



FACULTY OF LAW  
University of Lund

Charlotta Croner

+ 32 2 299 45 85

Leniency and Game Theory

Master thesis  
20 Points

Supervisor: Henrik Norinder

EC Competition Law

Spring 2007

# Contents

<b>SUMMARY</b>	<b>1</b>
<b>PREFACE</b>	<b>2</b>
<b>ABBREVIATIONS</b>	<b>3</b>
<b>1 INTRODUCTION</b>	<b>4</b>
1.1 Purpose	4
1.2 Method and material	4
1.3 Delimitations	5
1.4 Disposition	6
<b>2 CARTELS AND DETERRENCE</b>	<b>7</b>
2.1 Article 81 of the EC Treaty	8
2.2 Fines for cartel infringements	8
<b>3 THE DEVELOPMENT OF LENIENCY PROGRAMMES</b>	<b>11</b>
3.1 The American Model	11
3.1.1 <i>The American Corporate Leniency Policy</i>	12
3.1.2 <i>Effects of the American Leniency Programme</i>	13
3.2 The European Model	14
3.2.1 <i>The 1996 Leniency Notice</i>	14
3.2.1.1 The conditions for non imposition of a fine / substantial reduction	14
3.2.1.2 The Commission's decisions under the 1996 Leniency Notice	15
3.2.1.3 The effects of the 1996 Leniency Notice	17
3.2.2 <i>The 2002 Leniency Notice</i>	18
3.2.2.1 Immunity thresholds	19
3.2.2.2 The Commission's decisions under the 2002 Leniency Notice	20
3.2.2.3 Effects of the 2002 Leniency Notice	22
3.3 The ECN Model Leniency Programme	23
3.4 Comparison between the American and European Model	23
<b>4 GAME THEORY</b>	<b>25</b>
4.1 The Normal Form Game	25
4.2 The Prisoners' Dilemma	25
4.3 The Application of Game Theory to Leniency Programmes	27

<b>5</b>	<b>THE 2006 REVISED LENIENCY NOTICE</b>	<b>29</b>
5.1	Clarified immunity thresholds	29
5.2	The Marker System	30
5.3	Reactions on the revised Leniency Notice	30
5.3.1	<i>Level of necessary evidence</i>	30
5.3.2	<i>The introduction of a marker system</i>	32
<b>6</b>	<b>ANALYSIS</b>	<b>34</b>
6.1	Cartels and the Prisoners' Dilemma	34
6.2	Incentives for betrayal	36
6.2.1	<i>Increased transparency and predicatbility</i>	36
6.2.2	<i>One-stop-shop procedure</i>	37
6.2.3	<i>Criminal sanctions</i>	38
<b>7</b>	<b>CONCLUSIONS</b>	<b>40</b>
	<b>BIBLIOGRAPHY</b>	<b>41</b>
	<b>COMMISSION DECISIONS</b>	<b>46</b>

# Summary

A powerful cartel forces customers to pay significantly more for products and eliminates competition since its participants do not need to improve their productivity or the quality of their products. Cartels have historically exercised great influence over the international economy. During the inter-war period cartels were so powerful that economists have estimated that international cartels controlled almost forty percent of world trade between 1929 and 1937.

Article 81 (1) of the EC Treaty prohibits cartel agreements. The European Commission may therefore impose fines up to 10 % of the total turnover in the preceding business year on undertakings infringing the Article. However, in the fight against cartels not only the imposition of heavy fines is used. Nowadays, competition authorities around the world encourage undertakings to break the silence by applying *leniency programmes* reducing the fine for a member of a cartel that brings evidence to the antitrust authority.

The United States was the first country to introduce a leniency programme in 1978. It took another 18 years for the European Commission to launch its first leniency programme in 1996. Since then the Commission has operated three different leniency programmes, all of which have been subject to criticism. The discussed shortcomings of the leniency programmes have especially comprised of lacking transparency and predictability resulting in a wide discretion for the Commission when deciding on immunity or the exact reduction of fines.

The prisoners' dilemma is a game theoretic model that illustrates the strategic interactions of two arrested criminals who both want to minimize their time in prison, but are indifferent to how much time the other criminal spends behind bars. In the traditional prisoners' dilemma, confessing is always the dominant strategy. Regardless of how criminal 2 may act, criminal 1 is always better off confessing. Cartelization can be considered as a kind of prisoners' dilemma, the only difference compared with the traditional model lies in the absence of a provable minor crime and a dominant strategy. In such an event where the prisoners' dilemma does not give undertakings any guidance whether to confess or to remain silent, a successful leniency programme has to comprise both deterrent and appealing factors to make at least one undertaking to break the silence.

In my opinion, there are three major areas for the Commission to develop in order to make more leniency applicants to confess in the future: increase the transparency and predictability of the Leniency Notice, introduce a one-stop-shop procedure and impose criminal sanctions on individuals participating in a cartel.

# Preface

I would like to thank my supervisor Henrik Norinder for his support and advice during the process of writing. I would also like to thank my friends David Evans and Cecilia Brogren for proof reading the final version of the thesis. Thank you!

*Charlotta Croner*  
Malmö, May 28, 2007

# Abbreviations

CLA	Competition Law Association
DOJ	United States Department of Justice
EC	European Community
EC Treaty	European Community Treaty
ECLF	European Competition Lawyers Forum
ECN	European Competition Network
EU	European Union
IBA	International Bar Association

# 1 Introduction

The first time I got in contact with the concept “leniency” was on the Commission’s webpage where leniency applicants are encouraged to reveal illegal cartels by faxing in an application to the Commission’s fax number, + 32 2 299 45 85.<sup>1</sup> Ever since I have been fascinated by how leniency programmes work and how they can influence cartel participants facing a decision whether to “blow the whistle” or to remain silent.

