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Catching Cartels

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COMPETITION
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ECONOMISTS

Speaker

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Cento is Managing Partner of Case Associates, Associate Research Fellow, Institute of Advanced Legal Studies, University of London, IEA Fellow in Law & Economics, and Member of the Economic Advisors' Panel, Infocomm Development Authority of Singapore (IDA). He is a well-known economist with nearly 40 years' experience as an adviser to companies on competition, regulatory and communications economics. Cento has assisted a large number of fixed, mobile, internet and other communications operators in regulatory proceedings, merger investigations and on competition issues. He has been selected as one of the '*most highly regarded*' competition economists globally and one of the top five in Europe by the 2006 Global Competition Review survey. Cento was appointed an expert advisor to the Microsoft Monitoring Trustee in 2006 to examine FRAND royalties, and has assisted on a number of IP cases. He often acts as an expert witness in competition law, commercial and damage litigation, and on the communications and media sectors most recently in the English High Court, Irish High Court, Federal Court of Australia, Dutch District Court, Finnish Higher Administrative Court, the UK Competition Appeals Tribunal, Irish High Court, and the International Court of Arbitration.

What will be discussed

what we know about cartels

public enforcement of anti-cartel laws in practice

do fines deter

private enforcement

What is a cartel

It is an illegal secret agreement concluded between competitors who in coordination fix or increase their prices, restrict supply by limiting their sales or their production capacities, and/or divide up their markets or consumers.

EC Commission website

What do we know?

average duration of 7.1 years - range of 2.6 months to 29 years

5.2 members on average - range 2 (in 7 cartels) to 16 members

concentrated in chemicals (47%) and industrial raw materials (23%)

Where are the price-fixers?

Industry	Cartels	%	Commission Decisions
Chemicals	20	45	Lysine, Vitamins A, E, B2, C and D3, Beta Carotene Carotinoids; Citric Acid, Zinc Phosphate, Methionine, Dutch Indus. Medical Gases, Food Flavour Enhancers, Sorbates, Organic Peroxides, Chloine Chloride, Rubber Chemicals, MCCA Chemicals, Hydrogen Peroxide
Industrial inputs	10	23	Seamless Steel Tubes, Carbonless Paper, Copper Plumbing Tubes, Concrete Reinforcing Bars, Graphite Electrodes, Isostatic Speciality Graphite, Extruded Speciality Graphite, Plasterboard, Industrial Copper Tubes, Carbon & Graphite Products
Food	7	16	Belgian Brewers, Private Label (Belgian Brewers), Luxembourg Brewers, French Brewers, French Beef, Spanish Raw Tobacco, Italian Raw Tobacco
Banks	2	5	German Banks, Austrian Banks
Transport	2	5	FETTCSA, SAS/Maersk
Games consoles	1	2	Nintendo
Needles & Haberdashery	1	2	Needles & Haberdashery
Fine Arts Auctions	1	2	Fine Arts Auctions

How harmful are cartels

OECD estimates that cartel overcharges on average 15 to 20 per cent.

survey of over 200 'social science studies' suggests 'average overcharge about 40% positively skewed with the median of 25%, and one-fifth at 10% or less.

International cartels median overcharge 30-33%; US domestic cartels 17-19%

Who many are caught

Bryant and Eckard (1991) estimate 13% -17%.

