



Balancing price and emissions certainty: a reserve-based approach

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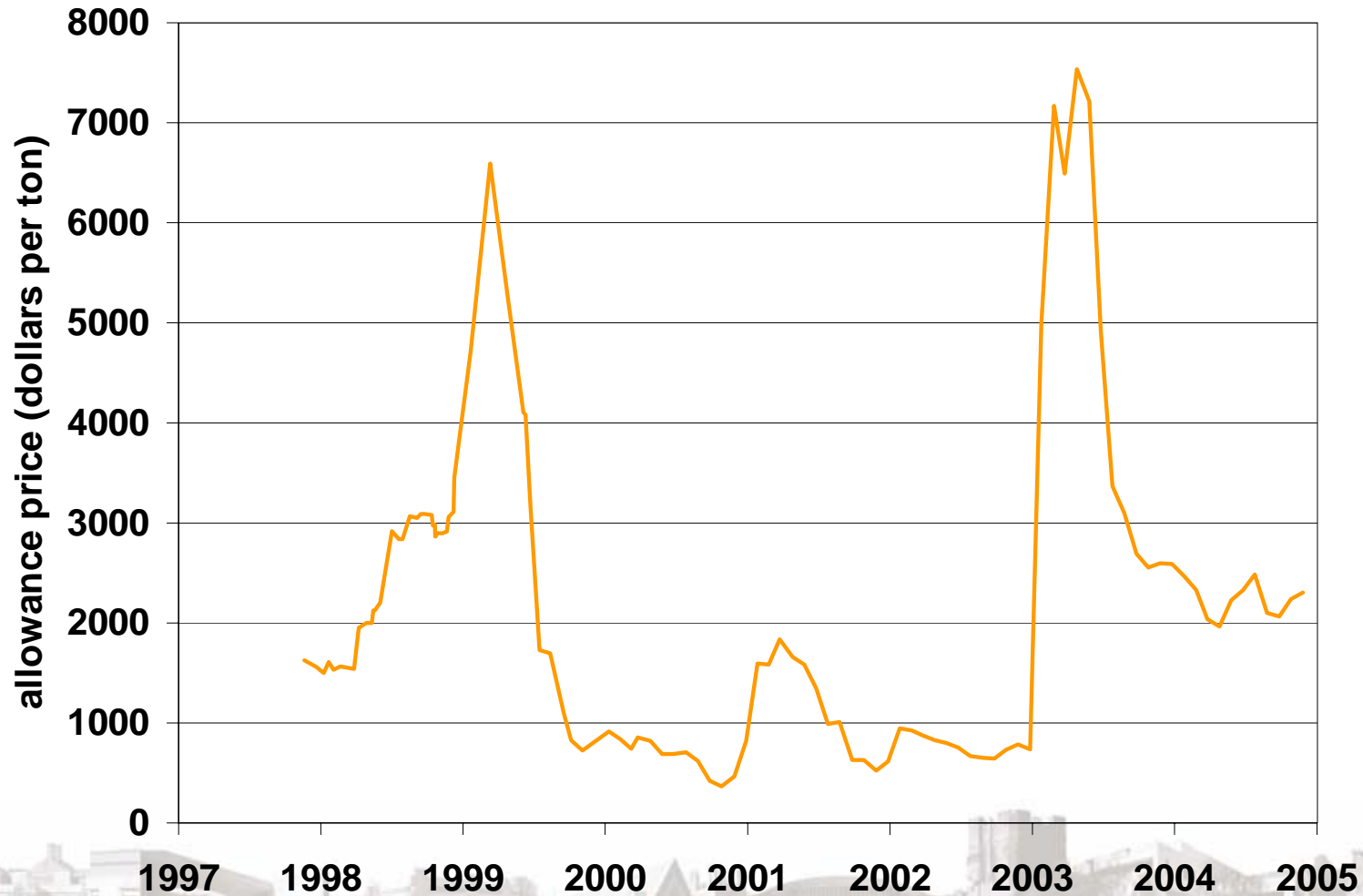
Root of the Issue

Goal	Instrument(s)	Advantages	Risks	Address risk
Emissions certainty	Cap and trade with firm cap	Guarantees long-term emissions target	Uncertainty of costs, economic growth leads to price uncertainty	Flexibility: Banking, borrowing, and offsets
Price certainty	Tax, C&T with market intervention (e.g., safety valve, expand allowances to maintain price)	Price in current year not to exceed set level	Undermine emissions target	Re-evaluate or re-set emission targets?





NO_x OTC Current Vintage Price





Question

Can we develop an effective and transparent mechanism for containing unexpectedly high costs while maintaining the long-term emissions goals?



