



# State and Trends of the Carbon Market *2008*

Jari Vayrynen  
World Bank

Montreal  
June 18, 2008

# Methodology



This study is based on the following:

- Analysis of the **World Bank's confidential project database**;
- **Interviews with market players** (natural buyers (Europe & Japan), fund managers, developers, project sponsors, DNAs, private equity funds, hedge funds, banks, traders & brokers);
- A comprehensive **review** of published literature, incl. access to preliminary reports by **Ecosystem Marketplace** and **Caisse des Dépôts**;
- Assisted by **Evolution Markets** and **Natsource**.

Project database includes:

- **More than 1,500 project-based transactions** (ERPAs signed)
- Completeness of information >80% in all fields except on exact terms and price of transaction >50%.

Aggregate data on allowance markets and secondary market:

- From **major exchanges and OTC sources**.



# The Growth of the Carbon Market

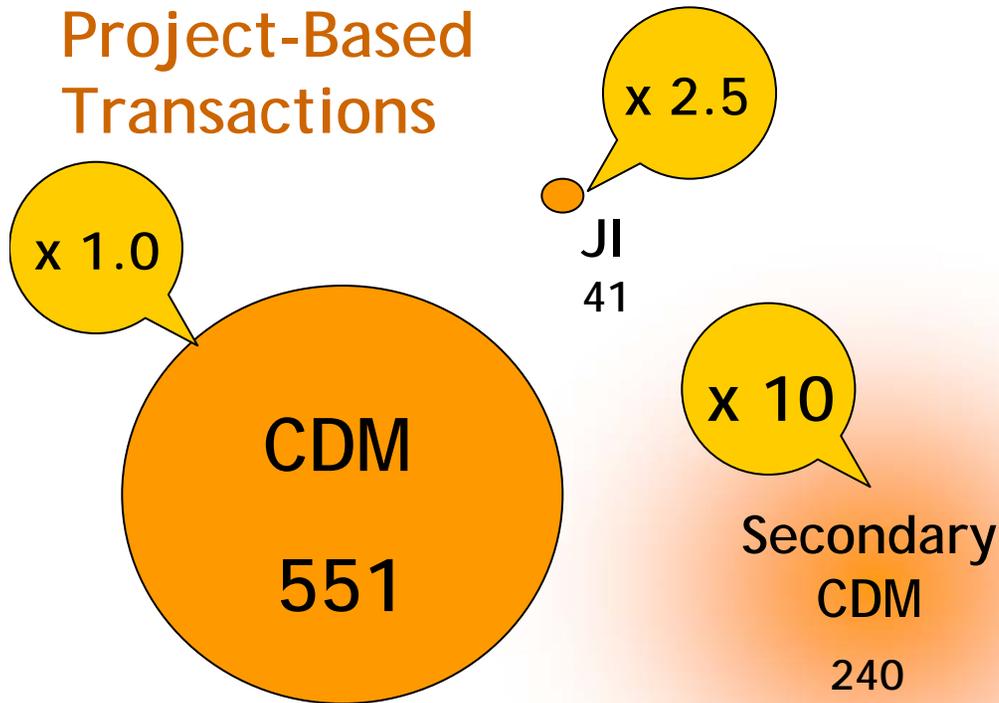
---

# Market Volume Growth 2007

(in MtCO<sub>2</sub>e)