others suggested 10% or less

but we simply don't know

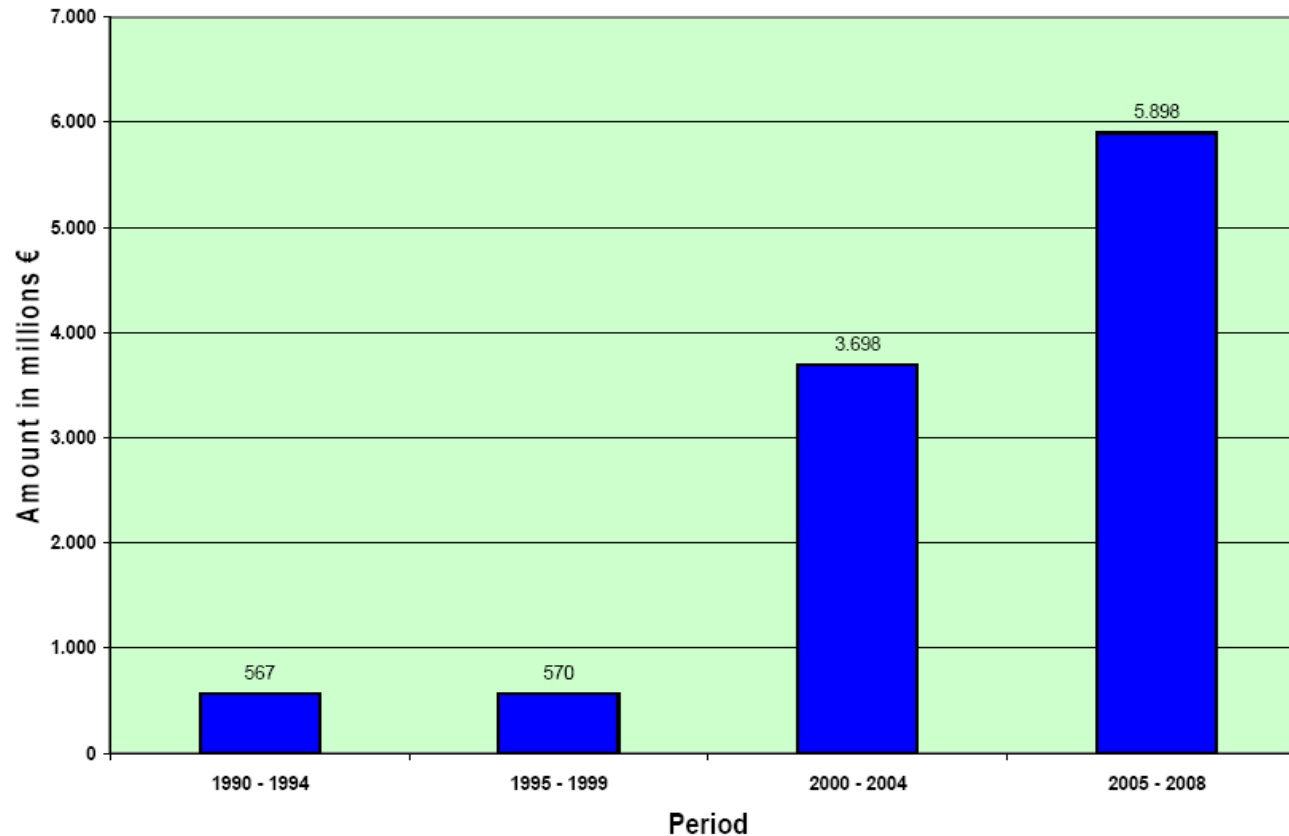
Adam Smith on cartels

People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices. It is impossible indeed to prevent such meetings, by any law which either could be executed, or would be consistent with liberty and justice. But though the law cannot hinder people of the same trade from sometimes assembling together, it ought to do nothing to facilitate such assemblies; much less to render them necessary.



A. Smith, *Wealth of Nations*, Book I.x.c.27 (Part II).

Regulators getting serious (EUC fines)



Fines Imposed on Cartels (exc court judgments - ec.europa.eu/comm/competition/cartels/statistics/statistics.pdf)

EC Commission has imposed

over €10 billion in fines before leniency (€6.1 billion after leniency)

the largest overall € 992 m and individual €479 million (ThyseenKrupp) in *Elevators & escalators 2007* cartel)

An aside

‘What happens to the proceeds from fines?’

