

# Rich booty – how much harm is caused by cartels to the Hungarian economy?

## Introduction

*“Our competitors are our friends.  
Our customers are the enemy!”*

These were the words of the head of the international lysine cartel which operated for three full years from 1992, when he called his competitors to collude against their consumers. These words sum up the essence of why cartels should be regarded to be the worst enemy of consumers and why the disclosure of cartel activities is the most important task for all competition authorities. By allocating markets or by agreeing on prices and other terms of sales, firms forming cartels eliminate or strongly restrict competition between themselves, which enables them to operate like a monopoly and dictate higher prices.

Consumers suffer a variety of different forms of damage and loss directly and indirectly as a result of the operation of cartels. It is very difficult or even impossible to identify the amounts of such damage and loss in any specific cartel case. Based on international experience, in view of the conduct of hundreds of cartels, it is possible to form some picture of the scale of the damage that has and is being caused by cartels together in Hungary. Cartel overcharges observed in international and domestic cases make it possible to show the proportions of the extra costs paid by consumers as a consequence of cartel activity. This paper will use such rules of thumb to illustrate the damage caused by cartels to consumers by cartels uncovered by the Hungarian Competition Authority (Gazdasági Versenyhivatal, GVH) since 2002.

The damage caused by cartels to the society as a whole, however, is even greater. Higher prices reduce the quantity of products sold on the market – in comparison to what could be sold under competitive conditions – and the elimination of the competitive pressure on the market strips companies from the incentives to widen their product ranges or to

improve quality. Nevertheless, as a consequence of the difficulties of quantifying these factors we will now focus on the price increasing impact of cartels, putting aside their numerous other effects.

## The extent of price increase achieved by cartels – theoretical background

In essence, all we need to answer this question is only two data: the cartel price and the competitive price. A comparison of these reveals the rate of the price increase resulting from the restriction of competition, i.e. the cartel overcharge. The difficulty in assessing the scale of the damage caused by cartels lies in the very fact that while the high price maintained by a cartel is very clearly visible indeed, generally there is no information on the competitive price. The main question, therefore, is this: what would the prices have been if there had been competition. A variety of approaches can be taken to estimating the unknown competitive price, with each of them having its advantages and disadvantages.

One such approach is comparing the average price in effect during the existence of a given cartel to the average price that was observed on the same market before the establishment or after the termination of the cartel. Another approach is whereby the researcher collects data on markets which are similar to that dominated by the cartel but on which competition on the merits may be supposed to prevail. In the case of local cartels such similar markets may include, for instance, markets of other regions. Another technique is based on reviewing the costs underlying the price and the margins applied by firms operating on the relevant market. Yet another method is attempting to assess the overcharge received by cartels through econometric modelling using data that are becoming available in increasing detail in recent years.

## United Kingdom – cartel in the market of replica football kits

The Office of Fair Trading (OFT) – the competition authority of the United Kingdom – tracked down an anti-competitive agreement involving a considerable number of firms on the market of football kits. The companies involved in the cartel (including Umbro and Manchester United) agreed to set minimum prices for their products. In August 2003 the OFT concluded that this agreement was contrary to the law and imposed a fine exceeding £ 18 million on the firms participating in the infringement. This was followed by an over 30 percent drop in prices, a welcome change for football fans.

## Sweden - asphalt cartel

Scrutinising the asphalt market the Swedish competition authority revealed a number of collusive agreements between asphalt manufacturing companies. The most interesting fact is that one of the subsidiaries of the Swedish public road management agency (Vägverket) putting out the tenders also participated in the collusion against its own parent company. In the wake of the Swedish competition authority's intervention prices fell almost immediately by nearly 20 percent.

### Cartel overcharges in the economic literature

Publications on cartels set the damage caused by cartels at a minimum of **10 percent** of the sale price. US and UK competition authorities alike estimate cartel overcharges based on this 10 percent rule, admitting though that this should be considered as a very conservative estimate. Cartels observed on various markets have typically increased prices by much higher rates.

operated included motorway and sewerage construction, school-milk supply, frozen fish and markets of various chemical products. In these cases the cartels applied an average overcharge of 21 percent, with the typical rate equalling 18 percent.