## Project-Based Transactions



## Allowance Markets

### Voluntary & Retail

42

x 3

### New South Wales Certificates

25

x 1.3

### Chicago Climate Exchange

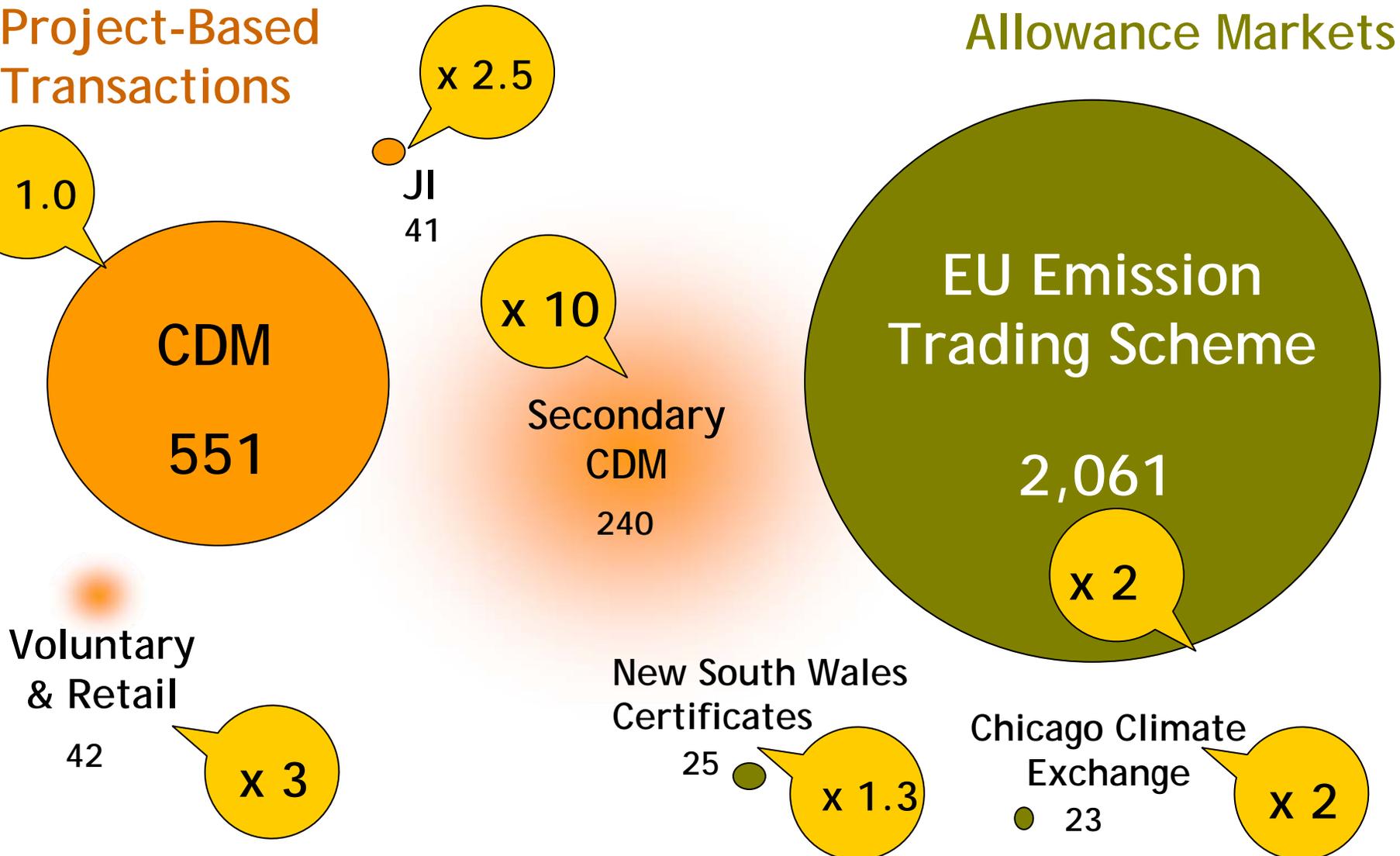
23

x 2

### EU Emission Trading Scheme

2,061

x 2

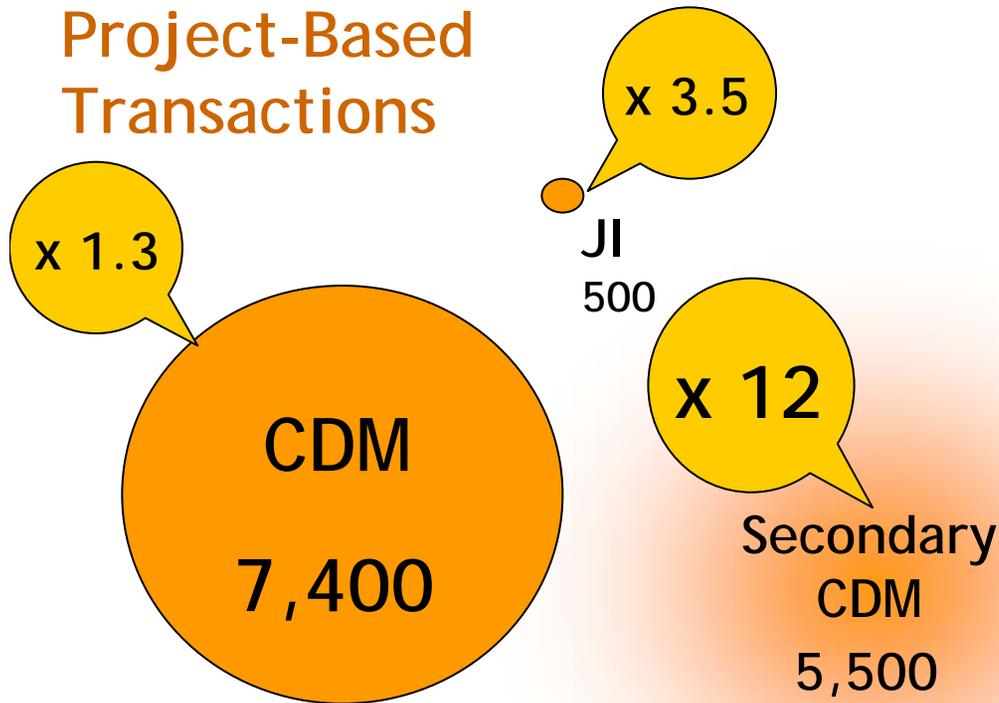


# Market Value Growth 2007

(in MUS\$)



## Project-Based Transactions

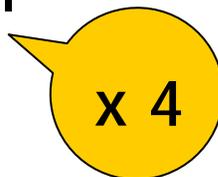


## Allowance Markets



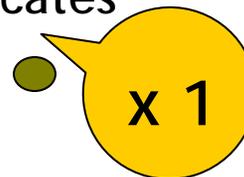
## Voluntary & Retail

270



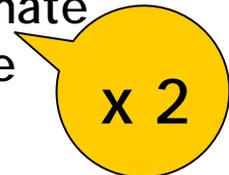
## New South Wales Certificates

220



## Chicago Climate Exchange

70



# EU ETS

## Good design, strong results



Price signal triggers abatement:

*at home*, 50-100MtCO<sub>2</sub>e reduced in 2005-06 (MIT-IEA analysis)  
and *abroad*, through CDM&JI projects (1,040 mlln CERs+ERUs contracted)