During the period January – April 2007, the Commission imposed record-high fines amounting to more than €2000 million on undertakings participating in cartels. Considering the development towards larger fines, a well functioning EC leniency programme is perhaps a more important instrument today than ever before, especially for cartel participants in order to have the possibility of escaping large fines.

## 1.1 Purpose

The purpose of this thesis is to examine what components a successful European leniency programme should contain in order to encourage cartel participants to reveal illegal cartels at an early stage. In other words, the aim of this essay is to examine whether the current 2006 Leniency Notice is satisfactory in this aspect, or if it needs to be revised further.

The consequences of a potential betrayal are of great importance for undertakings facing a decision to reveal a cartel. A bad future reputation and lost cartel profits must therefore be weighed against the possibility of avoiding high fines by receiving immunity or a reduction in fines. In order to develop my question I have also chosen to investigate how cartel participants may be influenced by game theory and in particular the prisoners’ dilemma.

## 1.2 Method and material

When writing this thesis I have applied the traditional method for legal research. Consequently, preparatory work, leniency notices, Commission decisions and other relevant legislative material have been of great importance.

Since 1996 the Commission has operated three different Leniency Notices. Due to this fact, updated literature on leniency is somewhat limited. The existing literature on leniency such as *Regulating Cartels in Europe - A Study of Legal Control of Corporate Delinquency* written by Julian Joshua and Christopher Harding, and *Game Theory and the Law* written by

---

Douglas G Baird et. al., have however been very useful as a general introduction on both the game theoretic aspect of leniency, and the history of leniency in Europe and in the United States.

For recent information on the development of leniency programmes updated sources such as the Commission's Press Releases, the Opinions of Consulted Parties on the draft of the 2006 Leniency Notice, and in particular articles written on the subject have been of interest. However, since some of the studied articles constitute "discussion papers" I have taken into consideration that these publications may not only represent incomplete work, but, in many cases, also the strong views of the authors. For example, Spagnolo states in his discussion paper *Leniency and Whistleblowers in Antitrust*, (2006), that he has "no ambition of being objective, having worked so long with the leniency issues".<sup>2</sup>

For further information on leniency I recommend the reader to consult the Directorate General Competition's webpage,<sup>3</sup> which provides access to detailed information on leniency as well as Commission decisions and legislative material.

## 1.3 Delimitations

I have chosen to focus this thesis on how a successful European leniency programme should be designed and how it can be improved by the application of game theory, especially the prisoners' dilemma. In order to provide the reader with the origin of leniency programmes I will, in broad outline, examine the American and European history of leniency; other individual leniency programmes operating today in countries such as the different EU Member States will not be discussed. For further reading on this topic I recommend a previous master thesis on leniency, "*Immunitet och nedsättning av böter i kartellärenden*"<sup>4</sup> written by Mikael Fredblad in 2003 at the Faculty of Law, Lund University. This master thesis specifically focuses on leniency programmes operating not only in the United States but also in the United Kingdom, Germany and Canada.

Since it is my intention to clarify briefly how game theory may influence cartels I will explain the prisoners' dilemma by using illustrative figures, but I will not use any further detailed economic calculations in order to give support to my argumentation, nor will I examine the calculation of fines for undertakings which have participated in cartels.

---

<sup>2</sup> Spagnolo, G., *Leniency and Whistleblowers in Antitrust*, (2006), p. 3.

<sup>3</sup> Directorate General for Competition;  
[http://ec.europa.eu/comm/competition/index\\_en.html](http://ec.europa.eu/comm/competition/index_en.html)

<sup>4</sup> Fredblad, Mikael (2003), *Immunitet och Nedsättning av böter i kartellärenden*, master thesis available at: [http://www.jur.lu.se/Internet/Biblioteket/Examensarbeten.nsf/0/746027B06079270BC1256D97004F52D0/\\$File/xsmall.pdf?OpenElement](http://www.jur.lu.se/Internet/Biblioteket/Examensarbeten.nsf/0/746027B06079270BC1256D97004F52D0/$File/xsmall.pdf?OpenElement)



## 1.4 Disposition

Chapter 2 describes how competition can be distorted when undertakings cooperate instead of compete. The chapter further presents Article 81 of the EC Treaty, plus statistics on the largest fines imposed on cartels and undertakings which have violated article 81 of the EC Treaty from 1969 up to 2007.

A brief overview and comparison on the development of leniency programmes in the United States and Europe is presented in chapter 3. The chapter also focuses on the Commission's decisions under the 1996 and 2002 Leniency Notice and the launching of the ECN Model Leniency Programme.

Chapter 4 is devoted to game theory. The chapter does not intend to present a complete overview of game theory; but will instead focus on describing the basic games such as "the normal form game", "the prisoners' dilemma and "repeated games". In the end of chapter 4 the application of game theory to cartels and leniency programmes is discussed.

The Commission's latest Leniency Notice from 2006 is presented in chapter 5. Relevant changes and possible effects of the revised Leniency Notice are further discussed in the chapter together with the different opinions of the parties consulted by the Commission.

Finally, my analysis and conclusion on what components a successful EC leniency programme should contain and how it can be further influenced by the application of game theory on cartel agreements, are presented in chapter 6 and 7.