Perhaps the **most comprehensive study** on overcharges achieved on the markets by cartels has been prepared by John M. Connor, professor of the Purdue University. The author reviewed all sources of literature published since 1770 and available in English language,

**25 percent** over what may be considered to be 'competitive price', while the average overcharge was some **49 percent**. Almost one third of the total of over 600 cartels under scrutiny had sold their products at prices which were 20-40 percent higher on an average in comparison to prices prevailing in competitive markets. Only about a fifth of the cartels raised their prices by less than 10 percent above the competitive price, while another fifth received overcharges which were greater than 60 percent.

### Studies on cartel overcharges

Connor, John M. (2005): Price-Fixing Overcharges: Legal and Economic Evidence, Purdue University Staff Paper No. 04-17

Griffin, James M. (1989): Previous Cartel Experience: Any Lessons for OPEC?, in Lawrence R. Klein & J. Marquez, Economics in Theory and Practice: An Eclectic Approach, Kluwer Academic

Levenstein, Margaret & Valerie Suslow (2002): What Determines Cartel Success? Working Paper 02-001 University of Michigan Business School (January 2002).

OECD (2003): Hard Core Cartels – Recent Progress and Challenges Ahead, Organisation for Economic Co-Operation and Development

Posner, Richard A. (2001): Antitrust Law (Second Edition). Chicago: University of Chicago Press

Werden, Gregory J. (2003): The Effect of Antitrust Policy on Consumer Welfare: What Crandall and Winston Overlook, EAG 03-2. Washington, DC: Economic Analysis Group, Antitrust Division, U.S. Department of Justice (January 2003).

Research carried out by	Number of cartels	Average overcharge (percent)	Typical overcharge (percent)
1 Posner (2001)	12	49	38
2 Levenstein and Suslow (2002)	22	43	25
3 Werden (2003)	13	21	18
4 Griffin (1989) *	54	46	44
5 OECD (2003) **	38	16	13
6 Connor (2005)	674	49	25

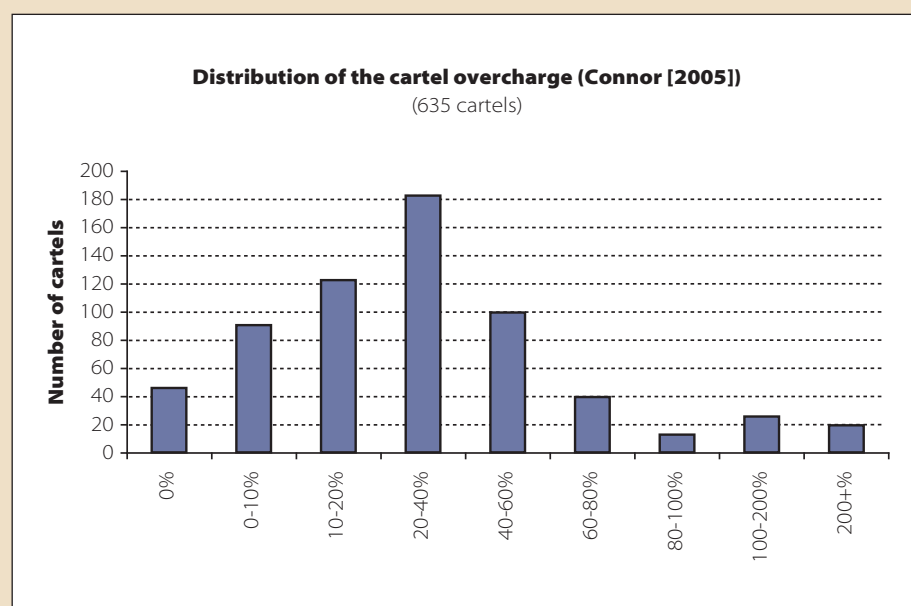
\* The overcharge relates to 38 private cartels  
 \*\* Information on overcharge was available in the case of 12 cartels  
 Source: Connor (2005)

In their study produced in 2002 Valerie Suslow and Margaret Levenstein analysed a number of cartels that operated after World War One, focusing on the duration of their existence, their stability and profitability. In the cases studied by the authors the average overcharge was 43 percent and the typical overcharge equalled 25 percent. These data are far in excess of the 10 percent overcharge assumed by the British and the American competition authorities.

In its report published in 2003 on the fight against cartels the OECD listed 38 international cartel cases, describing the turnover of goods affected by the infringement, the amounts of the fines and in some cases the established or estimated overcharges as well. Information on the rates of the overcharges achieved by the cartels was available in twelve cases, where the average and the typical overcharge equalled 16 percent and 13 percent respectively.