EU-ETS learns from Phase I review and better aligns incentives

	Ph II	Ph III	Ph III (with agreement)
<b>Timeframe</b>	2012	2020	2020
<b>Effort</b>	- 6% below 2005	- 21% below 2005	- 30% below 2005
<b>Auctioning</b>	Germany&UK (4-5% globally)	Gradual, to 100%	Gradual, to 100%
<b>CDM&amp;JI Limits (MtCO<sub>2</sub>e)</b>			
EU ETS	1,400	0	1,200 ?
non ETS	540	800 ?	1,200 ?

European Commission proposal strong, but limits potential of CDM & JI

A photograph of two elephants standing in a savanna landscape. They are facing each other, with their heads and trunks touching. The elephants are dark grey with wrinkled skin. The background consists of dry, yellowish-brown grass and scattered green bushes and trees. The foreground shows a patch of green grass and a body of water at the bottom.

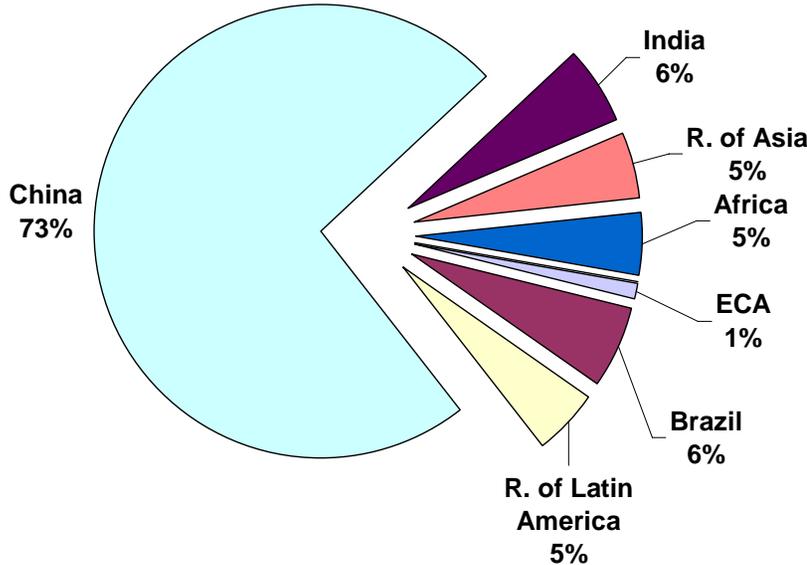
When two elephants fight...