The amount of the fines is paid into the Community budget. The fines therefore help to finance the European Union and reduce the tax burden on citizens’

Punishment toolkit expanding

fines

leniency/immunity to encourage whistleblowers

payments to encourage bounty hunters (OFT £100K)

criminal penalties – go to jail (UK, Ireland)

damages to victims

Penalty Notice /

Step 1 – Basic Amount ($x + y$)

gravity of offence (x) minor (€1000 - €1 m); serious (€1-€20 m); very serious offences (above €20 m)

deterrence uplift (part of x)

duration (y) 10% uplift per year

Penalty Notice //

Step 2 – Aggravating & Attenuating Factors – **aggravating** = recidivism, leading role, retaliatory measures against other undertakings, refusal to cooperate etc; **attenuating** = Passive role, non-implementation of offending agreement, termination of agreement as soon as Commission intervenes

Step 3 – Aggregative Adjustments -*‘certain objective factors such as a specific economic context, any economic or financial benefits derived by the offenders,..., the specific characteristics of the undertaking in question and their real ability to pay in a specific social context’*

Step 4 – 10% cap -Fine must not exceed 10% of previous year’s worldwide turnover

Leniency notice

'whistleblower' can receive 100% immunity as long as it is not the ring leader

parties that provide *'value added'* evidence which strengthens the Commission's case receive reductions in fines between 20% to 50%

Fines in practice

sample of 39 cartels from 30 fully reported cartel decisions 1999-2006

sufficient deterrence referred to 19 decisions - uplifts 0% to 400%

symbolic fines in *Italian Raw Tobacco* and *Spanish Raw Tobacco*

average reduction for attenuating circumstances 23.3%; average increase for aggravating circumstances 43.9%

ability to pay taken into account once - SGL (*Speciality Graphite*)

fines capped for 6 firms in 4 cartels

Leniency in practice

finances reduced by €2.5 billion for one or more firm in 90% of cartels

reductions of 10% to 100%, with full leniency granted to one or more firms in 12 cartels