Gregory Werden, economist of the US Department of Justice (DoJ) quoted thirteen cartel cases in his study published in 2003, where information was available on the cartel overcharges. The markets on which these cartels

hundreds of books and periodicals and decisions of American and foreign courts and competition authorities, seeking for evidence on the average extent to which cartels increased prices. The author found information on average cartel overcharges with respect to a total of 674 cartels that had been in existence during the two centuries covered by the review. He found that the typical cartel overcharge was



## Damage caused by cartels discovered in Hungary

International examples show that cartels almost certainly put up prices by at least 10 percent, indeed, it is not unreasonable to assume overpricing as high as 49 percent; since a number of research publications show the likelihood of this rate as an average price increase effect (See *Cartel overcharges in the economic literature*, in the box above). Based on such experience it is possible to estimate the damage caused to the

Hungarian economy by cartels brought to light by the GVH. This approach to estimating the harm is also supported by the fact that cartels in Hungary are also similar in terms of the sectors and products concerned to those disclosed abroad. Moreover, there have been several cartels in Hungary as well, where communication between competitors shed light on the difference between cartel prices and production costs or between cartel prices and market prices. In view of the estimated 28 percent overcharge in the motorway cartel case and 46 percent in the bid-rigging

for the payroll accounting system of the Paks Nuclear Power Plant, it does not seem unreasonable to use the rule of thumb drawn from literature to describe the harm caused by the biggest cartels uncovered by the GVH. In these Hungarian examples the overcharge rate achieved by cartels is closer to the upper end of the 10-49 percent range described in literature. Based on the cartel overcharge and the relevant turnover it is possible to develop an estimate of the damage caused by cartels to consumers.

**The biggest cartels discovered in Hungary (2002-2006)**

Title of case	Affected turnover		Invitation to tender	Period of the operation of the cartel
	million HUF (October 2006)	million € (1 € = 263 HUF)		
1 Paks Nuclear Power Plant, improvement of the economic information system (Vj 97/2006)	420	1.6	Yes	2004
2 Egg cartel (Vj 199/2005)	12 039	45.8	No	2002-2005
3 Motor vehicle repairers and insurers (Vj 51/2005)	177 103	673.4	No	2000-2005
4 Synergon, HP Mo. KFKI, Montana - IT cartel (Vj 40/2005)	1 416	5.4	Yes	2003
5 Payroll accounting system - IT cartel (Vj 21/2005)	311	1.2	Yes	2004
6 IT system for universities (Vj 162/2004)	15 872	60.3	Yes	2004
7 AREVA et al. - switchgear (Vj 102/2004)	9 408	35.8	No	1991-2004
8 Kemira-Tessenderlo - fodder phosphate (Vj 101/2004)	46 369	176.3	No	1991-2003
9 Graphic designers (Vj 98/2004)	1 150	4.4	No	1997-2005
10 Renovation of freehold block of flats (Vj 74/2004)	354	1.3	Yes	2002
11 Road construction firms in rural Hungary (Vj 56/2004)	29 136	110.8	Yes	2001-2002
12 Road construction in Budapest (Vj 25/2004)	14 967	56.9	Yes	2001
13 Kaposvár University Building (Vj 154/2003)	3 799	14.4	Yes	2002
14 Game meat price coordination (Vj 132/2003)	974	3.7	No	2000-2003
15 Hunting (Vj 89/2003)	3 221	12.2	No	2001-2004
16 Pension Fund Building (Vj 28/2003)	5 826	22.2	Yes	2002
17 Motorway cartel (Vj 27/2003)	157 738	599.8	Yes	2002
18 Renewal of Bartók Béla street (Vj 138/2002)	13 362	50.8	Yes	2002
19 Budapest cab companies (Vj 114/2002)	3 356	12.8	No	2002
20 Examination of origin (Vj 72/2002)	2 599	9.9	No	1999-2003
<b>Total</b>	<b>499 420</b>	<b>1 898.9</b>		

\*In case the collusion took place at a tender, the period of cartel operation relates to the time of the tendering

## Hungarian cartel overcharges – had there been available price information

Documents of the companies concerned provide some information – in two of the cartel cases investigated in Hungary – concerning the level of hypothetical competitive price to which the cartel prices can be compared.

