



Carbon Market Briefing

Analyst Briefing
Paris, 23 June 2009

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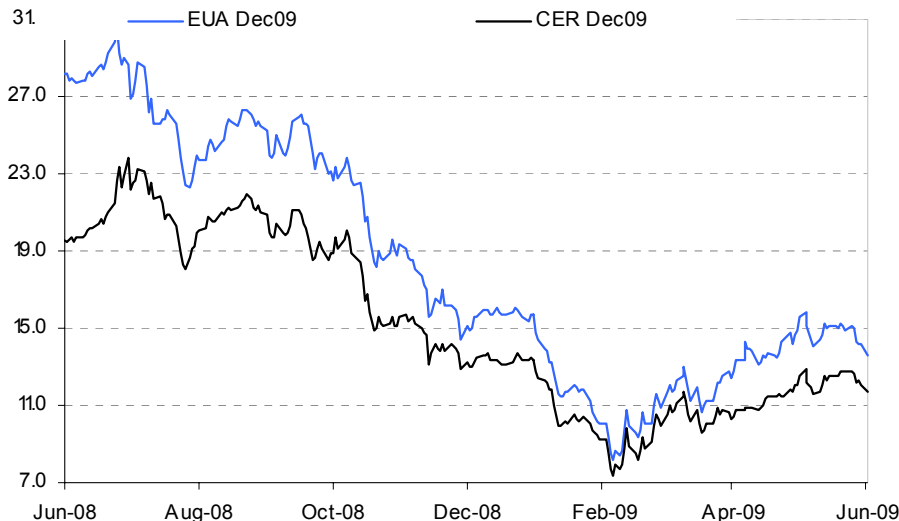
- **Update and analysis of recent EUA and CER movements**
- Market outlook, with focus on our recent 2020 scenario
- CDM evolutions and possible new flexible mechanisms post 2012
- Q&A



Prices are receding after rally in April and May

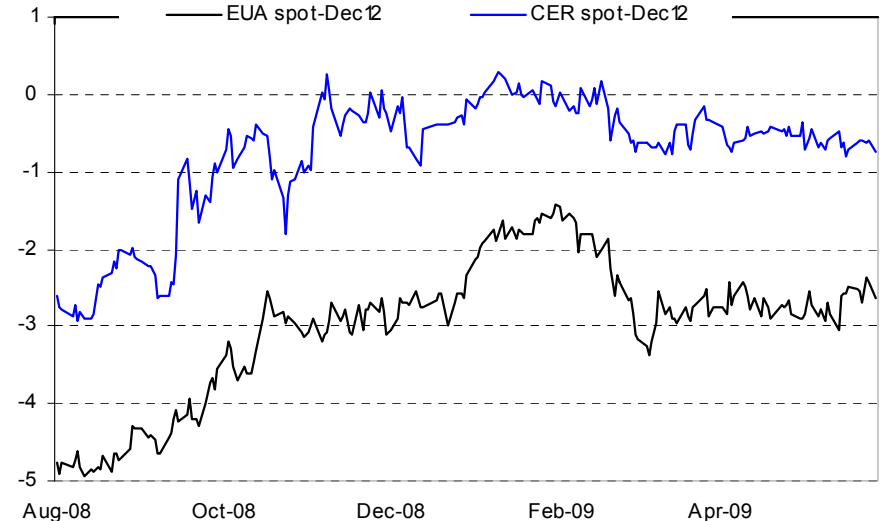
- Dec09 EUA prices reached a four month high of €15.68 /t on May 11, from lows of €8.2 /t in February. Prices have since consolidated to below €14 /t
- CER prices did not rally as markedly initially, but have on average remained above €12 /t in May and the beginning of June. Prices have since receded at a slower rate than EUA
- The EUA forward curve has remained in an apparent « super-contango » configuration even after the ECB reduced its interest rates
- EUA implied volatility is still high (55% on Dec09), although falling back from record levels in early April
- The CER-EUA spread, after widening to €-3 /t on May 8, has tightened to below €-2 /t as CER prices have remained firm while EUA has dropped