no leniency reductions in 4 cartels

finances for minor offences reduced by 48%

finances for 'serious' offences reduced by 30%

finances for 'very serious' offences reduced by 45%

Appeals in practice

finances appealed in 85% of cartels by one or more firms

12 appeals pending

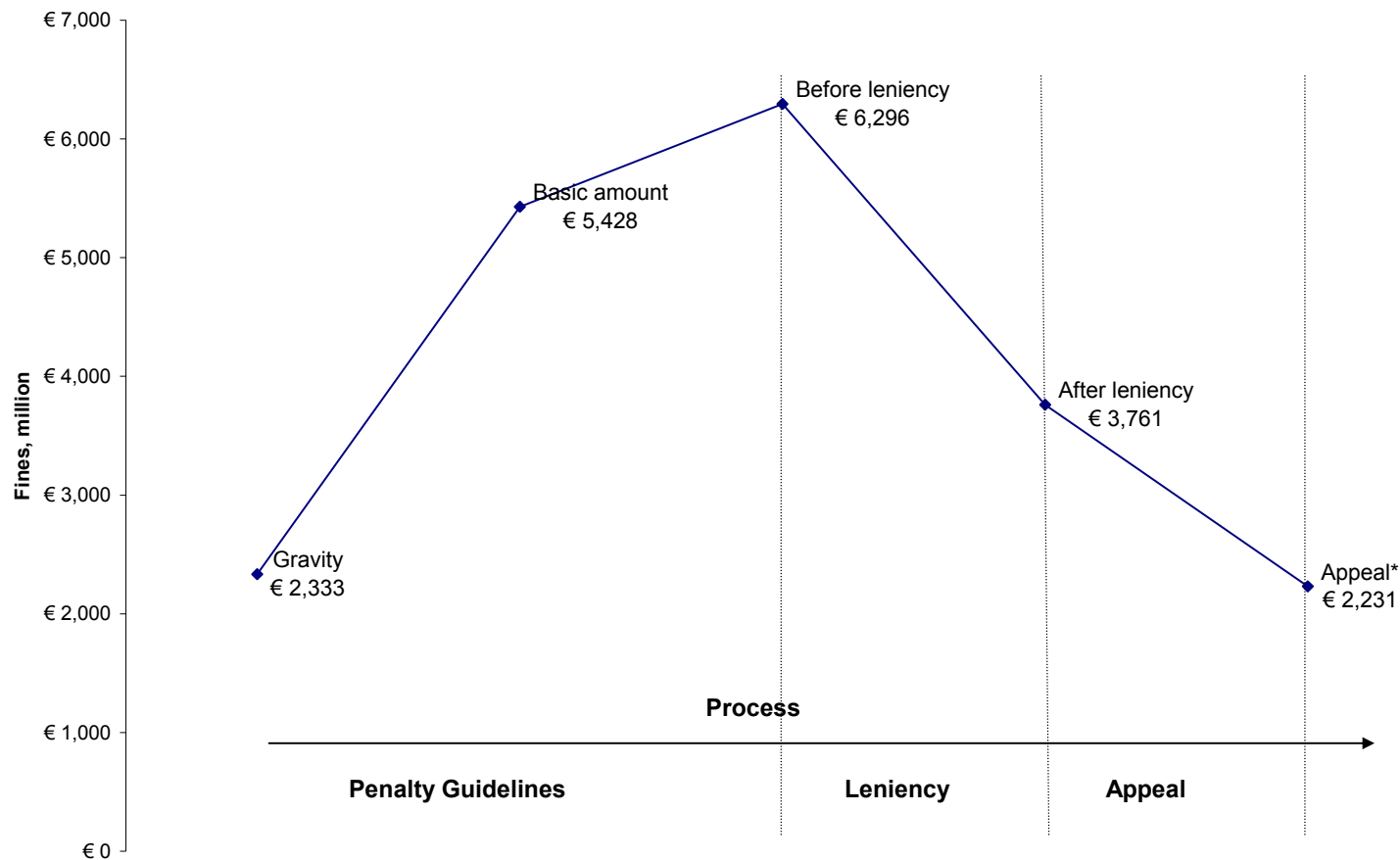
5 appeals dismissed

3 appeals fines were not adjusted

13 appeals fines reduced by between 2% and 100%

100% reduction in *German Banks* and *FETTCSA*

What actually happens



Summary

Cooperate & challenge - pays firm to co-operate with Commission, and then to challenge its decision in the courts. Firm found guilty of a 'very serious' offence can expect 42% reduction through leniency programme, and further 18% by disputing the fine in court ie pays on average only €48m of €100m fine.

leniency over-generous – more than €2.5 billion in foregone fines purportedly required to secure prosecution of 26 cartels and 178 firms. However, 12 cartels already detected by US authorities; further 7 under parallel investigations; full leniency to 'whistleblowers' in 4 cartels previously detected by other antitrust authorities (*Vitamins A & E, Organic Peroxides and Methionine*).

Excessive appeal rate - 85% appeal rate raises concerns over the efficiency and effectiveness

Negotiated approach - shares strong similarities with litigation – large discounts and significant enforcement costs.