## 2 Cartels and Deterrence

*“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.”*

**Adam Smith.** *An Inquiry into the Nature and Causes of Wealth of Nations*, 1776, chapter X part II.

In a perfectly functioning market, market forces will create the terms of trade. In order to achieve this state of “perfect competition” no individual actor must be strong enough to determine the market conditions in a specific sector. In reality, undertakings in the capacity of a dominant position may influence the conditions on more than one market.<sup>5</sup> It is also possible for undertakings to reach such a dominant position by agreeing with their competitors that they should not compete. These various forms of prohibited co-operation between undertakings are known as *cartels*. Cartels are attractive to participants; if the cartel succeeds, the total profit of the participants will be higher than the sum of the individual profits would have been in a competitive market.<sup>6</sup>

Collaboration between undertakings in a cartel can be *horizontal* or *vertical*. A horizontal agreement exists when undertakings operating at the same level in the distribution chain, for example two manufacturers of a product, collaborate rather than compete. In contrast, vertical collaboration arises between undertakings operating at different levels of the market, for example a manufacturer and a distributor or a retailer.<sup>7</sup>

In some situations, horizontal collaboration can improve the production and distribution of goods and promote technical and economic progress to the benefit of society. In most cases however, a powerful cartel eliminates competition within the common market since its participants do not have to make an effort neither to improve its productivity nor the quality of their products. Consequently, the fact that cartels keep the least efficient undertakings in the market weakens competition and causes considerable damages to the economy in general.<sup>8</sup> Cartels also create allocative inefficiency by raising prices for consumers. For example, the *Citric Acid* and *Graphite Electrodes* cartels increased prices by 30% and 60% respectively.<sup>9</sup>

---

<sup>5</sup> Lidgard, H. H., *Competition Classics*, (2006), p. 7-8.

<sup>6</sup> Rodger, B. J., & MacCulloch, A., *Competition Law and Policy in the European Community and the United Kingdom*, (2001), p. 129.

<sup>7</sup> Lidgard, H. H., *Competition Classics*, (2006), p. 50-51.

<sup>8</sup> Furse, M., *Competition Law of the UK and EC*, (2002), p. 103-104.

<sup>9</sup> Leslie, C. R., *Antitrust Amnesty, Game Theory, and Cartel Stability*, (2006), p. 453.

## 2.1 Article 81 of the EC Treaty

Article 81 (1) of the EC Treaty prohibits agreements, horizontal or vertical, between undertakings, decisions by associations of undertakings and concerted practices which have as their object or effect the prevention, restriction or distortion of competition within the common market. In particular, activities such as fixing of purchase or selling prices, allocation of production or sales quotas, the sharing of markets including bid rigging, restriction of imports or exports and/or anti-competitive actions against other competitors are among the most serious violations of Article 81 of the EC Treaty.

Article 81 pursues one of the EC Treaty's main objectives as set out in Article 3 (g), namely that of achieving "*a system ensuring that competition in the internal market is not distorted*". Such a system is in turn important in order to achieve the goals set out in Article 2 of the EC Treaty, in particular "*a high degree of competitiveness and convergence of economic performance*".

Agreements or decisions prohibited by Article 81 (1) of the EC Treaty are automatically void according to Article 81 (2) but, under certain circumstances, may be declared inapplicable by Article 81 (3).

## 2.2 Fines for cartel infringements

Pursuant to Article 23(2) of Regulation No. 1/2003 the European Commission may by decision impose fines up to 10 % of the total turnover in the preceding business year on undertakings and associations of undertakings infringing Article 81 of the EC Treaty. In fixing the amount of the fine, regard shall be had both to the gravity and to the duration of the infringement.<sup>10</sup> The amount of the fines is paid into the Community budget.<sup>11</sup>

In order to increase the deterrent effect of fines the Commission, revised its guidelines for setting fines in competition cases in June 2006. Pursuant to the new guidelines, fines may within the 10% limit, be based on up to 30% of the company's annual sales to which the infringement relates, and be multiplied by the number of years of participation in the infringement.<sup>12</sup> Another novelty under the 2006 Guidelines is that a part of the fine – a so-called "entry fee" - may be imposed on the undertaking irrespective of the

---

<sup>10</sup> Council Regulation No. 1/2003, Article 23 (3).

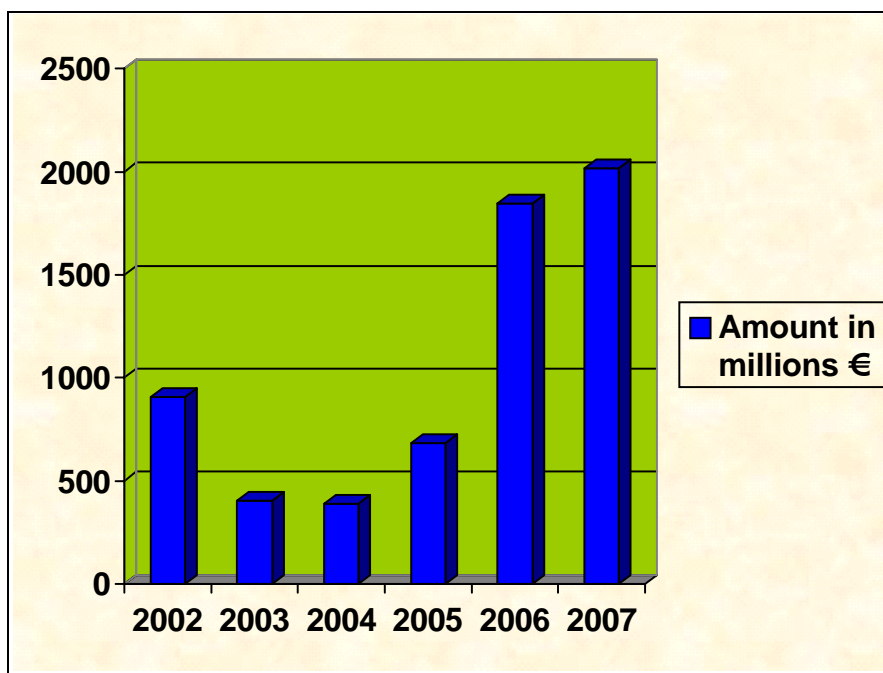
<sup>11</sup> MEMO/07/70, Commission action against cartels – questions and answers.

