A 'paradigm shift' in the climate affair

A monetary plan for upgrading climate finance and support a sustainable development

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The economics of a 'paradigm shift'

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Lessons from Kyoto's unfinished business

A 'mental map' (a world cap and trade system with ***unique carbon price*** through all sectors and countries with ***compensating transfers)*** which

1) does not indicate that significant carbon prices:

- **Hurt existing capital stock** in developed countries and mobilizes vested interests **in the absence of a new social contract**
- **hurt emerging economies over the short run** (higher share of energy expenditures in households budget and in production costs) and does not prevent their **lock- in** carbon intensive growth pattern

2) ignores that technologies are not selected in function of their levelized costs in **a 'shareholder' regime** of firm management

3) indicates **impossible 'fair' compensating transfers, focusses on how to share the very few remains**

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Lessons from Kyoto's unfinished business

A 'mental map' (a world cap and trade system with ***unique carbon price*** through all sectors and countries with ***compensating transfers)*** which

1) does not indicate that significant carbon prices ……

2) ignores that technologies …….

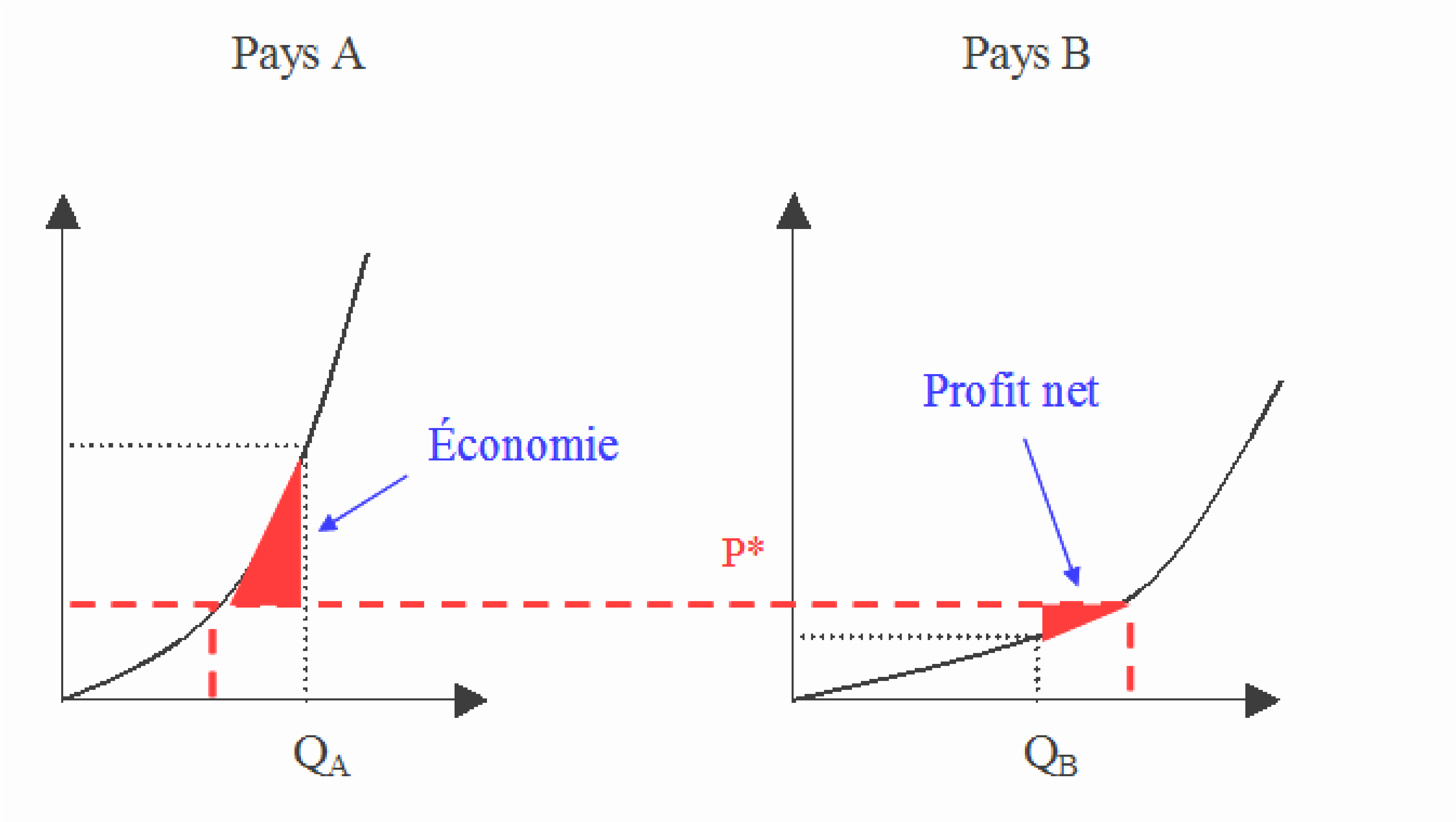
3) indicates **impossible 'fair' compensating transfers ….**