EUA and CER prices on ECX (in €/t)

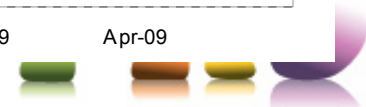


Source: ECX

EUA and CER spot-Dec12 spread (in €/t)



Source: ECX



EUA prices receding

- Price increase in April and May driven by a lack of sellers and positive macro-economic considerations suggesting the end of deterioration
- Prices have since receded due to the recent evolution of coal and gas prices
 - Surging coal prices and low gas prices will incentivize many utilities to switch to gas in the short term
 - Many utilities have thus bought little or no EUA over the period, with some even selling significant quantities, leading the market to lose its main support

Market more correlated with coal and gas movements lately

CER-EUA spread tightening

- CER-EUA spread has re-tightened as the absolute value of carbon has dropped and EUA typically fall more rapidly
- Many project developers only break even at €10-12 /t, resisting selling pressure
- Rising uncertainty of CDM's future to some extent has continued to deter buyers and thus volumes remain low
- Rising AAU trades could also impact CER/ERU demand (100 Mt done, 500 Mt more expected)
- CER demand likely to remain lower for months as next compliance deadline far off

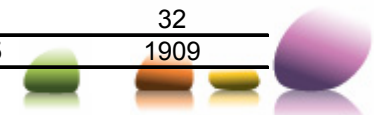
Equilibrium level for the spread seem to be €-2 /t to €-3 /t for Dec09



- We assess emissions decrease around 5.1% when adjusting 2007 emissions for the Phase II perimeter
- Final 2008 emissions at 2120 Mt (including Norway) compared to an average theoretical EUA availability over the period of 2097 Mt (2115 Mt for 2008), representing a shortfall for the year
- Real shortfall 99 Mt (emissions 2120 Mt, allowances 2021 Mt)
 - 1940 Mt distributed for free
 - 20 Mt NER
 - 61 Mt auctioned

2008 emissions and allowances reported as of 6 June 2009 (Mt)

Country	2008 Emissions	2007 Emissions	2008 Allocated
Austria	32	32	30
Belgium	55	53	55
Bulgaria	38	39	-
Cyprus	-	5	-
Czech Republic	80	88	86
Germany	473	487	389
Denmark	27	29	24
Estonia	14	15	12
Spain	163	187	154
Finland	36	43	36
France	123	127	130
United Kingdom	265	257	214
Greece	70	73	64
Hungary	27	27	25
Ireland	20	21	20
Italy	221	226	212
Liechtenstein	0.02	-	0.02
Lithuania	6	6	8
Luxembourg	2	3	2
Latvia	3	3	3
Malta	-	2	-
Netherlands	83	80	77
Norway	19	-	8
Poland	204	210	201
Portugal	30	31	30
Romania	64	70	71
Sweden	20	19	21
Slovenia	9	9	8
Slovakia	25	25	32
Total	2110	2165	1909



What does the compliance data suggest?

The combustion sector surrendered the most CER at 55 Mt...

After CER/ERU purchases, only the combustion sector remained short by 200 Mt...

What does this mean?...

...but this was slightly below the average (3.95%) used for compliance, at 3.7%

...this shortfall in the combustion sector was met by the purchase of 115 Mt from other sectors (excess EUA and CER), the purchase of auctioned/sold EUA and the use of 2009 EUA

...2009 EUA were surrendered mainly by utilities, as they were expecting the delivery of primary CER, but disruptions forced them to look for other sources.