<sup>12</sup> Guidelines on the method of setting fines imposed pursuant to Article 23(2) (a) of Regulation No 1/2003, (2006/C210/02), p. 20-21, 24.

duration of the infringement. Finally, fines for repeat offenders may be increased up to 100%.<sup>13</sup>

In February 2007, the Commission imposed the largest fines so far on undertakings operating cartels for the installation and maintenance of lifts and escalators in Belgium, Germany, Luxembourg and the Netherlands. The cartel was fined a total amount of €992 312 200. As a consequence of being a repeat offender the fine imposed on ThyssenKrupp was increased by 50% up to €479 669 840, which is, in EU history, the largest fine ever imposed on a single undertaking. Competition Commissioner Neelie Kroes justified the large fines imposed on the undertakings participating in the cartel in a statement where she held that “*the damage caused by this cartel will last for many years ... for these companies the memory of this fine should last just as long.*”<sup>14</sup>

In April 2007, the Commission published statistics on the fines imposed on cartels and undertakings participating in cartels under Article 81 of the EC Treaty. The cartel statistics illustrate an evident development towards larger fines imposed on both cartels and single undertakings.



**FIGURE 1.** Cartel fines imposed 2002 – 2007-04-18, (corrected for Court judgements).<sup>15</sup>

<sup>13</sup> *Guidelines on the method of setting fines imposed pursuant to Article 23(2) (a) of Regulation No 1/2003*, (2006/C210/02) p. 28.

<sup>14</sup> Press release IP/07/209, *Commission fines members of lifts and escalators cartels over €990 million*, (2007-02-21).

<sup>15</sup> <http://ec.europa.eu/comm/competition/cartels/statistics/statistics.pdf>, (2007-05-08, 10:22).

Year	Case name	Amount in €
2007	Elevators and escalators	992.312.300
2001	Vitamins	790.505.000
2007	Gas insulated switchgear	750.712.500
2006	Synthetic rubber (BR/ESBR)	519.050.000
2002	Plasterboard	478.320 000
2006	Hydrogen peroxide and perborate	388.128.000
2006	Methacrylates	344.562.500
2006	Fittings	314.760.000
2005	Industrial bags	290.710.000
2001	Carbonless paper	270.939.000

TABLE 1. Ten highest cartel fines *per case* since 1969.<sup>16</sup>

Year	Undertaking	Case	Amount in €
2007	ThyssenKrupp	Elevators and escalators	479.669.850
2001	F. Hoffmann-La Roche AG	Vitamins	462.000.000
2007	Siemens AG	Gas insulated switchgear	396.562.500
2006	Eni SpA	Synthetic rubber (BR/ESBR)	272.250.000
2002	Lafarge SA	Plasterboard	249.600.000
2001	BASF AG	Vitamins	236.845.000
2007	Heineken NV	Dutch beer market	219.275.000.
2006	Arkema SA	Methacrylates	219.131.250
2006	Solvay SA / NV	Hydrogen peroxide	167.062.000
2006	Shell	Synthetic rubber (BR/ESBR)	160.875.000

TABLE 2. Ten highest cartel fines *per undertaking* since 1969.<sup>17</sup>

<sup>16</sup> <http://ec.europa.eu/comm/competition/cartels/statistics/statistics.pdf>, last updated 2007-04-27, (2007-05-07 11:21).

<sup>17</sup> <http://ec.europa.eu/comm/competition/cartels/statistics/statistics.pdf>, last updated 2007-04-27, (2007-05-07, 14:32).

# 3 The Development of Leniency Programmes

In the fight against cartels not only the imposition of heavy fines is used. Nowadays, competition authorities around the world encourage undertakings to break the silence by applying *leniency programmes* reducing the fine for a member of a cartel that brings evidence to the antitrust authority. To apply for leniency, undertakings are requested to contact, directly or through a legal adviser, the Commission only through the fax number + 32 2 299 45 85. The use of fax ensures that the precise time and date of the contact are duly recorded and that the information is treated with the utmost confidentiality within the Commission.<sup>18</sup>

In the introduction to the 2006 Leniency Notice the Commission states that “*it is in the Community interest to reward undertakings involved in secret cartels which are willing to put an end to their participation and co-operate in the Commission’s investigation*”. Consequently, the Commission considers that the interests of consumers and citizens in ensuring that secret cartels are detected and punished outweigh the interests of undertakings participating in cartels re fines.<sup>19</sup>

The United States was the first country to introduce a leniency programme in 1978. It took another 18 years for the EU to launch the first European leniency programme in 1996. Thus, the development and functioning of leniency programmes in Europe and in the United States have differed over time. In the following the development of the two leniency systems up to the 2002 Leniency Notice will be described and compared.

## 3.1 The American Model

The historical lineage of the U.S. antitrust laws derives from the common law actions intended to be incorporated into the *Sherman Act* in 1890. As the first measure passed by the U.S. Congress to prohibit trusts, the Sherman Act identified anti-competitive collusion as an “*illegal and criminal activity*”. Pursuant to § 1 Sherman Act, 15 U.S.C. § cartels can be punished with fines on individuals and corporations, and by imprisonment for individuals.<sup>20</sup> In order to precisely define illegal acts and to provide criminal sanctions to ensure compliance, the *Clayton Act* was enacted in 1914 as a supplement to the Sherman Act.<sup>21</sup>

---

<sup>18</sup> Aubert, C., et al., *The Impact of Leniency Programs and Whistleblowing Programs on Cartels*, (2006) p. 2.

<sup>19</sup> *Commission notice on the immunity from fines and reduction of fines in cartel cases*, (2006/C 298/11), p. 3.

<sup>20</sup> Harding, C. & Joshua, J., *Regulating Cartels in Europe - A Study of Legal Control of Corporate Delinquency*, (2003), p. 51.

<sup>21</sup> Gellhorn, E., et al., *Antitrust Law and Economics*, (2004), p. 34-36.

