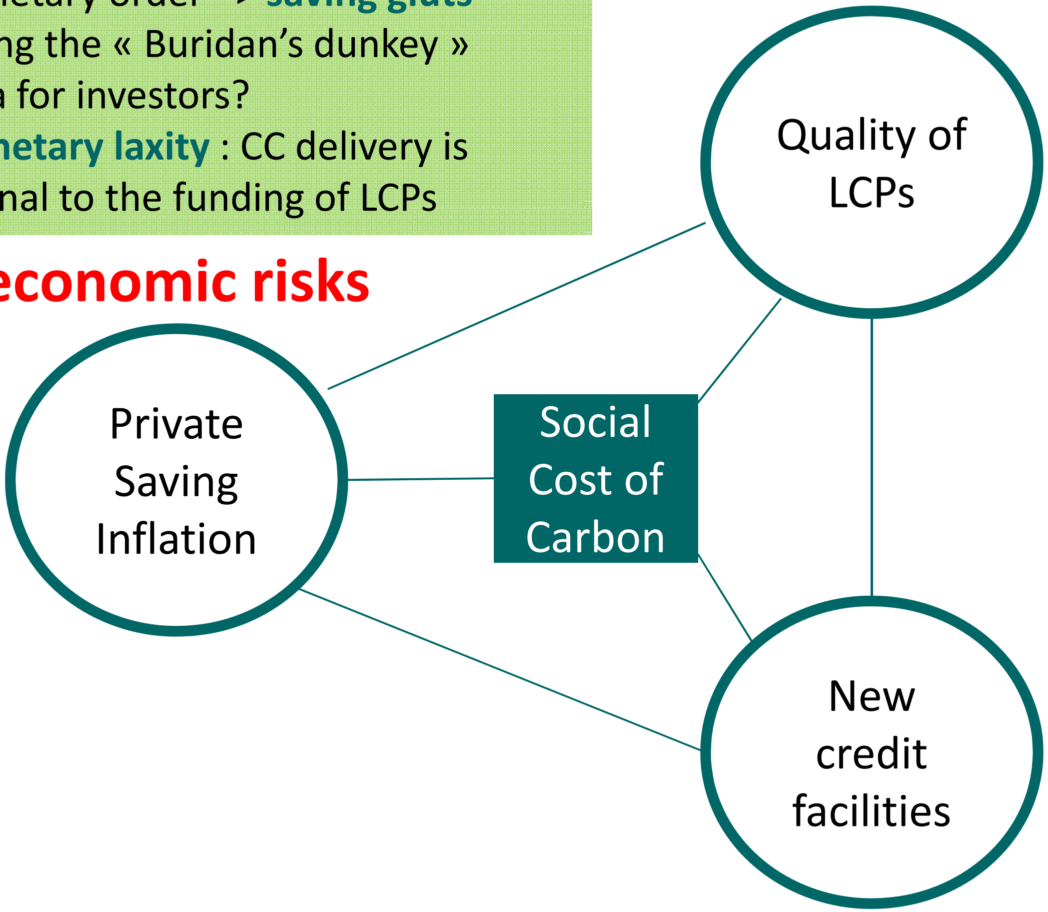
A carbon-based money (or debt) issuance with three main risks?

- Major imbalances of the global financial and monetary order => **saving gluts**
- Resolving the « Buridan's dunkey » dilemma for investors?
- **No monetary laxity** : CC delivery is conditional to the funding of LCPs

Environmental risk

Macroeconomic risks



- Taking stock of **CDM experience**
- From « project-based » additionality to **« statistical » additionality**

Regulation risk

No magic bullet ! A climate-friendly financial device to redirect part of (misused) savings toward a « green growth » recovery

Making low-carbon projects competitive

Projects	BAU	Low carbon	
Up-front costs (planning and building phases)	100	100	
Excess up-front costs		10	-5
Operating costs	14	9	
Non carbon-related risks (technological, country, currency etc.)	10	20	-8
Carbon-related risk	2.5		-x
Risk-adjusted costs	**126.5**	**139**	**<126**

grant

Public guarantee

Carbon tarding scheme *

Climate finance tools

* Carbon-related risk for the LCP depends on the tool used to make the carbon price happen: (i) in case of a carbon tax, the LCP avoid any carbon penalty, (ii) in case of a carbon trading scheme the risk gets even negative as the project would receive carbon revenues

TO SUM UP

1. Credible deal on the **« Social Cost of Carbon »**
   - The value of the climate externality along on optimal path
   - Governments' WTP to tackle climate change

SCC = notional value ≠ carbon tax

2. Issuance by Governments of **« carbon certificates »**
   - Delivered to banks // CO_2 abatement pledged by funded LCPs
   - **Public guarantee** on LCPs loans
   - Face value based on the agreed SCC
   - Credit facilities to **reduce « risk-adjusted costs »** of LCPs

3. Recognition by Central Banks of CC as **« carbon-based reserve assets »**
   - After verification of the effectiveness of CO_2 reduction
   - Expand lending capacity of the bank

Applied within a coalition of few « commited » countries or/and extended at a global level

Elements for a brainstorming

- *Hourcade J.C., Perrissin Fabert B. Rozenberg J.* Venturing into uncharted financial waters: an essay, on climate-friendly finance, ***International Environmental Agreements*** (2012) 12:165–186, DOI 10.1007/s10784-012-9169-y

- *Aglietta M., Hourcade J.C.* Can Indebted Europe Afford Climate Policy? Can It Bail Out Its Debt, ***Intereconomics*** , 2012/3

- *Hourcade J.C., Shukla P.* Triggering the low carbon transition in the aftermath of the global financial crisis, Forthcoming in ***Climate Policy***