...intuition suggests that utilities have banked the CER to benefit from option value, but the 80 Mt of issued CER that was not surrendered could also have been banked to a large extent by industrials

Sector	Free allowances (including NER) (Mt)	CER/ERU (Mt)	Total surrendered (Mt)	% CER surrendered	Short (-), long (+) (Mt)
Combustion	1239.2	54.9	1494.6	3.68%	-200.4
Refineries	152.3	4.5	154.8	2.92%	2.0
Coke Ovens	22.5	1.4	21.0	6.71%	2.9
Metal Ore	21.9	0.2	17.7	0.95%	4.4
Iron Steel	184.7	8.9	133.7	6.67%	60.0
Cement	206.8	8.2	186.8	4.40%	28.2
Glass	23.9	1.0	21.5	4.45%	3.3
Ceramics	18.1	0.6	13.2	4.51%	5.5
Paper	37.9	2.2	31.4	7.08%	8.7
Opt In	2.1	0.02	1.9	0.96%	0.2
Total	1909.4	81.9	2076.5	3.95%	-85.2



NER's impact on Phase 2 balances

In total 530 Mt has been set aside as NER

- It is estimated that so far 20 Mt has been allocated in 2008 (the difference between 18 Mt in slide 7 due to reported vs. NAP)
- We estimate 110 Mt will be allocated over the rest of Phase II

Timing of remaining NER distribution will have huge impact

- This leaves 420 Mt that still needs to be allocated, which results in 105 Mt per year if it is averaged out over the period
- 2009, a year assumed to be hugely over-allocated, could even be short EUA if NER distribution is uneven, especially considering that 21 Mt has been borrowed from 2009
- Most unallocated NER should be auctioned or sold but some could be retired (Ireland, France)

	2008e	2009f	2010f	2011f	2012f
Expected emissions (a)	2120	2042	2137	2189	2450
Phase II Free allowances (EUA) (b)	1941	1930	1918	1912	2119
Auctioned allowances (c)	61	70	70	70	70
Allocated NER (included in NAP) (d)	20	24	23	22	22
Remaining NER (e)		105	105	105	105
Compliance Demand (f)=(a)-(b)-(c)-(d)-(e)	98	-86	21	80	134
Other Demand (g)	5	0	10	40	40
Total EUA shortfall (h)=(g)+(f)	103	-86	31	120	174
CER/ERU actual inflow (i)	82	140	180	208	236
Balance banked (-) or borrowed (+) (j)=(h)-	21	-226	-149	-88	-62



- Update and analysis of recent EUA and CER movements
- **Market outlook, with focus on our recent 2020 scenario**
- CDM evolutions and possible new flexible mechanisms post 2012
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A whole slew of bearish news for Q1...

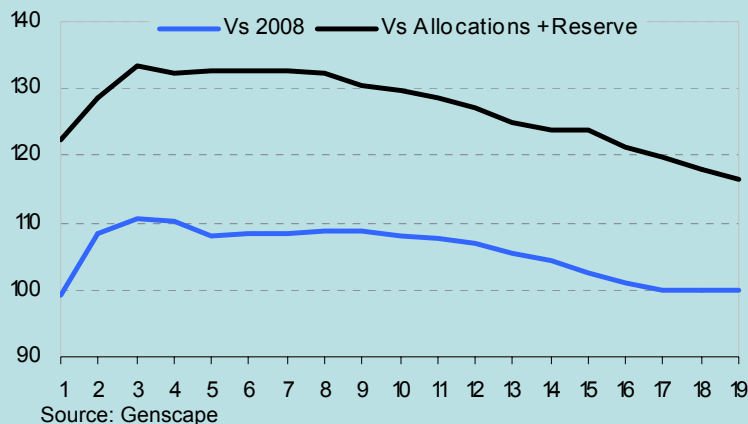
- GDP forecasts for the EU 27 projecting a drop of 4% (Eurostat, IMF)
- EU steel output fell 44% in Q1 (y-o-y), manufacturing production 20% in March (y-o-y)
- CO2 emissions from Spanish power sector fell 30% in Q1 (y-o-y)