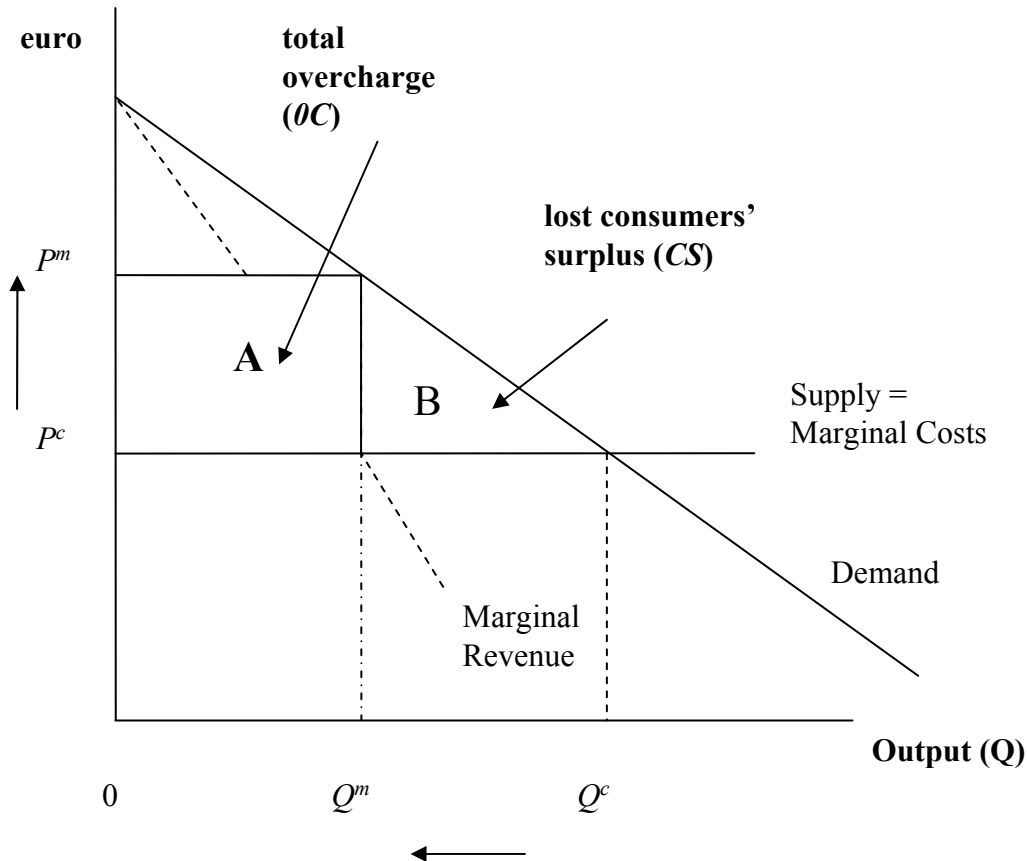
Deterrence and fines

Do fines reflect consumer harm?

Do fines deter price fixing?

sample of 24 cartels over 1999-2006 used based on availability of sales data

Measuring cartel losses



Optimal deterrence

economic loss = overcharge (OC) + lost consumer surplus (CS)

assume:

'but for' price = constant unit costs

demand curve linear → CS = 50% of OC; total loss is 150% = OC

annual OC = 20%

findings:

finances undervalued consumers' loss in 21 of the 24 cartels

undervaluation over 60% in 18 cartels

Do fines deter price fixing?

fines deter if make offending unprofitable if :

- exceed price-fixers gains
- adjust for concealability - if 1 in 3 cartels are successfully prosecuted ($c = .33$) then the 'multiplier' is 4.5 times the overcharge or $(1.5 \times OC)/c = 4.5OC$ i.e. triple 'damages'

Findings:

- fines significantly under-deter
- would need to increase 18-fold for optimal deterrence – from €3 billion to over €50 billion

Harm v optimal fines

Cartel	years	Fine €m	Sales €m	OC €m	Cer Harm €m	Fine/Harm	Optimal Fine Fine €m	Multiplier
Lysine	4	103	164	121	181	57%	549	5.4
Vitamin A	9	132	150	275	413	32%	1,251	9.5
Vitamin E	9	203	250	459	688	29%	2,085	10.3
Vitamin B2	4	70	34	25	38	186%	114	1.6
Vitamin B5	8	106	35	64	96	110%	292	2.8
Vitamin C	5	114	120	112	168	68%	510	4.5
Vitamin D3	4	41	20	15	22	184%	67	1.6
Beta Carotene	6	64	76	87	131	49%	397	6.2
Carotinoids	6	62	50	57	86	72%	260	4.2
Carbonless Paper	4	314	1,079	799	1,198	26%	3,631	11.6
Graphite Electrodes	6	164	420	481	722	23%	2,188	13.3
Methylglucanine	9	3	3	6	9	33%	26	9.1
Citric Acid	4	135	320	236	353	38%	1,071	7.9
Plasterboard	7	478	1,210	1,652	2,478	19%	7,508	15.7
Methionine	13	100	260	748	1,122	9%	3,400	34.0
Isostatic Speciality Graphite	5	42	84	79	118	36%	358	8.5
Extruded Speciality Graphite	4	9	42	31	46	19%	140	15.9
Food Flavour Enhancers	9	21	12	22	33	62%	100	4.9
Carbon & Graphite Products	10	101	290	604	905	11%	2,744	27.0
Organic Peroxides	25	70	250	1,694	2,649	3%	8,029	115.5
Choline Chloride	6	66	122	140	210	32%	635	9.6
Copper Plumbing Tubes	13	222	1,151	3,311	4,967	4%	15,052	67.7
MCCA Chemicals	15	217	125	434	651	33%	1,972	9.1
Rubber Chemicals	5	76	200	188	282	27%	854	11.3

