INSIGHTS FOR « FUTURE WISE » INVESTORS FROM A LONG-STANDING OBSERVER OF THE CLIMATE AFFAIR

JC Hourcade (CIRED – CNRS)

CLA and LA IPCC

Estimated annualised mitigation investment needed to stay below 2°C (2015-2035 in trillion 2010 US$ at Market Exchange Rates)

	Energy investments	Of which demand side	Transport	Other infra-structures	Total	Ratio to MER GDP
IAM Baseline (mean)	1.96	0.24			1.96	1.8%
IAM NDC (mean)	2.04	0.28			2.04	1.9%
IAM 2°C(mean)	2.19	0.38			2.19	2.1%
IAM 1.5°C (mean)	2.32	0.45			2.32	2.2%
IEA NDC	2.40	0.72	0.35		2.40	2.3%
IEA 1.5°C	2.76	1.13	0.55		2.76	2.7%
Min IAM-IEA, 1.5°C	1.38	0.38			**1.38**	**1.6%**
Mean IAM-IEA, 1.5°C	2.38	0.54			**2.38**	**2.3%**
Max IAM-IEA, 1.5°C	3.25	1.13			**3.25**	**4.0%**
OECD Baseline	1.91	0.36	2.46	1.37	5.74	5.4%
OECD 2°C	2.13	0.40	2.73	1.52	**6.38**	**6.0%**

Macro-financial implications ***(trillion 2010 US$ at MER)***

- Incremental investments/year: 0.42 (- 0.30% / +38%) for energy, 0,86 (all sectors)
- ***1.53% of the GCF in MER and 1,04% in PPP***
- Core issue: a ***drain on consumption of 0.68% and 0.45% or a redirection of savings towards long term assets***?

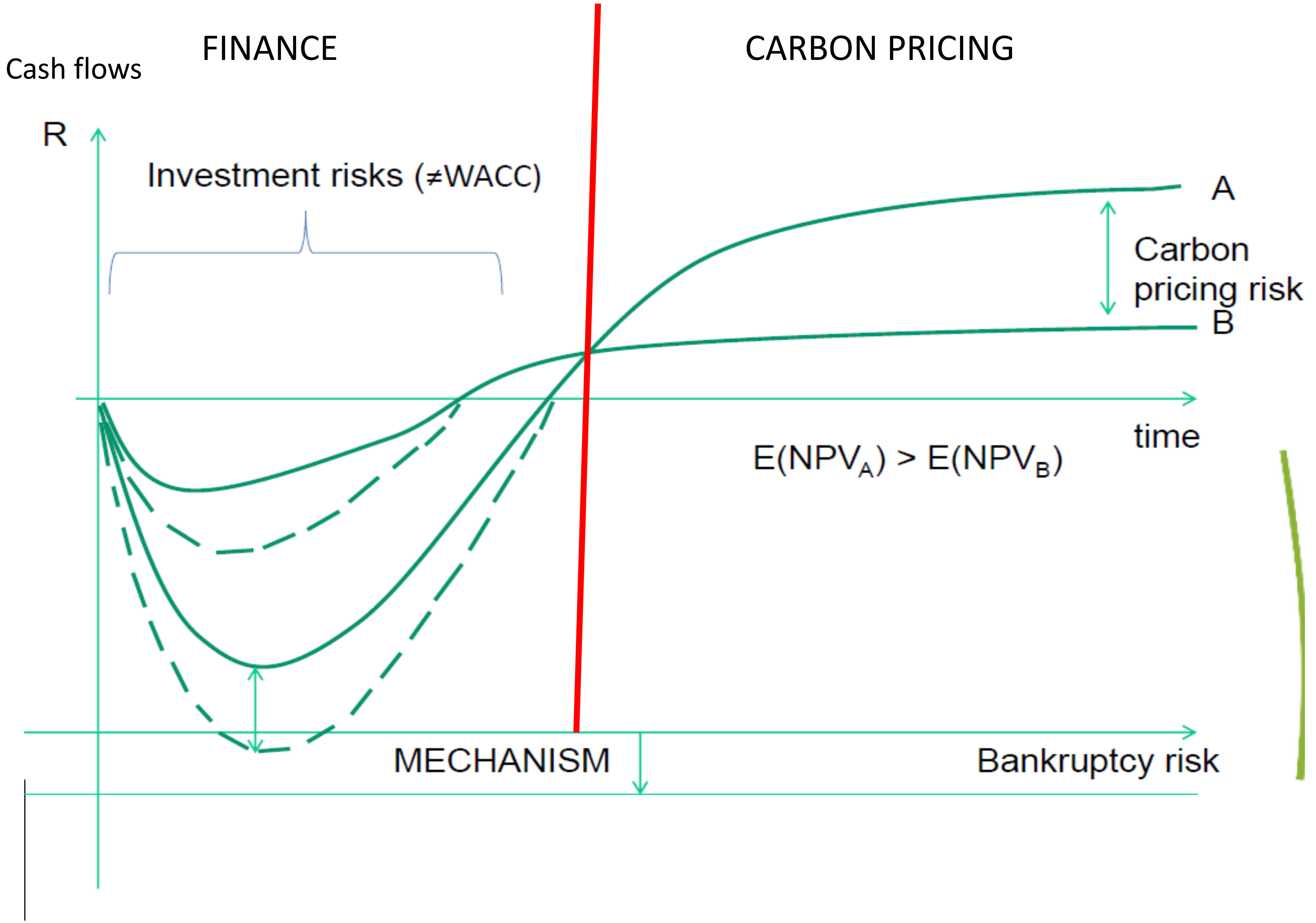
- Can the financial system do the job? Yes if we look at these orders of magnitude
  - Redirected savings : 0.42/0.86 between towards infrastructures, 1.26/2.58 within the infrastructure sectors
  - Covered by **targeting to LCI [3.3% - 5.3%] or [5.6% - 8.3%] of [US$ 16.8 - US$ 25.4] annual capital revenues**: *World capital stock = USD 386 trillions, average capital growth equal to the GDP growth, rate of return [3,4% - 5%], 25% of public investments*