...it is the grass that gets hurt



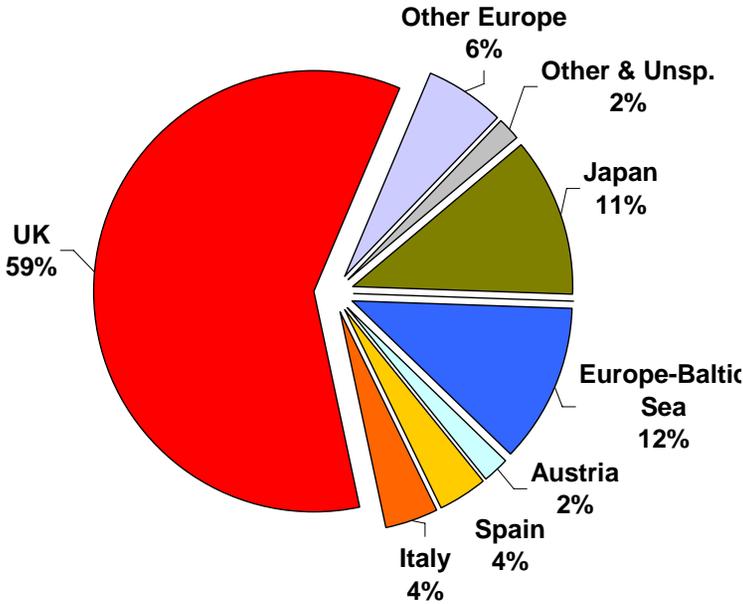
# China consolidates lead, Africa emerges (share of volumes)

Location of CDM projects



Jan. 2007 to Dec. 2007

Primary CDM&JI Buyers



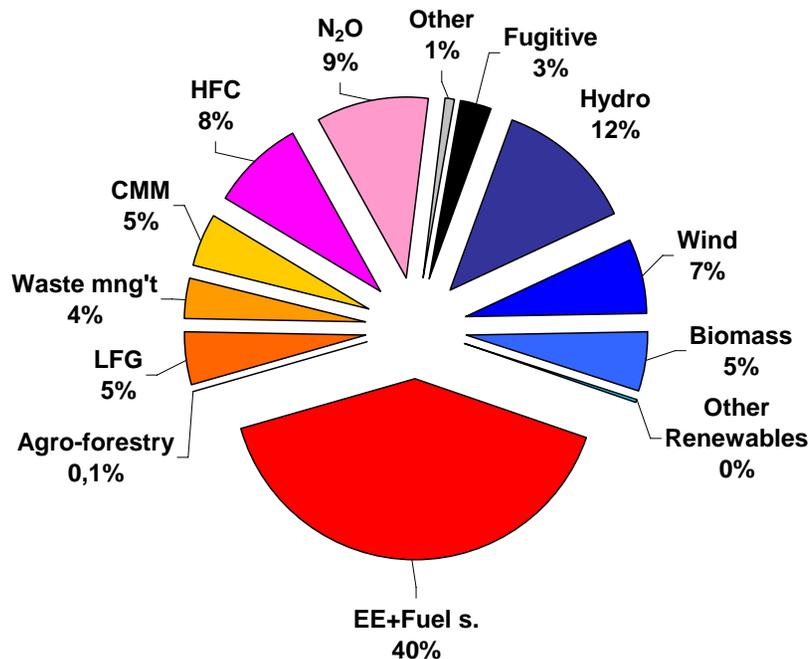
Jan. 2007 to Dec. 2007



# CDM Delivers on Clean Energy

(share of volumes)