### The motorway cartel

One such case is the **motorway cartel**, which brought in the largest

amount of fine in the history of the GVH. In February 2003 the authority started a proceeding against the companies that entered the August 2002 open public procurement tender with a pre-qualification procedure for the construction of the Balatonszárszó section of the M7 Motorway, the Görbeháza section of M3 Motorway and the section of M7-M70 Motorway/ main road between Becsehely and Letenye, put out by Nemzeti Autópálya Rt. The com-

petition authority suspected that the bidders coordinated their bids and allocated among themselves the construction of the altogether about 60 km long road sections. In the course of the on-site inspection of the companies the GVH seized a number of documents, which enabled it to establish the infringement. A note seized from one of the managers of Strabag indicated some 'cost-based prices' that could be used as a guideline in respect

of the competitive price in the case. According to the note the 'cost based' price would have been HUF 90 billion (€342 million), which would be the centre of gravitation for the market price as well, had there been perfect competition. If we add profit corresponding to the average margin of construction companies in 2002 (5.2 percent) to the 'cost based' price and regard this as the competitive price, we find that in a competitive market the road sections concerned could have been built up for some HUF 94-95 billion (€ 357-361 million). Even if we - quite generously - take twice the above margin, the project could have been implemented with HUF 100 billion (€ 380 million). The cartel undertook to carry out the assignment for a **28 percent higher** net price of HUF 128 billion (€ 487 million). This illegal alliance of road constructors therefore caused a direct damage of at least HUF 28 billion (€ 107 million) to consumers. This amount exceeds the annual budget of the town Pécs.

## The payroll accounting system for the Paks Nuclear Power Plant – 46 percent overcharge

The anticompetitive agreement between two IT firms – SAP and Synergon – also contained a reference to the competitive price. The Paks Nuclear Power Plant put out to tender the IT improvement to upgrade its payroll accounting system in April 2004. The investigation by the GVH found that during the tendering period the two firms conducted negotiations and mutually agreed on the roles to be assumed by each, coordinating their offers. Under such conditions SAP won the right to provide the service at a price of HUF 365 million (€ 1.4 million). The competition authority obtained a message, sent by an employee of one of the companies concerned, which read:

„At normal price the project would cost HUF 200-250 million. The contract price is about HUF 360 million which is quite a substantial extra profit [...]”

Although in this case 'normal price' is not necessarily identical with competitive price in the sense the latter term is used by economists, the message still gives a good indication of the scale of the price increase achieved by the cartel. Even if the maximum of the 'normal price', that is HUF 250 million (€950 thousand), is taken as the competitive price, the cartel price is higher than this by HUF 115 million (€ 437 thousand), or 46 percent. To illustrate the size of the damage suffered by customers: this amount would be enough to install WiFi relay stations providing full-range Internet access in 15-20 villages, or to purchase 700-800 new computers which could have been enough to supply quite a number of schools with a sufficient number of PCs.

When calculating the amount of the damage, closer estimates were taken into consideration whenever data for making such estimates were available (see 'Hungarian cartel overcharges...' above).

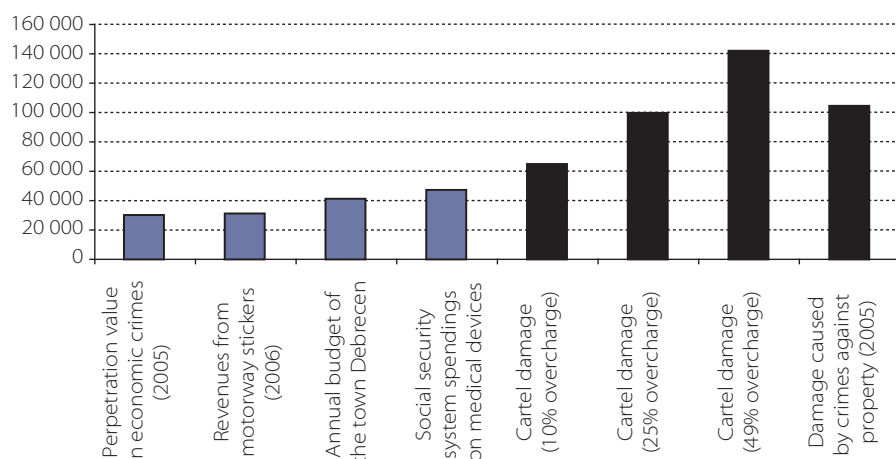
The twenty biggest cartels discovered by the GVH since 2002 have caused a loss of some HUF **64 billion** (€ 243 million) in real terms to consumers even according