- **Many observers revise 2009 emission forecasts down**

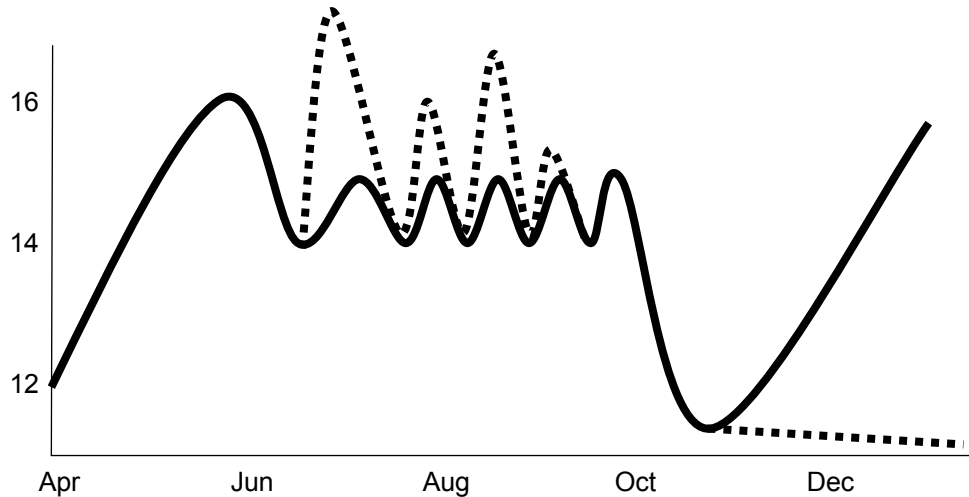
...but large uncertainty remains before December

- Production cuts due to high initial inventory levels, but ramp up will be needed once draw down over
- 2009 winter was exceptionally long and cold and summer is expected to be hot, which will partially counterbalance the emission drops due to the economic slowdown
- Cumulative emissions from utilities are still well above allocations so far, and are only now beginning to level out with 2008

- **2009 will be long most probably but emissions will ultimately depend on timing of recovery**
- **Difficult to make further revisions as of now**
- **We hold our figure ex-Norway at 2020 Mt, updated in March from 2059 Mt: a drop of 89 Mt from our 2008 figure (2109 Mt)**



A possible price path to end 2009



- Initial consolidation since prices increasingly far from fundamentals
- Range-bound summer, except if hot waves
- Sell-off of length in fall (utilities over-hedged?), limited by Phase III logics
- Progressive re-increase with activity and winter, except if seasonality plays « as usual »

SG EU27 EUA and CER first nearby price forecasts - updated

		2007	Q108	Q208	Q308	Q408	2008	Q109	Q209f	Q309f	Q409f	2009f	2010f
EUA	€/t CO2e	19.60	21.50	25.70	24.40	18.70	22.60	11.15	14.00	14.50	15.00	13.70	16.00
CER	€/t CO2e	15.10	15.90	17.70	20.20	16.20	17.50	10.45	11.50	12.00	12.00	11.50	14.00

Source: orbeo, SG Commodities Research

SG EU27 EUA and CER first nearby price forecasts - previous

		2007	Q108	Q208	Q308	Q408	2008	Q109f	Q209f	Q309f	Q409f	2009f	2010f
EUA	€/t CO2e	19.60	21.50	25.70	24.40	18.70	22.60	9.00	11.00	12.00	15.00	11.80	16.00
CER	€/t CO2e	15.10	15.90	17.70	20.20	16.20	17.50	8.00	10.00	11.00	13.50	10.60	14.00

Source: orbeo, SG Commodities Research

SG EU27 EUA and CER medium run price forecast - updated

		2008	2009f	2010f	2011f	2012f
EUA	€/t CO2e	22.60	13.70	16.00	19.00	20.00
CER	€/t CO2e	17.50	11.50	14.00	18.00	18.00