Clean energy: 64%



Jan. 2007 to Dec. 2007

❖ US\$1 of carbon leverages US\$9 financing of renewable energy

❖ US\$33 billion (€24 billion) clean energy leveraged in 2007

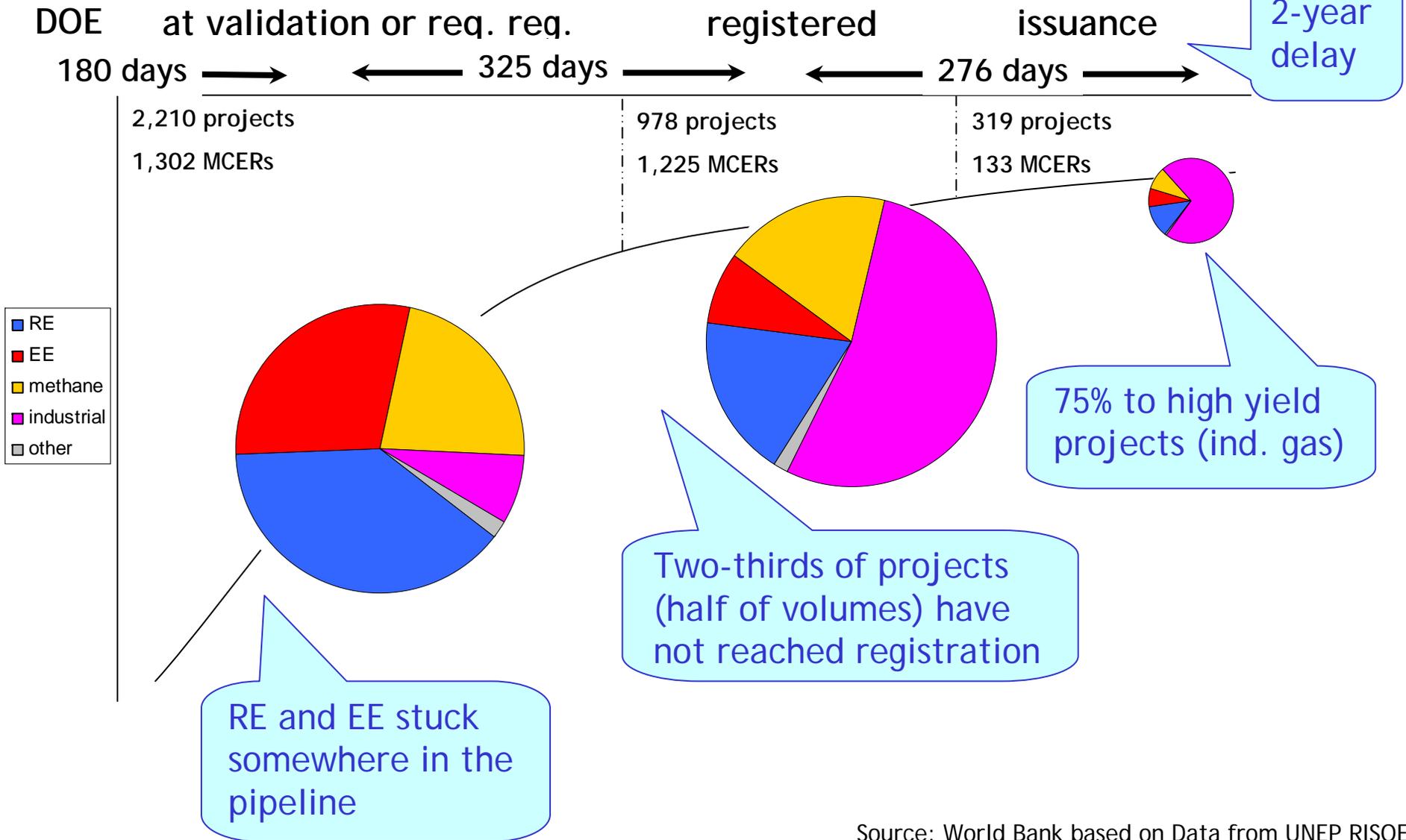
❖ Cumulative (02-07) leverage **US\$52 billion** (€39 billion) expected