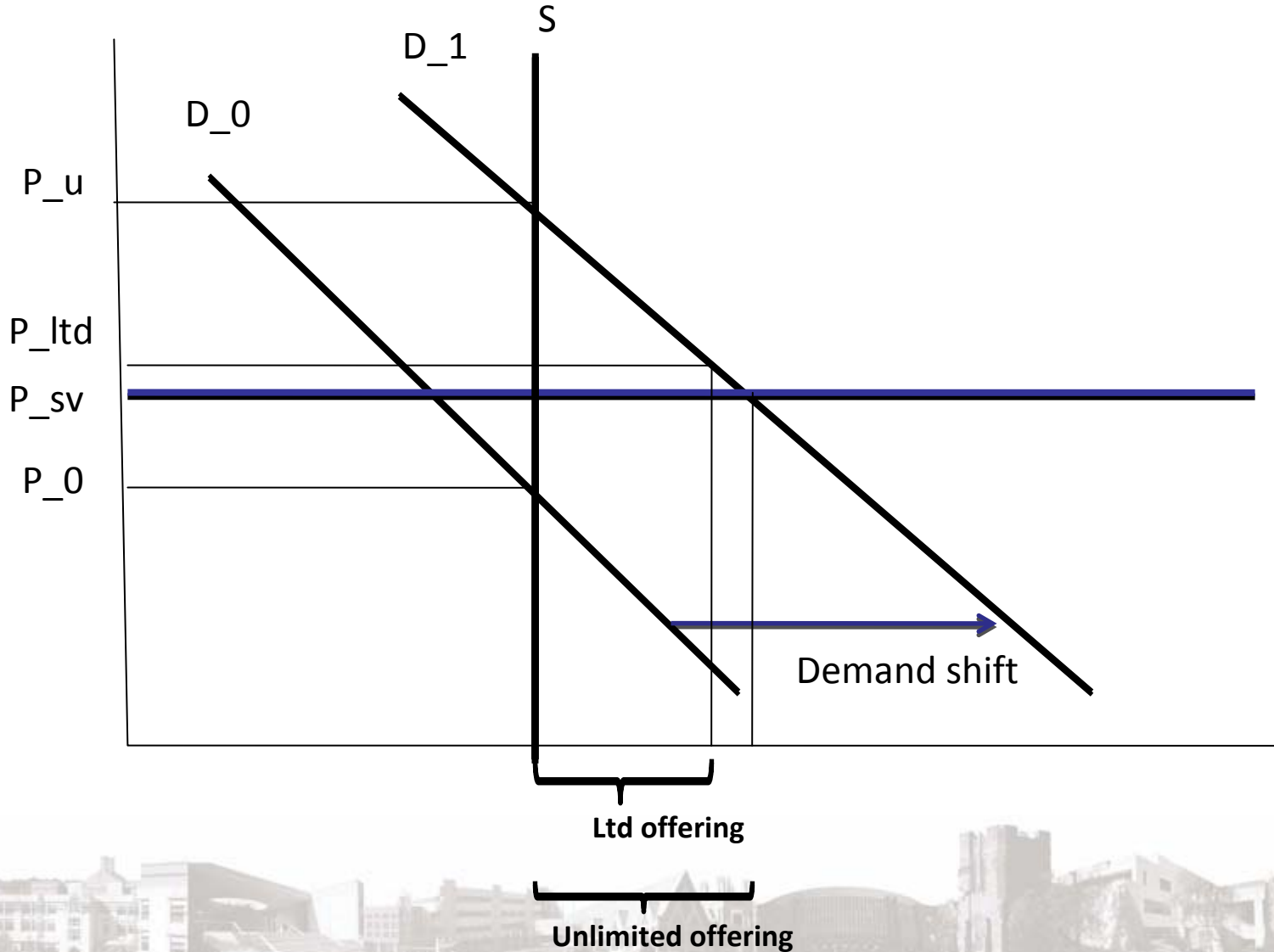


Possible Solution: Fixed Allowance Reserve

- Limited quantity of allowances set aside
 - Introduced to market in response to price run-up
 - Introduction could be done a number of different ways (auction, allocate, options), automatically or at discretion of a Board
- Reserve built from allowances within the long-term cap
 - forwarded from future caps at initiation of program
 - unsold at auction
- Reserve drawn down by allowances introduced to market as high price response
- Payback required
 - Future cap restored with allowances from the reserve, or
 - Future cap is lowered commensurately



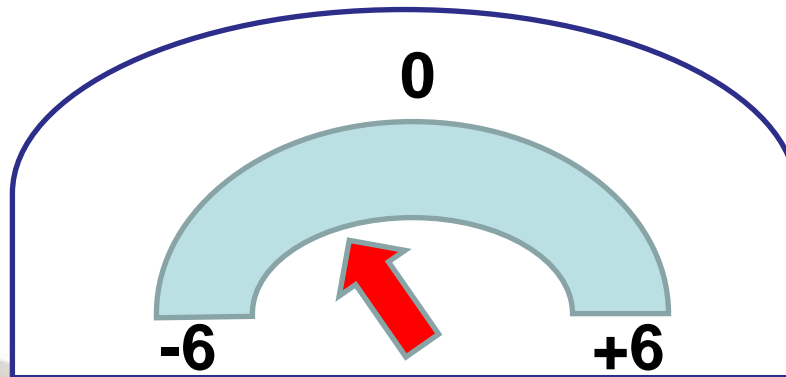
Allowance Market: Demand shift effects, with and without new allowance relief





Advantages of Reserve Approach

- Transparent
- Protects against allowance shortages
- Allows market to respond to cumulative cap
- Scalable
- Reserve Balance: Performance gauge



Reserve Meter: Do we have extra reserves (+) or have we borrowed from the future (-)?



Key Issues to Resolve

Parameters	Preliminary Ideas
Reserve	
- Size	~ 1 years worth (6 billion tons)
- Forwarding period	2030-2050
- Annual withdrawal rate max	10% of initial reserve
Activation Price	
- Level	TBD/above “expected” prices from econ studies of the underlying Bill...
- Escalation rate	5-7%
Form of allowance release into market	<i>Other presentations/discussion today</i>