Source: orbeo, SG Commodities Research

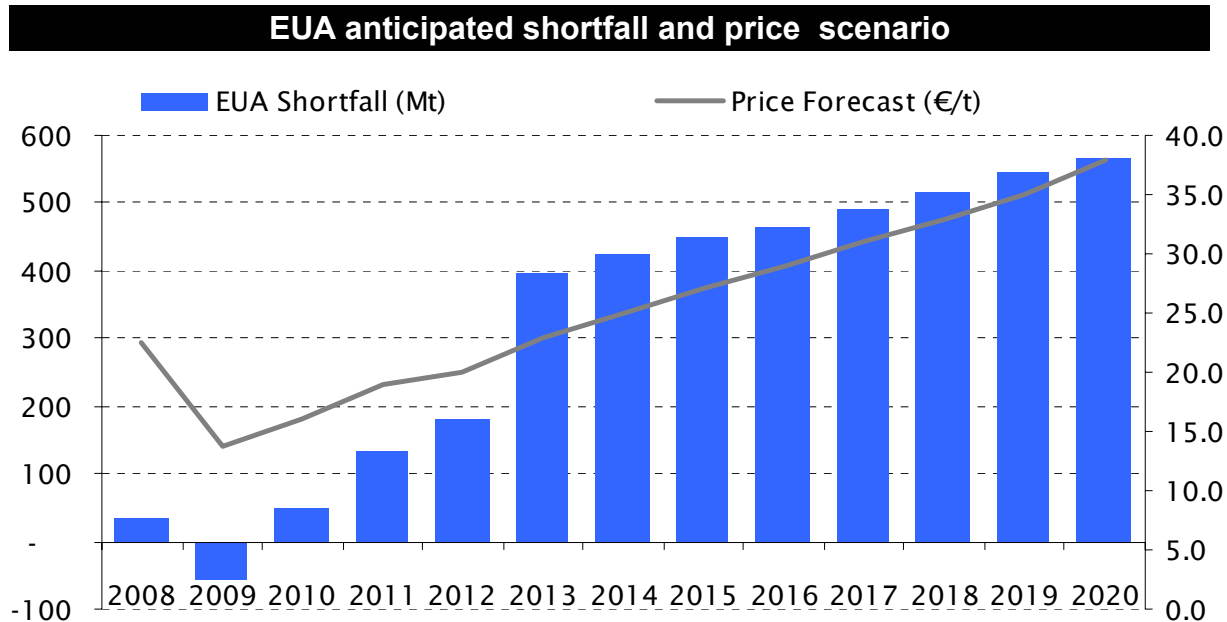
SG EU27 EUA and CER medium run price forecast - previous

		2008	2009f	2010f	2011f	2012f
EUA	€/t CO2e	22.60	11.80	16.00	19.00	20.00
CER	€/t CO2e	17.50	10.60	14.00	18.00	18.00

Source: orbeo, SG Commodities Research



A possible price path to 2020



Source: orbeo, SG Commodities Research, NCF

- Progressive increase of EUA shortfall due to decreasing allowance level (emissions also decrease)
- We anticipate €38 /t in 2020
- Price path could be smoother if holding of excess EUA and banking into Phase III happens soon



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Credits generated before 2013 (article 11a (2)):

Operators can use both ERU and CER generated before 2013 from 2013 onwards up to 31 March, 2015, at which point their use becomes unclear (the competent authority no longer has to make such an exchange on request)

No risk until 2015 for issued

Credits generated from 2013 onwards by projects registered before 2013 (article 11a (3)):

- Bilateral and multilateral agreements, with a country that has established a new cap, are required to enable imports. Non “high quality” CER and ERU generated from 2013 onwards might be excluded
- It remains unclear what would happen should an international agreement be signed, but operators could trade with countries that have signed the international agreement
- Kyoto places a limit on the generation of ERU, i.e. they have to originate from a country with a quantified emissions target (hence with national allowances such as AAU, or equivalent)