4) does not indicates that the challenge is the bifuraction of developing countries between different development patterns …. far beyond energy (see lessons from DDPP + IPCC))

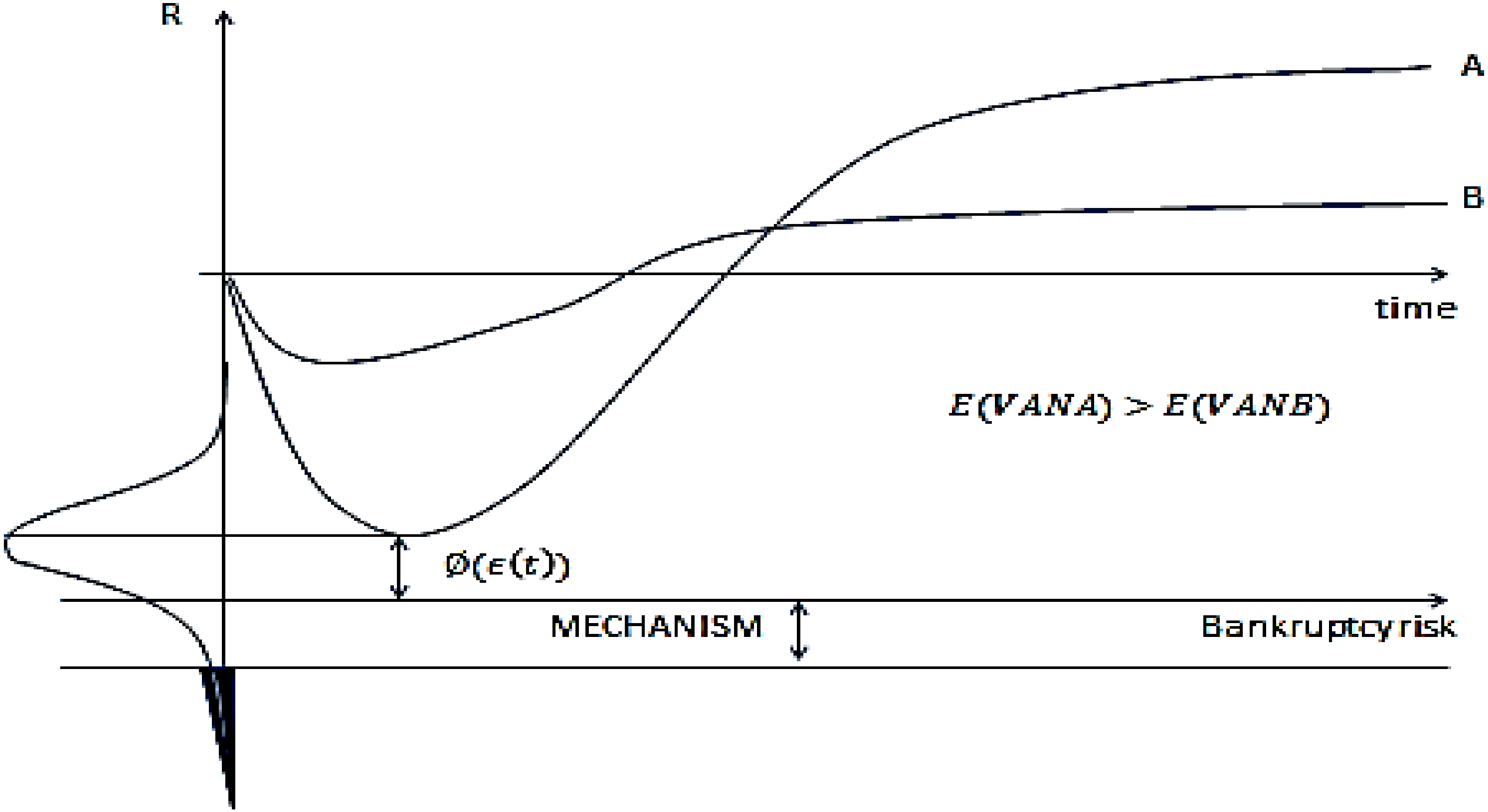
5) Does not indicates the real benefits of cooperation (see the Chinese case) which is the avoidance of 'undesirable bifurcation'