# CDM at a Crossroads

---

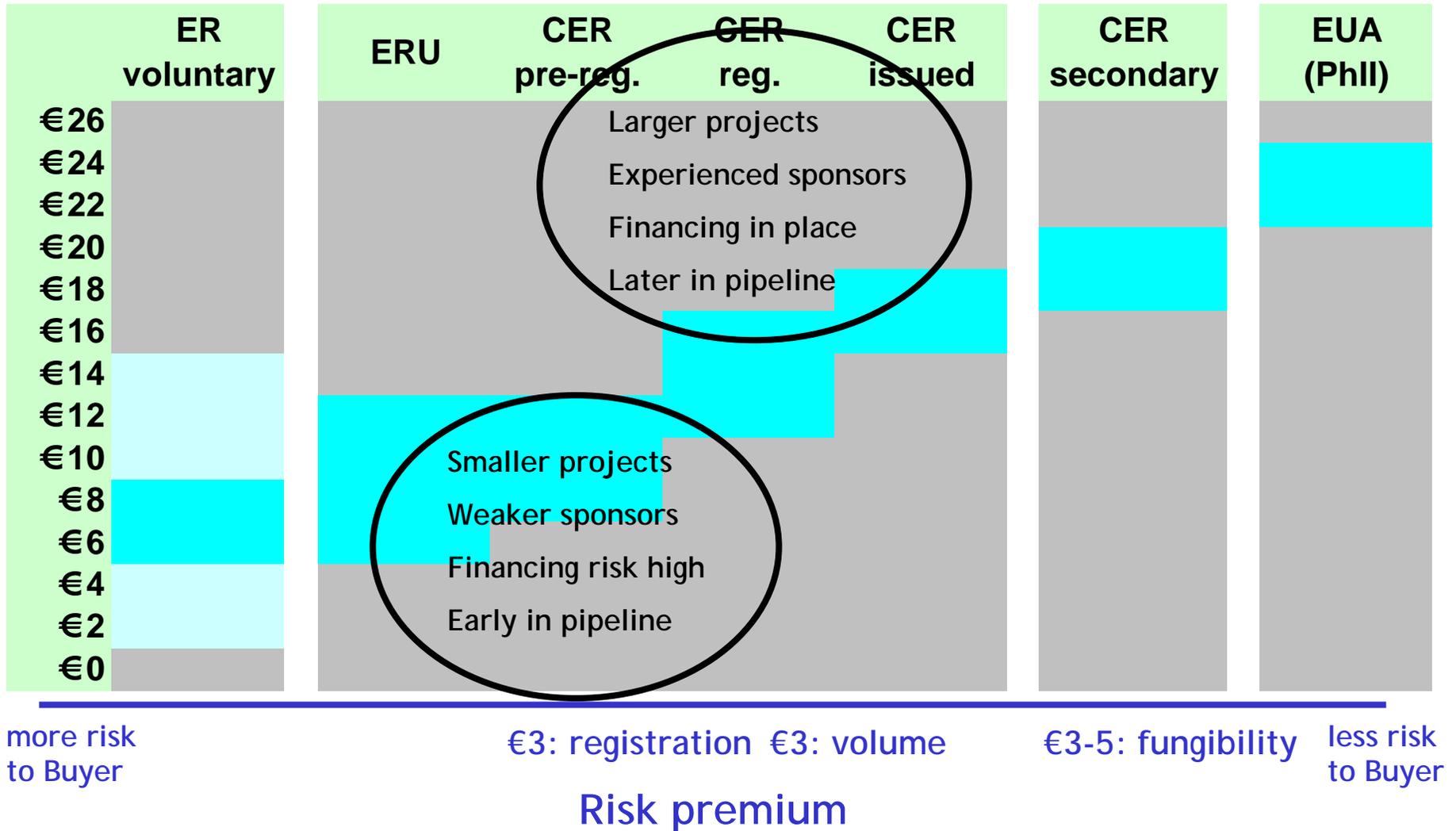
# Success masks challenges



Source: World Bank based on Data from UNEP RISOE

# Market tiers widen

Avg CER price: €10, avg ERU price: €9



## Recent update on prices



**EUAs** close to **€30** (tracking oil)  
forecasts: €30-40 by Dec08

**Secondary CERs** close to **€20**  
(tracking EUAs, concerns on CDM supply,  
other demand coming in?)

**Primary CERs** (competition on  
projects that can deliver)  
not registered, not built can fetch €12+

# SMART CDM

## for required scale up



**S**Streamline approval process to reduce transaction costs

**M**onitoring through new tools

**A**dditionality demonstrated using simple, conservative benchmarks

**R**each new potential and scale up through programs and innovative methodologies

**T**rends important, not exact Tons

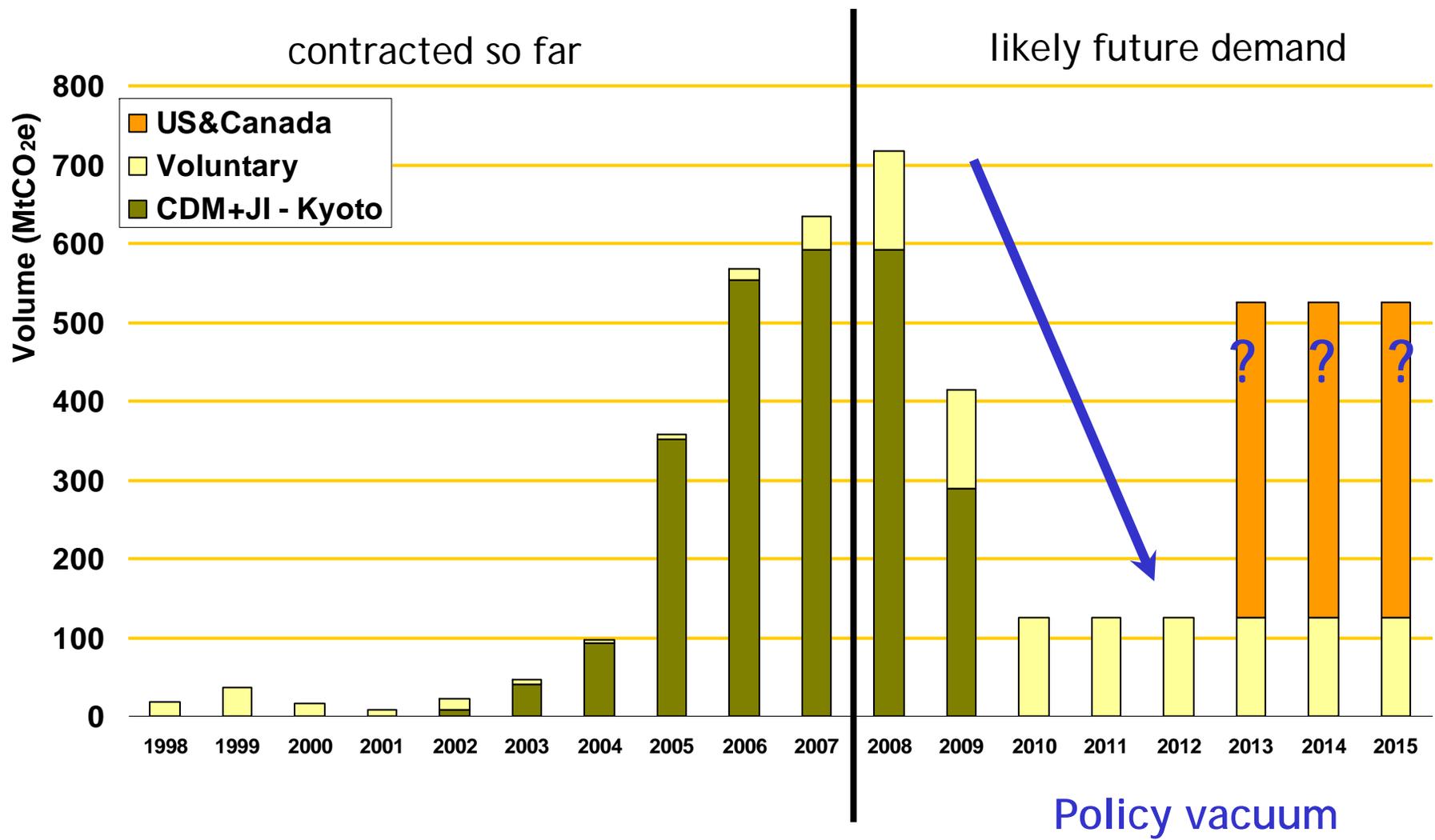
# Sources of demand



	Estimated demand (MtCO <sub>2</sub> e)	Contracted so far (MtCO <sub>2</sub> e)	Contracted so far risk-adj (MtCO <sub>2</sub> e)	Residual demand (MtCO <sub>2</sub> e)	Residual demand when risk-adjusted (MtCO <sub>2</sub> e)
<b>EU</b>	<b>1940</b>	<b>1217</b>	<b>1043</b>	<b>723</b>	<b>897</b>
gov't	28%	15%	13%	50%	45%
private sector	72%	85%	87%	50%	55%
<b>Japan</b>	<b>450</b>	<b>320</b>	<b>284</b>	<b>130</b>	<b>166</b>
GoJ	22%	9%	10%	54%	42%
private sector	78%	91%	90%	46%	58%
<b>RoEurope &amp; NZealand</b>	<b>45</b>	<b>17</b>	<b>13</b>	<b>28</b>	<b>32</b>
gov't	44%	76%	76%	25%	31%
private sector	56%	24%	24%	75%	69%
<b>Australia</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL</b>	<b>2435</b>	<b>1554</b>	<b>1340</b>	<b>881</b>	<b>1095</b>