### 3.1.1 The American Corporate Leniency Policy

The first American leniency programme came into operation in 1978. It has been argued that because of lacking transparency and a wide discretion of the U.S. Department of Justice (DOJ), the programme only attracted on an estimate one application a year and did not lead to the detection of any international cartels.<sup>22</sup>

In 1993 the revised version of the American Corporate Leniency Policy was introduced by the DOJ. The success of this version is attributable to a number of features such as "*automatic amnesty*" granted to the first undertaking to present evidence before the investigation of the cartel has started. As long as reporting is a truly corporate act the automatic amnesty also extends to include all individual directors, officers, and employees of the undertaking who cooperate in the investigation.<sup>23</sup>

In Section B of the 1993 American Corporate Leniency Policy an "*alternative amnesty*" is offered subsequent to the start of an investigation. The alternative amnesty is however subject to a number of conditions. In order to receive full immunity from section B the reporting undertaking must be the *first* to come forward. Further on, the Antitrust Division must not already have evidence likely to result in a sustainable conviction or grant a leniency that would be unfair to other undertakings. The undertaking must also take prompt and effective action in order to terminate its part in the activity, and in so far it is possible provide restitution to injured parties and fully cooperate in the investigations of the Antitrust Division. An undertaking which has been the leader or the originator of the cartel, or has coerced other parties to participate in the illegal activity may never be granted leniency.

Due to the fact that investigations many times are initiated by evidence obtained as a result of an investigation of a completely separate industry, the DOJ extended the American Corporate Leniency Policy in 1999 by introducing an "*Amnesty Plus*" provision for undertakings which had lost "the race to the courtroom door" in relation to the first market. The "Amnesty Plus" provision consists of a combination of leniency and an extra reward in the plea bargaining arena (mitigation for cooperation during the investigation). If an undertaking is first to self report and produce evidence of an illegal activity in a second market it will consequently receive full immunity on this market and none of its officers, directors, and employees who cooperate will be prosecuted in connection with that offence. The undertaking will also receive a significant additional discount by the Division in calculating an appropriate fine for its participation in the first conspiracy.<sup>24</sup> To complement the Corporate Leniency Policy, the

---

<sup>22</sup> Harding, C. & Joshua, J., *Regulating Cartels in Europe - A Study of Legal Control of Corporate Delinquency*, (2003), p. 213.

<sup>23</sup> The Department of Justice, *Corporate Leniency Policy*, (1993), Section A.

<sup>24</sup> Hammond, Scott, *A Summary Overview of the Antitrust Division's Criminal Enforcement Program*, presented at the New York Marriott Marquis, New York, January 23, 2003.

*Individual Leniency Policy* was introduced in 1994 offering individuals involved in a conspiracy the possibility to apply directly and receive amnesty on their own behalf, independently of their company, fellow workers and managers.<sup>25</sup>

The *Antitrust Criminal Penalty Enhancement and Reform Act* launched in 2004 limits the total private civil liability for undertakings that meet the requirements for amnesty. In Section 213 (b) the legislation defines liability to comprise actual “*damages attributable to the commerce done by the applicant in the goods or services affected by the violation*”. Consequently, undertakings fulfilling the requirements for leniency are no longer liable for treble but only for single damages. Neither are undertakings liable for damages suffered by their co-conspirators’ customers. On the other hand the act increases the potential liability for cartel participants that do *not* receive leniency. In addition to their previous liability those undertakings may be joint and severally liable for twice the actual damages suffered by the customers of the leniency applicant.<sup>26</sup>

### **3.1.2 Effects of the American Leniency Programme**

The revision of the American Leniency Policy granting automatic immunity to the first leniency applicant proved to be successful. Since 1993 the number of applications has multiplied to more than 20 per year.<sup>27</sup> One reason for this is that the *Antitrust Criminal Penalty Enhancement and Reform Act* (2004) increased the magnitude of penalties imposed on both undertakings and individuals that do *not* receive leniency. The maximum statutory fine for undertakings has been increased from 10 to 100 million US Dollars, and in relation to individuals the maximum statutory criminal fines have been increased from 350.000 US Dollars to 1 million US Dollars. In addition, the maximal jail term for individuals has been increased from 3 to 10 years.<sup>28</sup>

Another incentive for an undertaking to report its illegal participation in cartels is dependent on the fact that the DOJ has as a *confidentiality policy*. As a result of this policy the DOJ will, in the absence of prior disclosure or agreement with the applicant, treat the identity of an amnesty applicant or any information obtained from the applicant as confidential, unless authorized by court order. In order to protect the Amnesty Program, the Division will further not disclose the identity of, or any information

---

<sup>25</sup> Spagnolo, G., *Leniency and Whistleblowers in Antitrust*, (2006), p.11.

<sup>26</sup> Spagnolo, G., *Leniency and Whistleblowers in Antitrust*, (2006), p.12.

<sup>27</sup> Brisset, K. & Thomas, L., *Leniency Program: A New Tool in Competition Policy to Deter Cartel Activity in Procurement Auctions*, (2004), p. 6.

<sup>28</sup> Buccirosi, P. & Spagnolo, G., *Optimal Fines in the Era of Whistleblowers*, (2006), p. 5.



received from amnesty applicants to authorities in any other legal systems unless the amnesty applicant first agrees to the disclosure.<sup>29</sup>

## 3.2 The European Model

The European regulation of business cartels has gradually developed during the twentieth century. Before the 1930s manufacturing cartels were a tolerated feature in many European countries. In fact, during the interwar period cartels were so powerful that economists have estimated that international cartels controlled almost forty percent of world trade between 1929 and 1937.<sup>30</sup> However, after the Second World War, many assumptions underlying the international trading system were open to question. A further dimension to the regulation of competition also arose with the establishment of the European Economic Community in 1957 and the need legally to protect the setting up and operation of a European common market.<sup>31</sup>

### 3.2.1 The 1996 Leniency Notice

In the introduction to the 1996 Leniency Notice the Commission stated that it was “*aware of the fact that certain enterprises participating in cartels wished to terminate their involvement and inform the Commission of the existence of the cartel*”. However, the risk of receiving large fines deterred many undertakings from doing so. In order to provide an incentive for cartel members to break the “silence of conspiracy”, the Commission therefore implemented the 1996 Leniency Notice to set out the conditions under which undertakings may be exempted from, or granted reductions in fines.<sup>32</sup>

#### 3.2.1.1 The conditions for non imposition of a fine / substantial reduction

The 1996 Leniency Notice comprised of three Sections (B, C and D), each setting out the extent of reduction in fines, which an undertaking could expect to receive depending on which conditions of the 1996 Leniency Notice, it fulfilled.