6) Says nothing about the 'triggering phase' and the need for confidence building in an adverse economic context

Un argument économique simple …. trop simple?



Why price-signals does not suffice. Why 'finance' matters in an uncertain world



Climate Finance at risks of the distrust?

- A context of ***'depression economics', 'public debts'*** 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)

- A problem of **orders of magnitude: a funding gap of 90%????**
  - **leveraged invest costs< upfront invest costs < induced invest costs**
  - **Redirected invest height times higher than incremental invest costs**

The economic rationale for turning the question upside down

Can we afford climate policies? <-> No debt bailout and economic recovery w/o climate policy

- *A shift of less than 1% of the GDP is needed to fund incremental costs*
- *Concerned sectors represent around 40% of the GCF and some are critical for inclusive growth*
- *The redirection of investments concerns about 8-9% of the GCF*
- *This is not bad news:*
  - *Climate policies can be a stimulus for a sustainable and inclusive growth recovery*
  - *climate finance is not bound to remain* a *marginal department of global finance*

A diplomatic non starter?

- **Is** linking two sensitive issues **diplomatically dangerous?**
- ignoring the short term economic and political constraints leads to a ***diplomatic dead-end***
- To go out of the 'sharing the pie' approach implies to ***link a diversity of domestic an international co-benefits***
- **Getting the support of 'non climate concerned' policy-makers: the European Case, the Chinese case ….. and others**

Turning the question upside-down

The world economy 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*** »

Any new growth regime implies

- To **redirect savings towards infrastructure and industry** instead of speculation
- a **more inward-oriented industrialisation**
- A **more resilient financial and monetary order**

Low carbon finance is a good candidate to contribute to sustainable economic recovery with …. less « ups and downs »

A ‘C4’ device

The agenda

- ***Inject liquidity, provided that it is used to fund low-carbon investments (LCI)***
- ***Awake the Buridan's Donkey:*** public guarantee to lower the risks of LCIs and ***enhance the solvency of low-carbon entrepreneurs***'
- Make the ***Banking System interested*** in funding LCIs:
  - banks can better face their prudential constraints and improve their risk-weighted assets (RWA)
- **Make institutional investors** interested in carbon-based financial products to attract savings (instead of real estates and others …)
- Trigger a ***wave of LCI in infrastructure***
  - ***Revitalizing the industrial fabric*** in OECD countries
  - ***More inward-oriented growth*** in emerging economies