to the most conservative estimate, based on an assumed 10 percent overcharge rate. Taking into account the higher – 49 percent – average overcharge observed by Connor shows a loss of HUF **142 billion** (€ 540 million) in real terms. The amount of loss based on a medium 25 percent overcharge equals HUF **100 billion** (€ 380 million). Apply-

ing this to the total Hungarian population reveals that the activities of the cartels revealed during the past five years cost every single Hungarian citizen some HUF **10,000** (€ 38). Even on the basis of the lowest assumed overcharge, the damage is twice as high as the size of all economic crimes detected in Hungary in year 2005. The magnitude of the damage caused by the biggest cartels brought to light in Hungary during the five years under review is indicated by the fact that even the HUF 64 billion (€ 243 million) that is the amount of loss calculated using the lowest likely overcharge would be enough to operate the competition authority for 40 years with its current budget.

The weight of construction-related public procurement procedures in the above cases is shown by the fact that the collusions in seven road and building construction works account for almost half of the turnover affected by the cartels under review. Public procurement cartels qualify as particularly serious violations of the EU and Hungarian competition law since in these cases – with the procurement being implemented from public money – cartels steal from all taxpayers.

**The damage caused by the biggest cartels discovered in Hungary (million €, October 2006)**



## Motorways 40 percent cheaper?

The public procurement procedure for the construction of the section of M7 Motorway between Balatonkeresztúr and Nagykanizsa clearly illustrates the importance of competition. Changes introduced to the earlier motorway construction tendering regime resulted in unprecedented competition and, consequently, a lower price.

In the early 2000s the same state-owned consortium enjoying a monopoly position was invariably commissioned to carry out motorway construction projects and there was practically no competition on the market of motorway construction. Although after 2002 companies capable of constructing motorways were invited to bid for contracts, those participating in tendering often colluded to form cartels and eliminate competition and instead of trying to offer more favourable terms and conditions than others, they shared the tasks and put up prices. The GVH started proceedings in a number of cases and in 2004 alone, the Competition Council made decisions on five cartel cases relating to public procurement on the construction market.

In its procedure for the award of public works contracts for the construction of the last section of the M7 Motorway, Nemzeti Autópálya Zrt. – which invited the tenders – transformed the tendering conditions in comparison to its previous practice. The number of bidders increased significantly as a result of the elimination of or changes in the rules restricting participation. As a consequence of increased competition, the construction price was reduced in comparison to the prices observed in public

procurement procedures that had taken place after 2000 and the winner of the procedure undertook to construct the road section at a price of HUF 43.8 billion (€ 167 million), way below all expectations and earlier prices. In the media the minister of economy spoke about a 40 percent price cut in comparison to previous prices of motorway construction. Without specific knowledge of the separate impacts of the increased price competition and the easing of the technical requirements, we can declare that by means of these two factors the Hungarian state saved some HUF **30 billion** (€ 114 million) on the construction of the last section of the M7 Motorway. This amount is more or less equal to the annual revenue from motorway tolls. Without the Balatonkeresztúr-Nagykanizsa section of the M7 Motorway the motorways constructed since 2000 cost about HUF 1000 billion (€ 3.8 billion) at current prices. If all construction projects could have been completed at 40 percent lower prices, this could have saved HUF 400 billion (€ 1.5 billion) for the state.

By applying the 28 percent overcharge estimated to have been charged by the motorway cartel (see *Hungarian cartel overcharges* in the box above) to the motorways constructed since 2000, we see that competition could have enabled the Hungarian state to save almost HUF **220 billion** (€ 837 million). This amount – in view of the kilometre price of the last section of M7 – would have been enough for constructing up to 180 km more motorways. Or if the same amount were to be used for bicycle road construction, it would be enough for completing some 11,000 kilometres. This would result in a six times more extensive network in comparison to what exists today in Hungary.

The cartels detected by the GVH must be but the tip of the iceberg: according to the estimate of the British competition authority only approximately 15 percent of cartels are discovered in any given year. In view of this detection rate and the known duration of the operations of the biggest cartels in Hungary, the total amount of the damage caused to the society by **all operating cartels** may amount to many times the HUF 64-142 billion (€ 243-540 million) damage caused by the cartels reviewed in this paper and it may amount to HUF **160-356 billion** (€ 608 million-1,35 billion), equalling 0.7-1.6 percent of Hungary's GDP.

