

# **On EU antitrust fines and cartel deterrence**

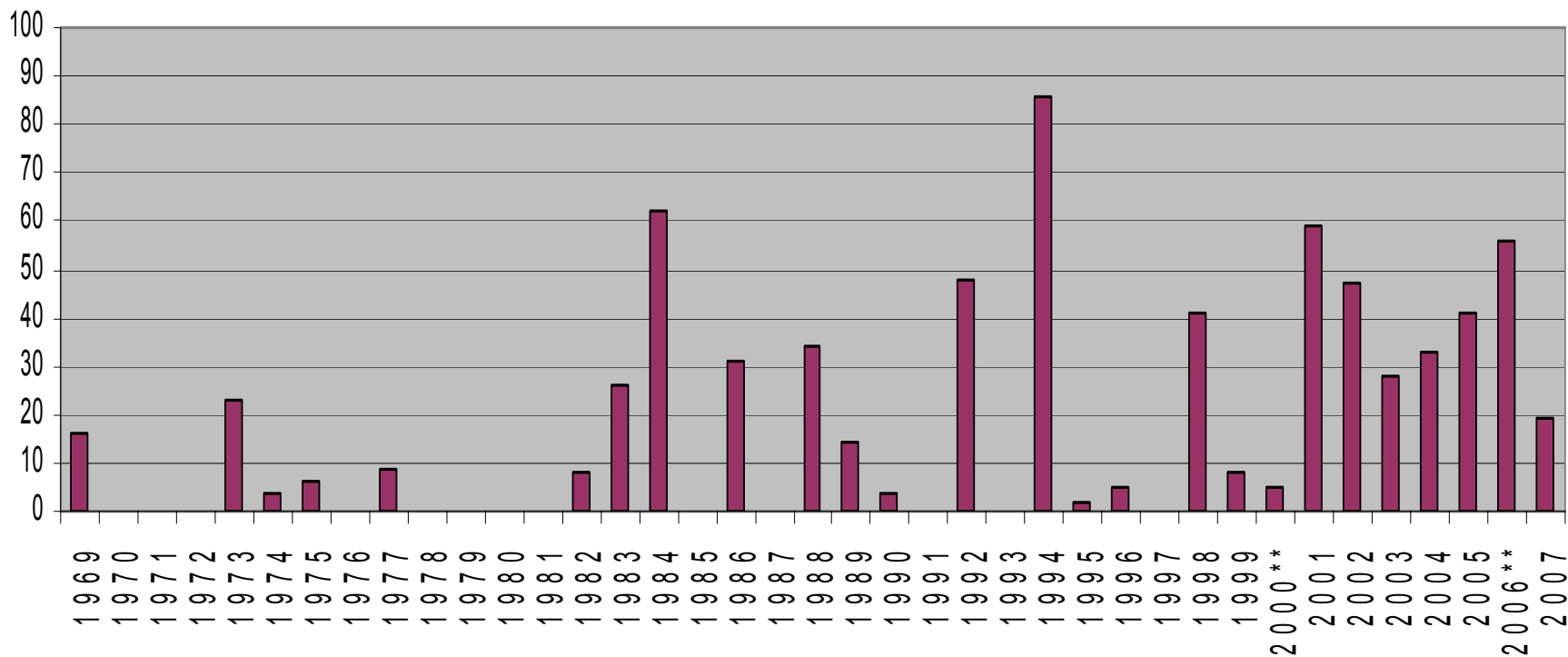