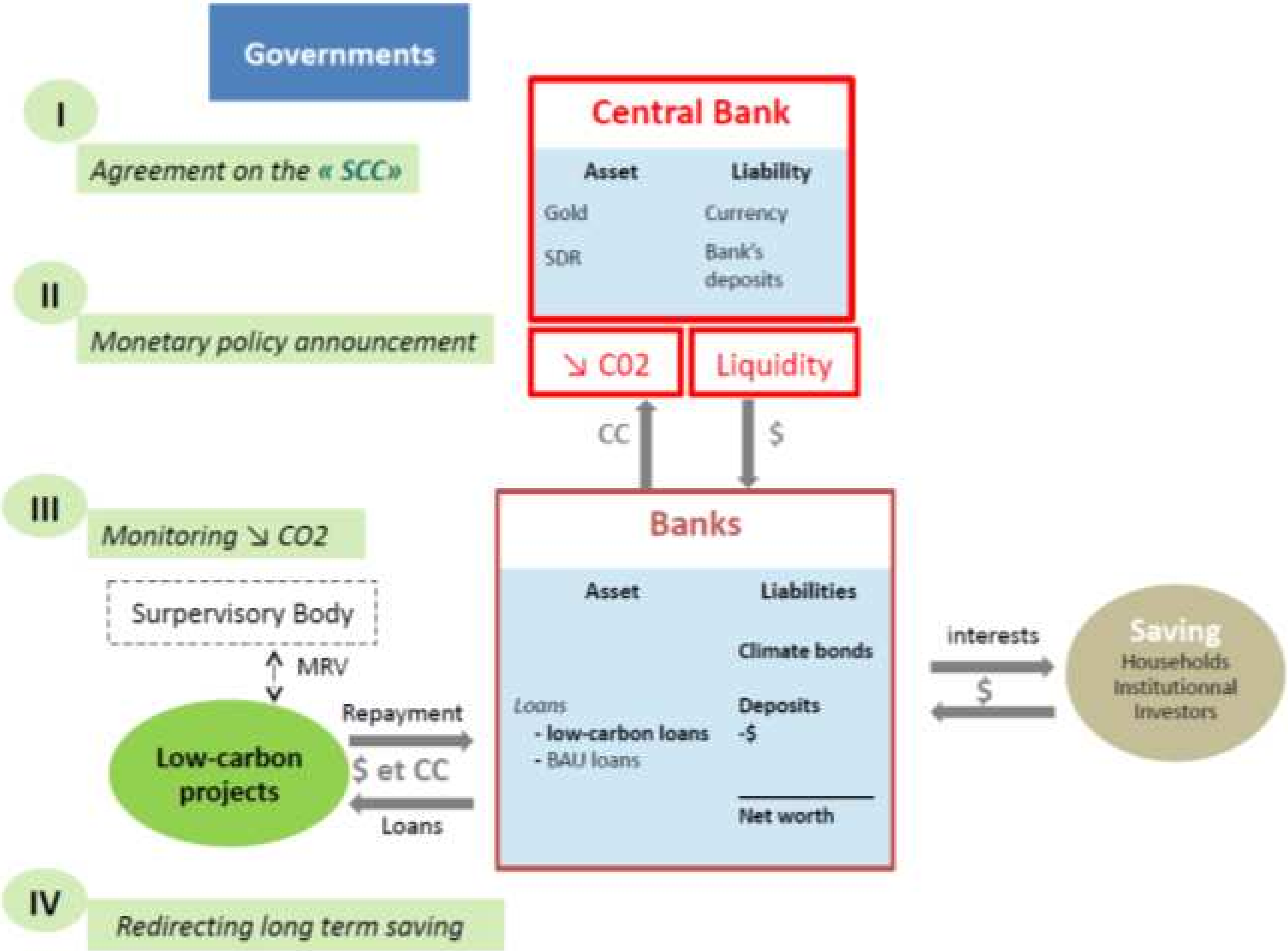
Sketching a possible mechanism

1. ***Its anchor*** **:** an agreement, under UNFCCC on ***a Social Value of Avoided Carbon Emissions*** (SVC)
2. ***Voluntary commitments by governements,*** over every five years to back a quantity of ***carbon assets,***
3. Central banks open ***drawing rights on these carbon assets*** and accept as repayment ***carbon certificates (CC)*** to fund LCIs
4. ***After certification*** of project completion: ***asset swap*** …. CCs are turned into carbon assets that appear on the balance sheet of central banks (like gold), banks or entreprises
5. ***An Independent Supervisory Body***
    1. Negotiates with governments which **NAMAs** these LCI should contribute to
    2. Secures the ***« statistical additionality »*** of the investments

The SVC, 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 « gobal 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 and the peasant will not be obliged to pay more for irrigation
   - The SVC differs theoretically across countries but is conditional upon the content of their development policies (Shukla)
   - Countries may thus accept ***similar SVC for different reasons,*** including various views of the co-benefits of climate mitigation