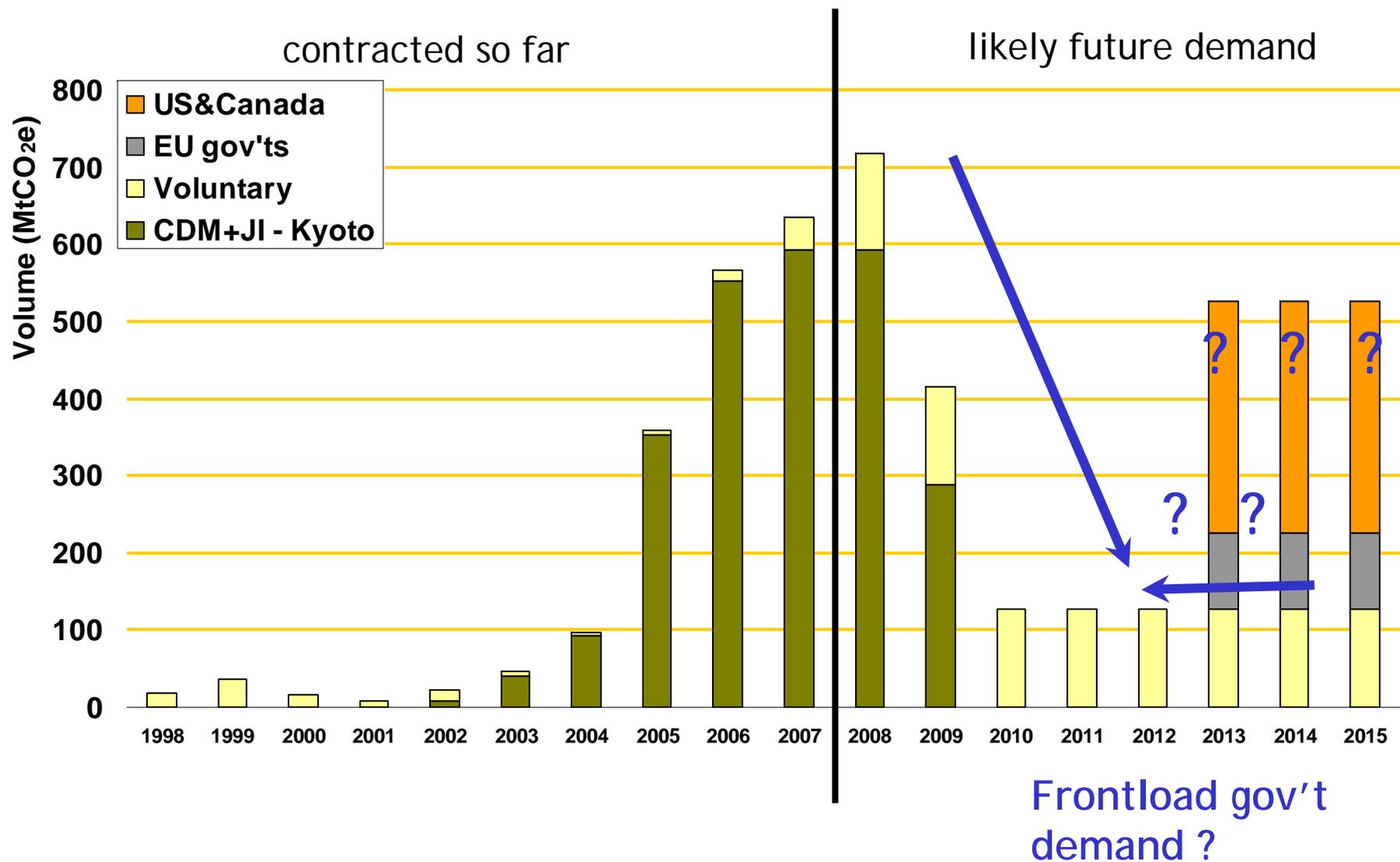


# Right direction?





# Right direction?





Thank you

Full report available at

[www.carbonfinance.org](http://www.carbonfinance.org)