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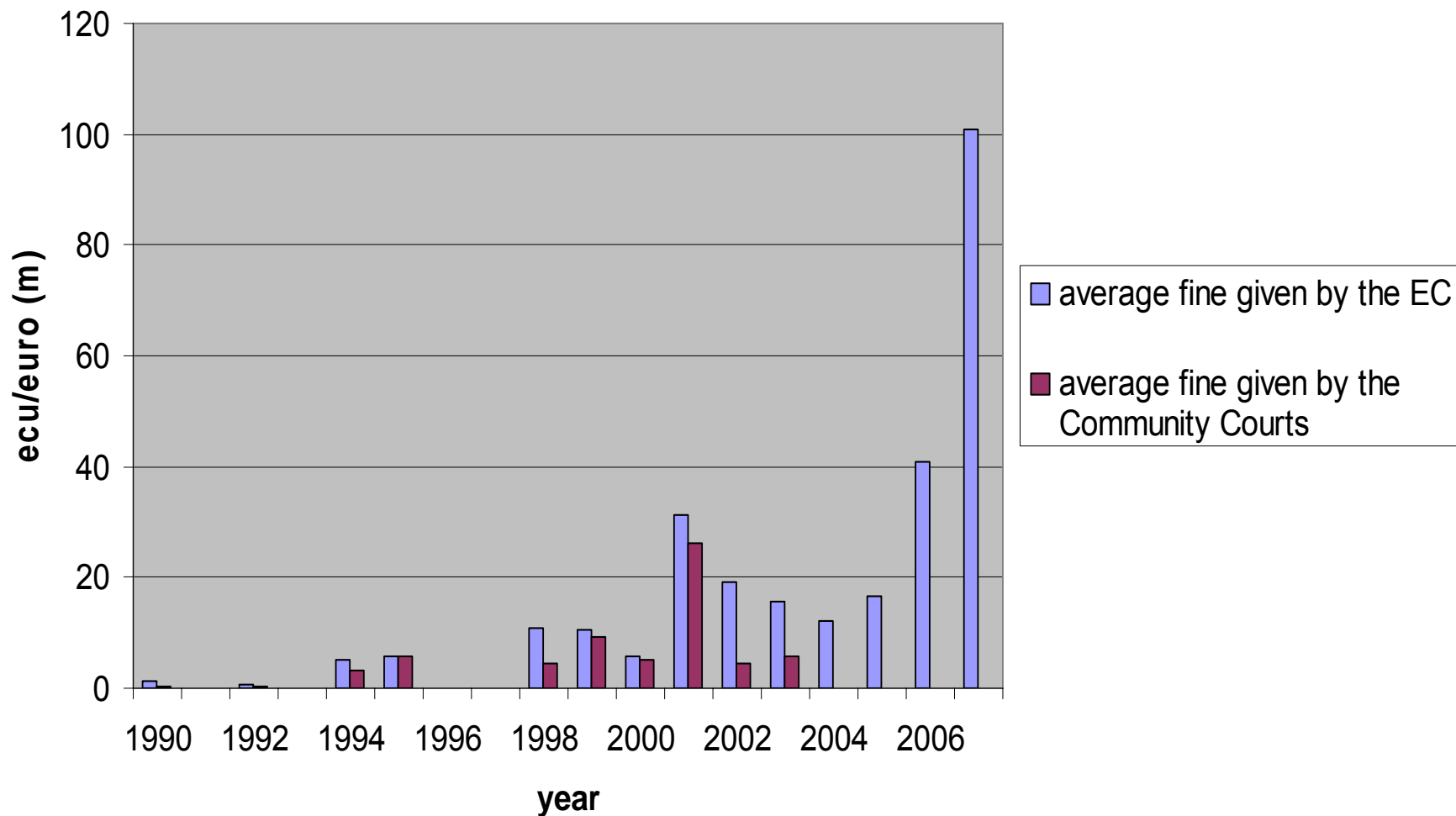
**Brussels, 13 December 2007**