New EU penalty guidelines

basic amount up to 30% of last full business year's sales

15% - 25% of value of last years' sales imposed as a deterrent

basic amount increased by up to 100% for each prior offence

no reductions where anti-competitive action authorised/encouraged by public authorities/legislation

no reduction for passive role

fine may be increased to exceed offender's gains

Impact of new guidelines

finer on average more than double those imposed by the Commission
- €7.7 billion vs €3.4 billion

estimated fines substantially larger for some firms - 5, 6, and up to 8 times greater.

a surprising finding – fines for 23 out of the 57 firms/offenders (that's about 40%) would be lower and substantially lower (esp. *Vitamins B2, B5, C, D3, Beta carotene & Carotinoids, Lysine, and Food Flavour Enhancers* cartels).

still significant under-deter

1998 vs 2006 guideline fines

Cartel/Date	Cartelists	Basic amount	2006 Fine €m	% Sales	1998 Fine €m	ratio
Amino Acids (Lysine)	ADM	34.9	52.3	128%	52.6	1.0
	Ajinomoto	78.8	118.1	158%	56.6	2.1
Vitamin A	Kyowa	16.8	16.8	105%	18.9	0.9
	Chell Jedand Corp	14.5	14.5	85%	17.4	0.8
	Sewon	15.8	15.8	105%	17.8	0.9
	BASF	132.8	179.2	398%	92.3	1.9
	Roche	177.0	265.5	443%	171.0	1.6
Vitamin E	Aventis	110.6	110.6	295%	68.4	1.6
	BASF	184.4	248.9	398%	179.7	1.4
	Roche	184.4	276.6	443%	199.5	1.4
Vitamin B2	Aventis	147.5	147.5	295%	39.9	3.7
	Eisai	99.4	99.4	265%	18.9	5.3
	BASF	20.3	27.4	196%	37.8	0.7
	Roche	29.0	43.5	218%	84.0	0.5
Vitamin B5	Takeda	7.8	7.8	130%	13.5	0.6
	BASF	27.8	37.6	358%	68.0	0.6
	Roche	41.7	62.6	398%	108.0	0.6
Vitamin C	Daitichi	27.8	27.8	265%	36.0	0.8
	BASF	28.8	38.9	216%	29.4	1.3
	Roche	126.4	189.6	240%	131.0	1.4
Vitamin D3	Takeda	20.8	20.8	160%	43.5	0.5
	Merck	20.8	20.8	160%	10.9	1.9
	BASF	5.8	7.8	196%	15.1	0.5
Beta Carotene	Roche	8.7	13.1	218%	42.0	0.3
	Aventis	2.9	1.5	73%	5.6	0.3
	Solvay	13.1	13.1	145%	14.0	0.9
	BASF	23.4	31.5	277%	86.4	0.4
Carotinoids	Roche	132.4	198.6	308%	96.0	2.1
	BASF	14.3	19.2	257%	83.7	0.2
Carbonless Paper	Roche	14.3	21.4	285%	93.0	0.2
	AWA	480.9	721.3	195%	283.5	2.5
	Bollere	53.6	53.6	95%	28.4	1.9
	Carrs	8.7	8.7	75%	1.8	5.0
	Divipa	15.4	15.4	75%	1.8	8.8
	MHTP	210.2	210.2	130%	33.1	6.4
	Zicunaga	7.6	7.6	45%	1.5	4.9
	Mougeot	25.7	25.7	85%	7.3	3.5
	Koehler	144.8	144.8	130%	33.1	4.4
	Sappi	37.2	37.2	95%	15.1	2.5
	Torraspapel	58.3	58.3	95%	14.2	4.1
	Zanders	175.9	175.9	130%	33.1	5.3
Citric Acid	ADM	48.3	89.4	194%	79.4	1.1
	Cerestar Bioproducts	24.3	24.3	115%	4.6	5.3
	Haarmann & Reimer	45.5	45.5	145%	122.5	0.4
Plasterboard	Hoffmann-La Roche	59.9	110.9	268%	79.4	1.4
	Jungbunzlauer	101.5	101.5	145%	29.4	3.5
	BPB	1,111.0	1,666.5	330%	198.0	8.4
	Knauf Westid'	737.0	737.0	220%	85.8	8.6
Food Flavour Enhancers	Lafarge	584.3	876.4	308%	249.6	3.5
	Gyproc	53.6	40.2	49%	7.2	5.6
	Ajinomoto	6.6	9.9	293%	22.2	0.4
Choline Chloride	Chell	2.3	3.5	308%	4.6	0.8
	Daesang	2.3	2.3	205%	4.6	0.5
	Takeda	2.4	3.6	323%	9.4	0.4
Totals	UBC	131.0	97.2	100%	14.8	6.6
	Akzo Nobel	20.4	40.8	270%	30.0	1.4
	BASF	13.4	20.0	203%	43.7	0.5
Totals		5,924.6	7,655.6	226%	3,368.6	2.3