According to section B the first undertaking to adduce decisive evidence and cooperate fully with the competition authorities prior an investigation would under the condition that it had not been the instigator to the cartel or played a determining role in it benefit from a reduction of *at least 75 %* of the fine. An undertaking fulfilling the conditions set out in Section B, point (b) to (e), such as the requirements of “*decisive evidence*” and “*complete and continuous cooperation*”, but which did not cooperate with the

---

<sup>29</sup> U.S. Department of Justice, Spratling, G. R., *The Corporate Leniency Policy: Answers to Recurring Questions*, (1998), p. IV.

<sup>30</sup> Leslie, C. R., *Trust, Distrust and Antitrust*, (2004), p. 518.

<sup>31</sup> Harding, C. & Joshua, J., *Regulating Cartels in Europe - A Study of Legal Control of Corporate Delinquency*, (2003), p. 52-54.

<sup>32</sup> Van Bael, I. & Bellis, F., *Competition Law of the European Community*, (2005), p. 1120.

authorities until *after* an investigation (but before it had produced evidence sufficient to “initiate a procedure leading to a final decision”) received a 50-75 % reduction in fines under Section C of the 1996 Leniency Notice.

All other undertakings whose confession and cooperation materially contributed to the Commission’s case, or after the statement of objections, did not substantially contest the facts alleged by the Commission received a 10-50% reduction in fines under Section D.<sup>33</sup>

### **3.2.1.2 The Commission’s decisions under the 1996 Leniency Notice**

Between 1996 and 2001 the Commission granted full immunity on only three occasions. The first undertaking to benefit from full immunity under the 1996 Leniency Notice was Aventis (formerly Rhone Poulenc) which participated in a series of secret cartels sharing markets and fixing prices on vitamins. The Commission considered Aventis to be the first undertaking to adduce decisive evidence on the existence of the cartel and to meet all other requirements set out in Section B of the 1996 Leniency Notice. As a result, Aventis was granted a 100% reduction of the fine that otherwise would have been imposed if it had not cooperated with the Commission.<sup>34</sup>

In *Carbonless Paper*, ten European carbonless paper distributors and producers were fined a total amount of €313, 7 millions for taking part in a price-fixing and market-sharing cartel in the carbonless paper industry 1992-1995. One undertaking, Sappi was however granted full immunity from fines since it submitted information and a written statement about its participation before the Commission had undertaken an investigation or had sufficient information to establish the existence of the cartel. The Commission also considered that Sappi maintained continuous and full cooperation throughout the investigation and that it put an end to its participation the day it disclosed the existence of the cartel. In addition, the Commission stated that Sappi had not compelled any other undertakings to participate in the cartel and that it had not acted as a ringleader or as an instigator in the cartel.<sup>35</sup>

The first undertaking to benefit from a “*substantial reduction*” in fines under section C of the 1996 Leniency Notice was Showa Denko, which received a 70% reduction of fines for cooperating with the Commission and providing it with decisive evidence on the *Graphite Electrodes* cartel. The Commission especially regarded evidence such as a “CMS report” (central monitoring system of sales value) and pricelists handed in by Showa Denko

---

<sup>33</sup> Brisset, K. & Thomas, L., *Leniency Program: A New Tool in Competition Policy to Deter Cartel Activity in Procurement Auctions*, (2004), p. 2.

See also the 1996 Commission Notice on the non-imposition or reduction of fines in cartel cases, (96/C 207/04), p. B-D.

<sup>34</sup> Commission Decision, COMP/E-1/37.512, *Vitamins*, p. 741-742.

<sup>35</sup> Commission Decision, COMP/E-1/36.212, *Carbonless Paper*, p. 436-443.

as decisive evidence when establishing the facts on which the decision was based.<sup>36</sup>

The importance of being the *first* whistleblower was shown in *Fine Arts Auction houses*. From April 1993 and lasting at least until February 2000 the two main worldwide competitors for the sale on commission by auction of fine art objects, Christies International plc (Christie's) and Sotheby's Holdings Inc (Sotheby's), entered into an agreement contrary to Article 81 (1) of the EC Treaty. In order to prevent or restrict competition in the fine arts auction business the two undertakings adopted identical commission structures for vendors, moved to a non-negotiable scale of vendor commission rates, increased commission charges and refrained from granting special conditions to sellers.<sup>37</sup>

Christie's approached the Commission via its legal adviser on January 24, 2000. Sotheby's first contacted the Commission by telephone on February 4, 2000 after receiving the information that Christie's had put the US DOJ in possession of relevant material.<sup>38</sup> In its decision the Commission stated that Christie's was the first undertaking to inform about the existence of the cartel and provide the Commission with decisive evidence without which the cartel might not have been disclosed. Christie's had further not played a determining role or compelled Sotheby's to take part in the cartel. In addition, Christie's had ended its involvement in the cartel and continuously cooperated with the Commission throughout the procedure. The Commission therefore considered Christie's to meet the conditions in section B of the 1996 Leniency Notice.<sup>39</sup>

Sotheby's submitted that it met the conditions set out in section D under the 1996 Leniency Notice and that it therefore should be entitled to the maximum reduction, of 50%. The Commission noted that Sotheby's fulfilled the conditions of section D but only granted Sotheby's a 40% reduction of the fine without any further explanation.<sup>40</sup>

In *Citric Acid* the Commission found five undertakings on the citric acid market guilty of participating in a worldwide cartel from 1991 to 1995. Through the cartel the undertakings had fixed the price and shared out the market for citric acid, which is one of the most widely used additives in the food and beverage industry. The Commission started to investigate the case in 1997 when it became aware of the fact that various undertakings had been charged by the US authorities for participating in an international conspiracy. Part of the evidence on the cartel was however, provided by the involved undertakings to the Commission at later stages of the investigation.<sup>41</sup>

---

<sup>36</sup> Commission Decision, COMP/36.490, *Graphite Electrodes*, p. 217-218.