- And if the ***38% losses in stranded assets*** are compensated in due time by low carbon assets

Arguments to involve the climate agnostics

- ***Climate action, a fulcrum to reduce the 'fault lines' of the world economy?*** (R. Rajan)
  - The gap between propensity to save and propensity to invest (L.Summers)
  - A large funding gap on infrastructures (IMF)
  - The fragility of the financial intermediation system (the 'tragedy of the horizons')
  - Too export dependent development strategy in developing countries after the Asian Crisis
- ***A lever compatible with the constraints on public budgets and avoiding the traps of quantitative easing and of 'growth austerity'?***

Triggering investments in an uncertain context : carbon prices vs cuts in capital costs



A fulcrum to change the possibility spaces

- **The ‘risk’ component is critical to do so**
  - ***to increase the number of economically viable LCIs, a matter of WACC including ‘transaction costs’***
  - ***to de-risk the ‘decarbonisation’ movement of institutional investors***
  - ***attracts ‘savers’ thanks to financial products based on a new class of assets …***
- Progress to be made on ***disclosure rules*** and on ***reputationnal effects***
- The ***commitment of States needed under three conditions***
  - Avoiding the ‘regulatory uncertainty’ (pricing policies, subsidies, standards)
  - Maximising the efficiency of the use of public funds
  - Facilitating the emergence of a new class of liquid low carbon assets
- ***Towards new forms of public guarantees backed on a SVMAs (article 108 of the decision of the Paris agreement and of Multisovereign Guarantee Mechanisms***

Putting the 'right value' on long term infrastructures (World SVAM)

	Technological pessimism path		Technological optimism path	
Discount rate	5%	2%	5%	2%
T=10	73,50	87,25	36,66	43,24
T=20	75,76	104,71	36,54	50,20
T=30	72,26	115,34	35,56	56,96
T=40	68,82	127,50	34,34	64,22

To sum up … between economics and political economy

- *Lowering risk-weighed capital costs -> more projects for a given explicit carbon price -> Treasuries of all countries are interested in raising carbon prices to enhance the value of 'Climate Remediation Assets'*

- *A new approach to bi and multilateral development financing: a new form of 'where flexibility' (SVMA + creditworthiness)*

- *A common language to be found between the financial community, the enterprises (including the SMEs) and the project developers to generate the business model of the low carbon transition* ***(Platforms to lower the transaction costs to LCP, increase the credibility of (cheapest) MRV systems and grouping small scale projects to interests institutional investors***