Private actions

available since *Camera Care* in 1980s

massive variation across EU e.g. common v civil law;
uncertainty over law (passing on defence)

public enforcement often little help in quantification

single damages v US triple damage acts as hurdle?

Reform in air

encouragement of follow-on actions h/e *Crehan* not a good advertisement – 11+years, incert' legal position, failure

EU Commission *Ashurst Study*

www.ec.europa.eu/comm/competition/antitrust/actionsdamages/study.html

EU White Paper expected soon

<http://ec.europa.eu/comm/competition/antitrust/actionsdamages/index.html>

OFT proposals expected soon

www.offt.gov.uk/shared_offt/reports/comp_policy/oft916.pdf

Issues

uncertainty as to purpose – compensation v deterrence

relationship to public enforcement e.g. leniency

single or multiple (2/3x) damages – US has 3x but no pre-judgment interest = about UK single damages

passing on defence

costs and uncertainty

Further analysis by speaker

C. Veljanovski, *Economic Principles of Law*, Cambridge UP, 2007. Chap. 6 on basic issues of law enforcement

C. Veljanovski, Penalties For Price-Fixers - An analysis of fines imposed on 37 cartels by the EU Commission', *European Competition Law Review*, 2006, Vol. 27, 510-513.

C. Veljanovski, Cartel Fines in Europe – Law, Practice and Deterrence', *World Competition*, 2007, Vol. 30, 65-86
Available at ssrn.com/abstract=920786.

C. Veljanovski, European Commission Cartel Prosecutions and Fines, 1998-2007 - A Statistical Analysis, Available at ssrn.com/abstract=920786.

C. Veljanovski, The Economics of Cartels, *Finnish Competition Law Yearbook 2006*, Available at SSRN: ssrn.com/abstract=975612

[New EU Penalty Guidelines](#), *Casnote*, July 2006

[Deterring Price-fixers](#), *Casnote*, June 2006

[Penalties For Price-fixers](#), *Casnote*, May 2006

Casenotes available at www.casecon.com/publications/comnotes.php

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