<sup>37</sup> Commission Decision, COMP/E-2/37.784, *Fine Art Auction Houses*, p. 1.

<sup>38</sup> Commission Decision, COMP/E-2/37.784, *Fine Art Auction Houses*, p. 51-57.

<sup>39</sup> Commission Decision, COMP/E-2/37.784, *Fine Art Auction Houses*, p. 228.

<sup>40</sup> Commission Decision, COMP/E-2/37.784, *Fine Art Auction Houses*, p. 229-231.

<sup>41</sup> Commission Decision, COMP/36.604, *Citric Acid*, p. 2-4.

Cerestar Bioproducts was the first undertaking to provide the Commission with decisive information on the cartel. However, since Cerestar Bioproducts did not approach the Commission until *after* it was fully aware that the citric acid cartel was the object of an on-going investigation by the Commission, it was granted a 90 percent reduction of the fine rather than full immunity under section B. Another undertaking involved in the cartel was Archer Daniels Midland Inc (ADM). ADM submitted to the Commission that it should be regarded as the first to provide documentary and decisive evidence since the evidence provided by Cerestar Bioproducts was limited and unclear. The Commission on the other hand considered the information already provided by Cerestar Bioproducts to be sufficient to establish the existence of the cartel, while the information presented by ADM was not considered to be of such decisive character. Instead the Commission concluded that ADM fulfilled the conditions set out in section D and granted it a 50 % reduction.<sup>42</sup>

In *British Sugar* the two sugar manufacturers, British Sugar plc (British Sugar), Tate & Lyle plc (Tate & Lyle) and the two sugar merchants Napier Brown & Company Ltd (Napier) and James Budgett Sugars Ltd (James Budgett) coordinated prices on industrial and retail white granulated sugar.<sup>43</sup>

British Sugar, Napier Brown and James Budgett were each granted a 10 % reduction of fines under section D of the 1996 Leniency Notice. Tate & Lyle on the other hand put an end to its illegal activity and cooperated with the Commission by sending in two incriminating letters consisting of decisive evidence at a time when the Commission did not know of the agreement and/or the concerted practice. The conditions set out in points (a), (b) and (c) of section B were, therefore fulfilled. However, after initial revelations, Tate & Lyle did not maintain continuous and complete cooperation as set out in point (d) of section B. As a result Tate & Lyle could not benefit from the favourable treatment pursuant to section B or C. Instead the Commission considered it appropriate to grant, under an analogous application of Section D, a 50 % reduction of the fine that otherwise would have been imposed if Tate & Lyle had not initially cooperated.<sup>44</sup>

### **3.2.1.3 The effects of the 1996 Leniency Notice**

Between 1996 and 2001 the Commission granted full immunity only on three occasions, much relating to the fact that even if an undertaking was the first to apply for leniency there were no guarantees of immunity until the decision of the Commission was given. The uncertain value of the evidence presented and the uncertainty of how much evidence the Commission might already have from other sources made the application of the 1996 Leniency Notice unpredictable and its benefits uncertain. Especially industries traditionally under surveillance for cartel activity were precluded from ever receiving immunity or a very substantial reduction in fines since they had no

---

<sup>42</sup> Commission Decision, COMP/36.604, *Citric Acid*, p. 297-316.

<sup>43</sup> Commission Decision, COMP/33.708, *British Sugar*, p. 1.

<sup>44</sup> Commission Decision, COMP/33.708, *British Sugar*, p. 213-218.

possibility to demonstrate the existence of a cartel before the Commission had commenced its investigations.<sup>45</sup>

Also, the terms “instigator” and “determining role” under section B were vague and did not necessarily comprise the same actor. The undertaking that made contact with another to fix prices would be the “instigator” and the other competitor may later have played a “determining role”. In addition, the vague requirements under Sections B and C that an undertaking had to present “decisive evidence” or evidence “materially contributing when establishing the existence of the infringement” acted as deterrent factors.

*Fine Art Auction Houses* also shows that the Commission had a wide discretion when deciding the exact reduction of fines within a given section of the 1996 Leniency Notice. The *Citric Acid* decision further illustrates the difficulties and uncertainties that arose under the 1996 Leniency Notice when an undertaking claimed to be the first whistleblower. Being the first to provide the Commission with evidence did not necessarily imply that the Commission would consider the evidence to be of a “decisive character”. As a consequence of this, subsequent undertakings such as ADM had legitimate expectations to benefit from immunity in case the evidence provided by “the first” undertaking (Cerestar) would not be regarded as decisive.

Also, the fact that the Commission could not legally guarantee applicants immunity from legal action in other States also worked as a disincentive to apply for leniency. Section E point 4 of the 1996 Leniency Notice states that

*“the enterprise benefiting from the leniency in respect of the fine will also be named in that decision as having infringed the Treaty and will have the part it played described in full therein. The fact that the enterprise cooperated with the Commission will also be indicated in the decision, so as to explain the reason for the non-imposition or reduction of the fine”.*<sup>46</sup>

As a result, many undertakings waited until they felt cornered before providing the Commission with information under section D of the 1996 Leniency Notice.<sup>47</sup>

### **3.2.2 The 2002 Leniency Notice**

After five years of implementation the Commission considered it necessary to modify the 1996 Leniency Notice in order to increase the transparency and certainty of the conditions on which reduction of fines would be

---

<sup>45</sup> Geradin, D. & Henry, D., *The EC fining policy for violation of competition law: An empirical review of the Commission decision practice and the Community courts' judgements*, (2003), p. 15-17.