Governments
I
Agreement on the « SCC»
II
Monetary policy announcement
III
Monitoring ↘ CO2
IV
Redirecting long term saving
Central Bank
Asset
Liability
Gold
SDR
Currency
Bank's deposits
↘ C02
Liquidity
CC
$
Banks
Asset
Liabilities
Loans
- low-carbon loans
- BAU loans
Climate bonds
Deposits
-$
Net worth
Surpervisory Body
MRV
Low-carbon projects
Repayment
$ et CC
Loans
interests
$
Saving
Households
Institutionnal
Investors

Gvt's commitments and issuance of carbon-based liquidity by Central Banks

Central Bank balance sheet

Asset	Liability
Gold	Bills and coins
Sovereign bonds	Banks' deposits

% of Governments' "CO_2 commitment"	Liquidity drawing right

Out of balance sheet

New credit lines for commercial banks, refundable with ↘ of CO_2

Table 1: Balance sheets at the opening date of the low-carbon loan

Central Bank		Commercial Bank		Entrepreneur	
Asset	Liability	Asset	Liability	Asset	Liability
				$1000R^{LC}$	
Loan CO_2		$+900r^l$	$+900r^d$		$+900r^l$
$+100$	$+100$	$+100$	$+100$		$+100$
			$+0.08(900r^l)$		

10 CO_2	100
Reduction of CO_2	Drawing rights

Balance sheets at the end of the payback period of the low-carbon loan before the asset swap

Central Bank		Commercial Banks		Entrepreneur	
Asset	Liability	Asset	Liability	Asset	Liability
				$1000R^{LC}$	
Loan CO_2		+0	+0	$-900r^{l}$	+0
+100	+100	+100	+100	+ 10 CC	+100
			+0		

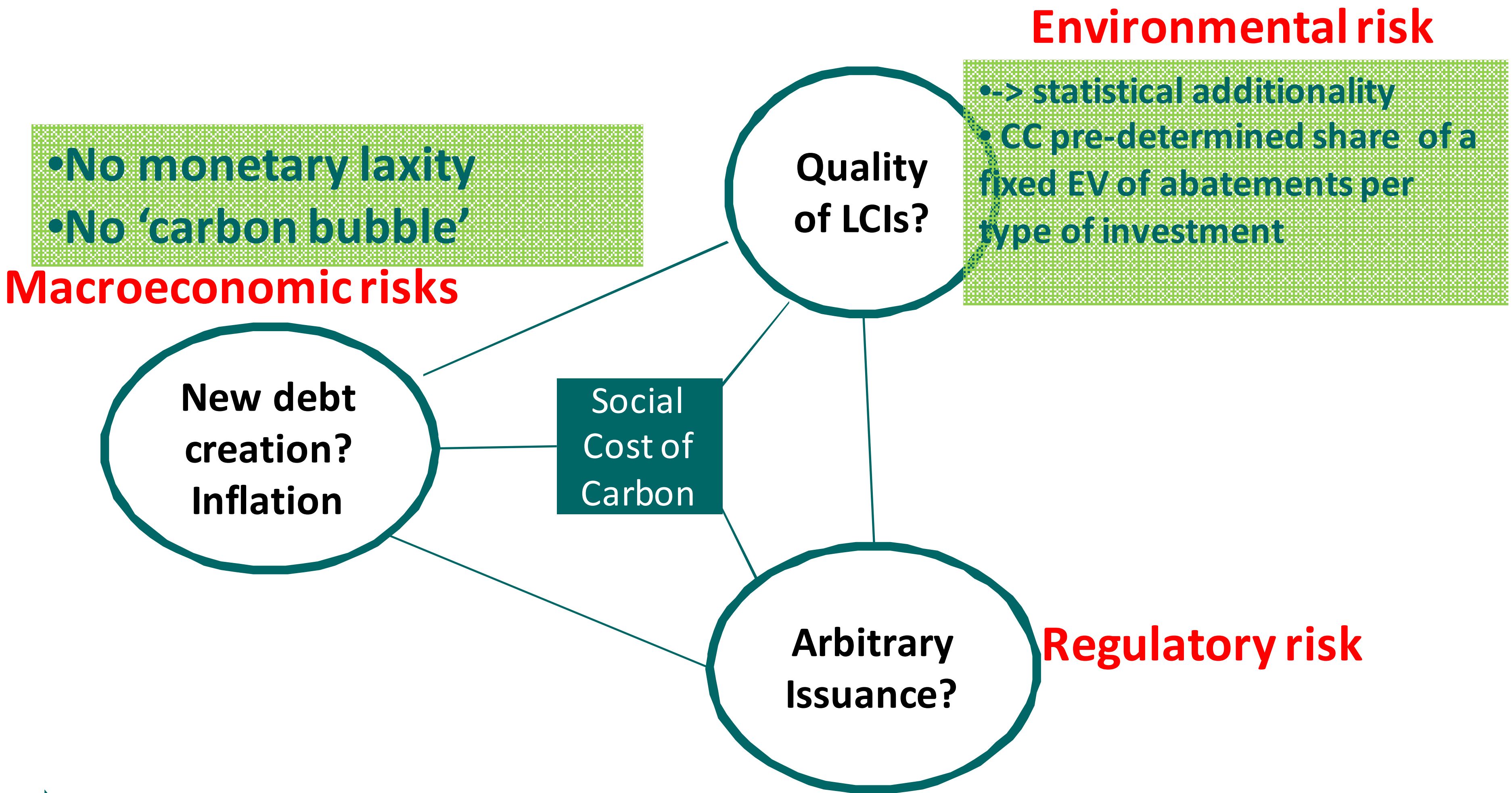
10 CO_2	100
Reduction of CO_2	Drawing rights