# Fight against cartels: Evidence (until Aug. 2007)

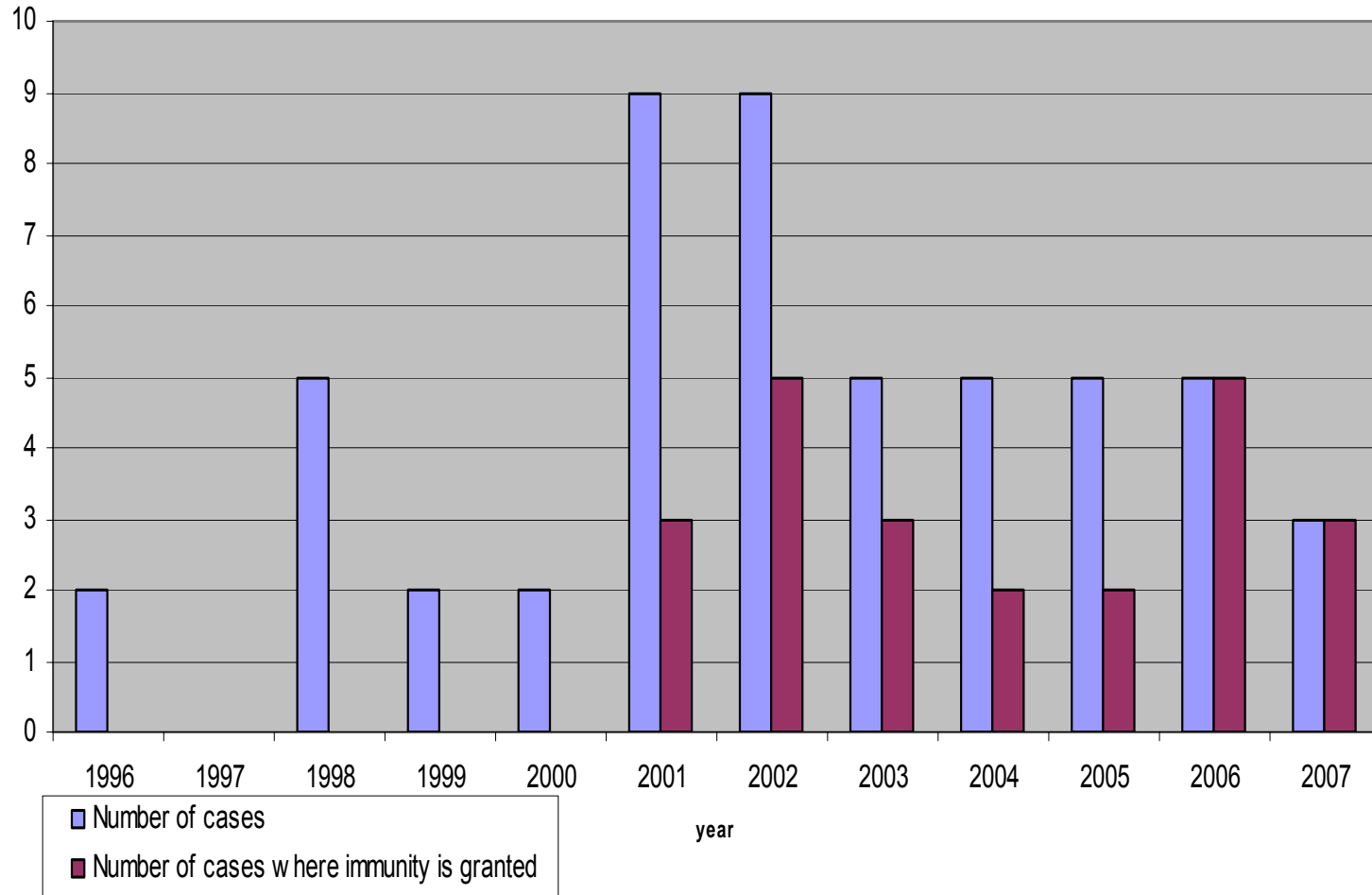
Figure 1: Cartel Infringements in the EU: total number of firms involved