Risk due to high quality provision

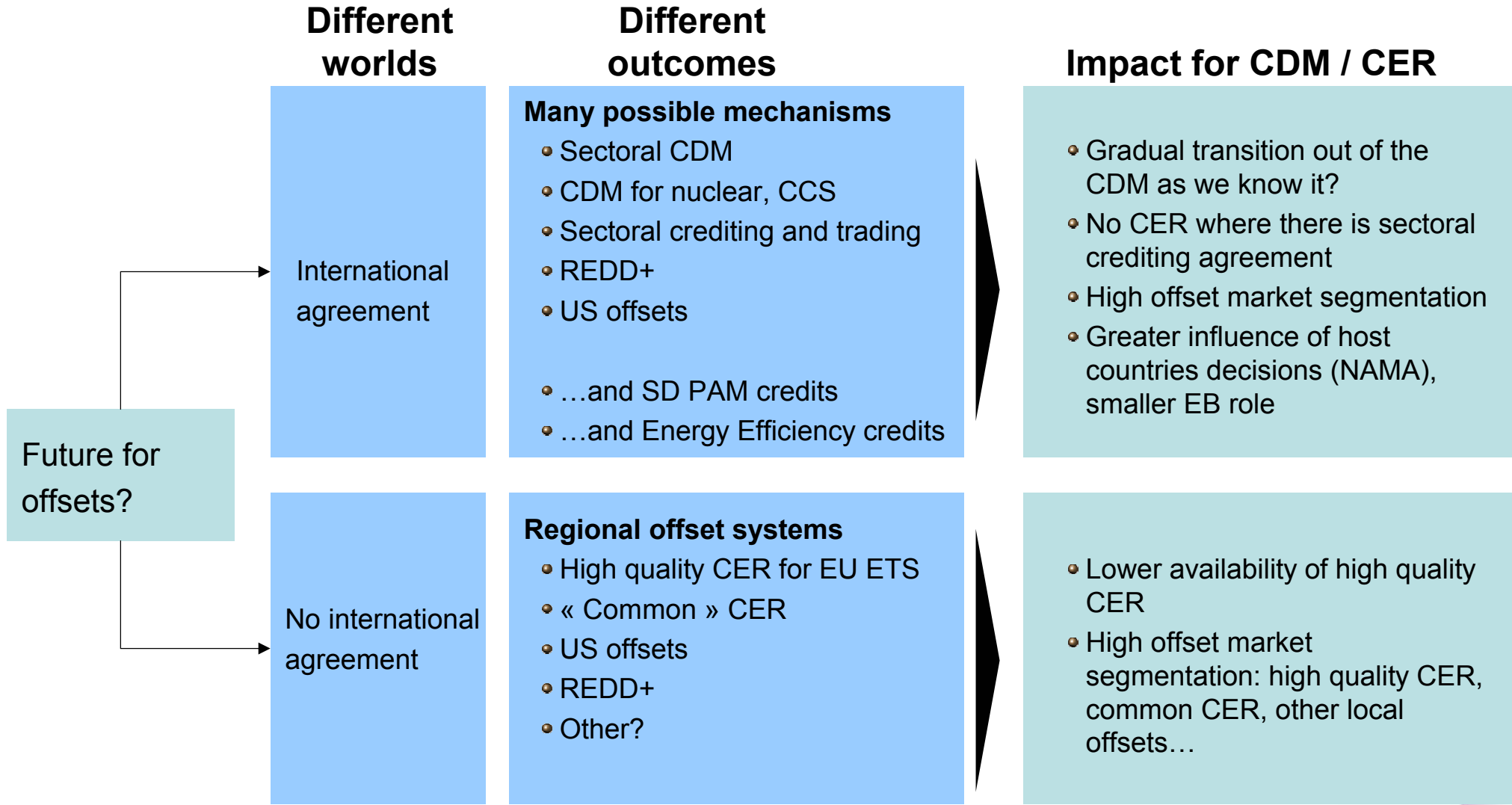
Credits generated from 2013 onwards by projects registered after end 2012 (article 11a (4)):

- Only CER generated in Least Developed Countries are mentioned explicitly
- By establishing third party agreements with a capped country it may be possible to also use ERU generated from projects registered after 2012, as third party agreements are discussed with no reference to the year of registration of these projects (article 11a (5))

Risk for ERU



What about CDM and flexible mechanisms post-2012?



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