## Summary

These examples and simple calculations are presented with the aim of illustrating the magnitude of the social damage caused by cartels. The largest cartels discovered by the GVH caused a greater than HUF 64 billion (€ 243 million) harm to consumers even according to the most conservative estimate. This amount may actually be taken as a lower bound of the damage, since it has been calculated, where no individual estimates were available, by using an overcharge rate of only 10 percent, whereas the actual average overcharge rate – as it is shown by the pricing practices of hundreds of cartels – is much higher than that. Furthermore, this estimate takes account only of the damage suffered by consumers in the form of higher prices, disregarding a variety of other detrimental effects of cartel activity. Be it the market of eggs, driving school lessons, graphic design services or motorway construction, just buying practically anything in the grocery store or conducting public procurement procedures, cartels are here and they are causing huge damage to the society as a whole. Collusion between competitors is the most serious violation of competition law and efficient investigation and proper sanctioning of such practices is in the interest of the public.

## The case of motor vehicle repairers with insurers

The largest fine ever paid by a single company in Hungary was imposed by the GVH in late 2006, when the authority fined Allianz Hungária HUF 5.3 billion (€ 20 million). The total of HUF 6.8 billion (€ 26 million) imposed on those involved in the case altogether was only slightly below the HUF 7 billion (€ 26.6 million) record fine imposed on the motorway cartel. This case was a combination of a number of contested practices, each of which restricted competition.

Two large insurance companies – Allianz Hungária and Generali-Providencia – agreed with the Hungarian Association of Automobile Dealers (Hungarian abbreviation: GÉMOSZ), an

association of 600-700 car dealers, on ‘recommended prices’ (actually: on overpriced hour rates) between 2003 and 2005. The Competition Council found that GÉMOSZ – though it was a civil society organisation – was functioning as a cartel enabling its members to restrict price competition and to apply higher, uniform prices. As a consequence of the concerted conduct of the participants motor vehicle repairers managed to increase their prices by over 10 percent a year between 2003 and 2005 – exceeding the inflation rate – but there were negotiations about hour rate increases which would have gone up to three times of that extent.

The insurers accepted the increased hour rates in exchange for the repair firms making up for it by getting new insurance contracts for them. More-

over, the insurers brought the level of the hour rates paid to repair shops in line with the performance of the repair shops in getting them new insurance contracts. Other insurers on the market also had to pay the artificially increased repair rates to the repairers without the latter getting them new insurance contracts. The two insurers mentioned above did not set up a cartel between themselves, but they accepted the price cartel built up by motor vehicle repair firms and so they tried to restrict competition on the market of motor vehicle insurance.

The GVH imposed fines on the insurers, authorised dealers and intermediaries (insurance brokers) playing a key role in operating the insurance market, which were parties to the restrictive agreements.

## Is it worth cartelling?

„The decision hit [... company] hard. A procedure has been started within the company and the managers found guilty of participating in price-coordination should expect sanctions.”

Népszabadság, 30 November 2006:  
Cartel companies caught (information on the Slovakian competition authority's decision against public procurement bid rigging cartel)

„I will be steadfast in applying **zero tolerance** for those who operate cartels.”

Neelie Kroes, European Commissioner for Competition Policy (in her acceptance speech)

Participating in cartels offers substantial advantages for businesses at the expense of consumers (see ‘Rich booty...’ above). This is the reason why competition authorities are adopting increasingly tough approaches to uncover and eliminate cartels. Thus when a cartel is brought to light, the participating companies and their managers have to face serious negative consequences.

One of the most severe consequences of having been caught cartelling is **bad publicity** resulting from the company's

name appearing in a negative context in relation to the cartel. This may destroy the results of years of PR efforts and spoil the image of the company for quite a long period. (Since 2002 the daily Népszabadság and the weekly Figyelő has published articles on cartels discovered by the GVH in more than thirty and in twenty cases, respectively.)

Participating in cartels is the most serious infringement of competition law and a company found guilty of cartel activities is heavily **fined** by the GVH. Between 2002 and 2006 the authority

imposed fines totalling in HUF 20.2 billion (€ 76.8 million), in nominal terms. One of the companies was fined HUF 5.3 billion (€ 20.2 million) in a single cartelling case.

Customers injured by a cartel may **sue the cartelist for damages** in civil law action. Damages enforced in such actions may significantly exceed even the fines imposed by the competition authority. For instance, in the case of the vitamin cartel manipulating the international vitamin market up to the late nineties, the DoJ – proceeding as one of the competition

Cartel fines imposed by the Hungarian Competition Authority (million HUF)