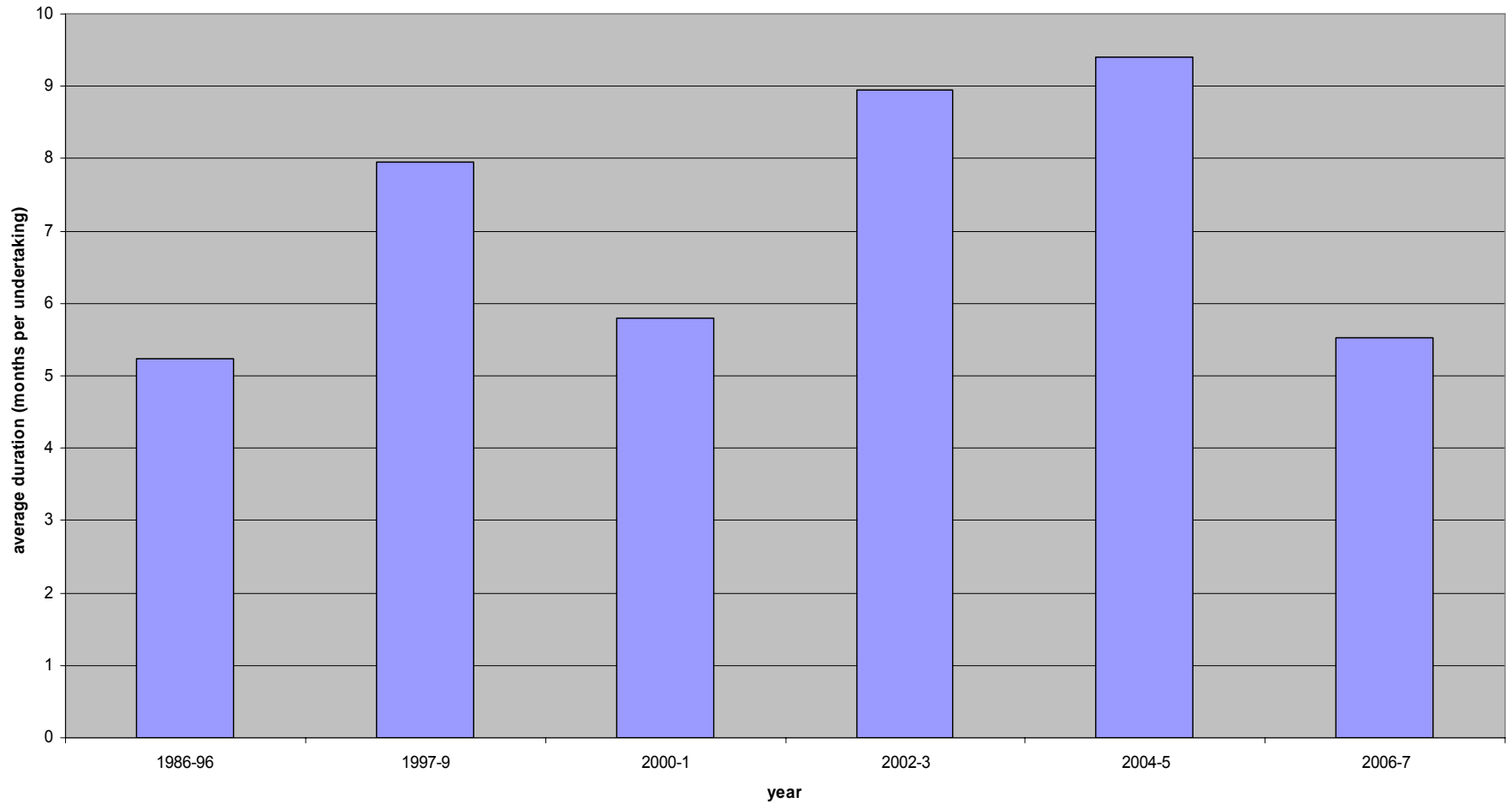
**Figure 2 : Average cartel fines given by the EC (1990-August 2007)  
and (for the same cases) by the Community Courts**



# Figure 3 Leniency Program



**Figure 4. Per-firm Length of Cartel Investigation  
(months/undertakings)**



# Main results

- Fines have increased over time
- Number of cartel cases increased, but not dramatically (despite leniency and modernisation)
- Leniency helpful to break existing collusion, but not to free resources for deterrence (a settlement procedure is needed)

# Do fines matter for the firms?

- One could think until recently fines have not left a big mark on firms
  - A lot of recidivism (a large number of repeat offenders)
  - Managers do not seem to lose their jobs even when large fines are imposed on their firm
  - Several commentators have argued fines are too low (at least, before new Notice)

# Langus and Motta (2006)

- Event study analysis shows that EU antitrust actions do have some impact. The cumulative effects are on average:
  - Dawn raid: share prices **-2.0%**
  - Decision: share prices **-3%**
  - Court upholds: share prices **-1%**

# Langus and Motta, cont'd

- The fine (1-2% of capitalisation) accounts for a small part of (about 6%) loss in market value
  - ⇒ market expects antitrust action decreases profits. For cartel cases, indirect evidence of price decrease
- This method cannot say if fines are too high/low

# Are fines high enough?

- For a fine  $F$  to deter unlawful conduct it must be:  
$$F \geq \Delta\Pi/p = F^*$$
  - where  $\Delta\Pi$ =expected benefit of conduct and
  - $p$ =probability of being discovered
- Under some assumptions (simple mark-up model, constant demand elasticity) and some ‘guesses’ on values of parameters, one can try to compute  $F^*$ .
- This approach is followed also by CET.