Balance sheets after the carbon asset swap

Central Bank		Commercial Bank		Entrepreneur	
Asset	Liability	Asset	Liability	Asset	Liability
10 CC	+100			$1000R^{LC}$	
~~Loan CO_2~~		+0	+0	$-900r^{l}$	+0
~~+100~~		~~+100~~	~~+100~~	~~+ 10 CC~~	~~+100~~
			+0		

~~10 CO_2~~	~~100~~
Reduction of CO_2	Drawing rights

Adressing potential risks of the system



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

Preliminary numerical assesments
‘based on last IEA World Energy Outlook’

Orders of magnitude of the 'carbon based money 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**

A « pull-back force » to secure both ‘decarbonation’ and ‘equitable access to development’

Key Principles for a global architecture

- ***targets and country timetables under the* CBDR" principle**
- ***no legally binding commitments on these timetables***
- ***legally binding commitments within a 'club' of voluntary countries adhering a system providing incentives for*** respecting announced emissions pledges and to narrow the gap between these pledges and a "2°C" trajectory
- leave all latitude to Parties to select the ***NAMAS apt to align their climate and development policies*** ….. no misgiving about environmental colonialism
- Penalty: **deprive a defaulter country of the benefits of the system** supported by the club of voluntary countries

A Pull-Back force hung on three pillars

- *allocating* to each participating country part of the global emissions budget through a long term convergence trajectory *(compromise easier than in the case of a cap and trade system)*
- emissions commitments to issue carbon assets by countries above their convergence trajectory: no geographical restriction on the use of 'credit lines' to secure North/South transfers and the triggering of a Low Carbon transition in OECD countries
- Emissions pledges announced by countries below their convergence trajectory; the tighter the pledges, the higher the drawing rights on the credit lines

If you are interested

1. Cired’s website: the documents of the CIRED/IASS meeting early july
2. **Money creation backed on real wealth** *(Avoided climate risks, Infrastructure investments)*
3. ***No risk of ‘speculative bubble’*** on carbon
4. ***Normative targets*** with when flexibility and ***back pulling force***
5. A concrete way to secure ***« equitable access to development »*** by supporting ***NAMAs***’ full incremental costs‘ by a real inflow
6. A respected ***CBDR that can be progressively extented to*** the most advanced emerging economies
7. Can ***support any carbon trading mechanism and bottom-up initiatives (***sectorial arrangements in the industry, cities inititiatives ….) and ***stabilize the ‘business context’***