# Simulation exercises

- Results very sensitive to parameter values; no reliable estimates for many of them (and they could differ across industries)
- Also, it depends on the factors which modify the base fine. E.g., for a *repeat offender* fine could increase by 100% and become above  $F^*$ .
- (2006 Notice) fines seem roughly of the right order of magnitude
- Costly to have arbitrarily large  $F^*$ , but 10% threshold is a good safeguard

# How to further increase deterrence

## Alternatives to further increases in fines

- Less discretion in imposition of fines may decrease litigation and free EC's resources (same for settlement procedure)  $\Rightarrow p$  increases
- Promoting private actions (but this may entail costs as well)
- Administrative penalties and disqualification may align managers' incentives with lawful conduct
- Antitrust compliance programmes and codes of conduct may also help

# Conclusions

- Leniency seems to work, but necessary to reduce the time to the Decision
- 2006 Notice: ok, but better not to raise fines further
- Deterrence may be increased if private actions more widespread (but careful design needed)
- Fines on individuals (and disqualification), compliance programmes might also help
- Disregard firms' lobbying against high fines: normal if exit after cartel action; consumers benefit from antitrust intervention and fines

# Appendix (not to be showed)

- Simulation Tables
- Some myths about fines

# An example

- If cartel increases prices by 15% (probably underestimation); prob. discovery= 15% (guess); mark-up=.5; elasticity=.6:  
⇒ **optimal fine=68%** of turnover per year
- New Notice: if no aggravating or attenuating factor, nor leniency; 5 year infringement  
⇒ **actual fine=35%** (30%+25%/5) per year

# Optimal fines: some simulations

Price overcharge: 15%;  $p=15\%$

Elast. Mark-up	.2	.4	.6	.8	1
.2	0.8397	0.8079	0.7740	0.7378	0.6991
.5	0.8098	0.7462	0.6784	0.6061	0.5286
.8	0.7899	0.7051	0.6147	0.5182	0.4149

# Results sensitive to parameter values

Price overcharge: 15%;  $p=15\%$

Elast. \ Mark-up	.2	.4	.6	.8	1
.2	0.8397	0.8079	0.7740	0.7378	0.6991
.5	0.8098	0.7462	0.6784	0.6061	0.5286
.8	0.7899	0.7051	0.6147	0.5182	0.4149

# Robustness of simulations

Price overcharge: 5%;  $p=15\%$

Elast. \ Mark-up	.2	.4	.6	.8	1
.2	0.3068	0.2959	0.2847	0.2734	0.2618
.5	0.2961	0.2743	0.2520	0.2293	0.2061
.8	0.2890	0.2599	0.2302	0.1999	0.1689

# Optimal fines: some simulations

Price overcharge: **25%**;  $p=15\%$

Elast. Mark-up	.2	.4	.6	.8	1
.2	1.2865	1.2346	1.1765	1.1111	1.0370
.5	1.2398	1.1358	<b>1.0196</b>	0.8889	0.7407
.8	1.2086	1.0700	0.9150	0.7407	0.5432

# Myths, I: fines will bankrupt firms

- There is already a 10% turnover cap
- An inefficient firm may exit - not so much for the fine, but because it expects not to survive in a competitive market  $\Rightarrow$  good! (Darwinian selection raises productivity)
- High cartel price overcharges: if firms could not build provisions and increase assets they must be inefficient
- Unfair not to punish a firm which does not have enough assets despite the cartel

# Myths, II: fines hurt consumers

- Some (who?) claim that firms will raise prices to recover cash needed to pay fines
  - Economics: fines are a sunk cost, they will not affect price decisions
  - But, suppose firms want to raise prices. Can they? Since the cartel is disrupted, unlikely they can coordinate to raise prices (note: claim implies that prices are higher *after* than *during* the cartel!)
  - Langus-Motta: indirect evidence that prices will go down after the Decision