<sup>46</sup> 1996 Commission Notice on the non-imposition or reduction of fines in cartel cases, (96/C 207/04), Section E p. 4.

<sup>47</sup> Geradin, D. & Henry, D., *The EC fining policy for violation of competition law: An empirical review of the Commission decision practice and the Community courts' judgements*, (2003), p. 15-17.

granted. In that way undertakings would to a larger extent be able to rely on legitimate expectations when disclosing the existence of a cartel to the Commission. A closer connection between the level of reduction in fines and the company's contribution to the establishment of an infringement was also seen as a necessary measure in order to improve the effectiveness of the Leniency Notice.<sup>48</sup>

### **3.2.2.1 Immunity thresholds**

The 2002 Leniency Notice comprised of two sectors, A and B granting the first undertaking full immunity from fines and setting out the extent of a reduction in fines the following undertakings could expect to receive.

Under section A the first undertaking to provide evidence which allowed the Commission to commence a dawn raid investigation (p. 8a) or enabled it to find a cartel infringement in connection with an alleged cartel affecting the Community (p. 8b) was granted full immunity. In order for immunity to be granted under p. 8(a) the Commission must not have had sufficient evidence to commence a dawn raid investigation. For immunity to be granted under p. 8 (b) the Commission must not already have had sufficient evidence to find a cartel infringement or granted another undertaking conditional immunity from fines under p. 8(a).

To be granted immunity an undertaking had to cooperate fully with the Commission throughout the administrative procedure. It also had to provide the Commission with all the evidence that came into its possession (p. 11 (a)), end the infringement immediately (p. 11(b)) and not have coerced other undertakings to take part in the cartel (p. 11(c)).

An undertaking which did not meet the conditions for immunity pursuant to section A could still benefit from reduction of fines pursuant to section B of the 2002 Leniency Notice if it immediately ended its involvement in the cartel and gave evidence which represented "significant added value" in addition to the evidence already in the Commission's possession.

The first undertaking to provide the Commission with evidence of the suspected infringement that represented "significant added value" under Section B received a 30-50% reduction. The second undertaking received a 20-30% reduction, and subsequent undertakings received reductions up to 20%. To determine the exact level of reduction the Commission had as its aim to take into account the extent and the continuity of the cooperation, the time at which the evidence was submitted and the extent to which it represents "added value".<sup>49</sup>

---

<sup>48</sup> *Commission notice on the immunity from fines and reduction of fines in cartel cases* (2002/C 45/03), p. 5, 29.

<sup>49</sup> *Commission notice on the immunity from fines and reduction of fines in cartel cases*, (2002/C 45/03), p. 23 (b).

Another novelty under the 2002 Leniency Notice was the introduction of *conditional immunity* for undertakings fulfilling the conditions for immunity in *writing*. This innovation meant that the Commission would not consider other applications with regard to the same infringement until it had taken a position on an existing written application.<sup>50</sup>

### **3.2.2.2 The Commission's decisions under the 2002 Leniency Notice**

In *Rubber Chemicals* the Commission fined four undertakings € 75.86 millions for fixing prices on certain rubber chemicals in the EEA and on world-wide markets at least from 1996 to 2001.<sup>51</sup> Flexsys was the first undertaking to submit evidence enabling the Commission to adopt a decision in order to carry out an investigation pursuant to Point 14(3) of Regulation No 17 in connection with the alleged cartel. Since Flexsys' application satisfied the conditions set out in point 8 (a) and 9 of the Leniency Notice it was granted conditional immunity from fines, and in the end of the administrative procedure it received a 100% reduction of fines.

The other undertakings participating in the cartel submitted evidence to the Commission at different stages of the procedure. The Commission granted a maximum reduction of 50% to Crompton for providing significant added value pursuant to point 23(b) of the 2002 Leniency Notice. The second undertaking to meet the requirements set out in point 23 of the 2002 Leniency Notice was Bayer which provided the Commission with evidence representing significant added value with respect to the evidence already in the Commission's possession. However, the Commission considered the added value to be limited since Bayer only admitted infringement for the period 1998-2001. The Commission therefore only granted Bayer the minimum reduction of 20% within the band. The third undertaking to meet the requirements of point 21 of the 2002 Leniency Notice was General Quimica which received a 10% reduction of fines.<sup>52</sup>

In *Raw Tobacco Italy* four major Italian processors of raw tobacco colluded on overall purchasing prices and strategies, and allocated suppliers on a preferential or exclusive basis between 1995 and 2002. The processors also rigged their bids on public auctions organised by public authorities for the sale of tobacco.<sup>53</sup>

The Commission granted one of the processors, Deltafina, conditional immunity on its application only days after the adoption of the 2002 Leniency Notice. Deltafina cooperated throughout the whole investigation and provided the Commission with decisive evidence. However, at the oral

---

<sup>50</sup> Commission notice on the immunity from fines and reduction of fines in cartel cases, (2002/C 45/03), p. 15.

<sup>51</sup> IP/05/1656 Press Release, 2005-12-21, *Commission fines four firms €75.86 million for rubber chemical cartel*.

<sup>52</sup> COMP/F/38.443, *Rubber Chemicals*, p. 351 -378.

<sup>53</sup> COMP/C.38.281/B.2, *Raw Tobacco Italy*, p. 5.

hearing of June 22, 2004 it became clear that Deltafina had divulged details of its leniency application at a meeting attended by representatives from the other undertakings participating in the cartel. As a result, two of these undertakings applied for leniency the same day. Since the meeting took place *before* the Commission had an opportunity to carry out the investigations pursuant to Point 11(a) of the Leniency Notice, Deltafina failed to comply with the required conditions in order to receive full immunity at the end of the administrative period.

The Commission stated that point 11(a) of the 2002 Leniency Notice was to be drafted widely. To “*cooperate fully, on a continuous basis and expeditiously throughout the Commission’s administrative procedure*” was consequently not only limited to the provision of evidence relating to the infringement, but also included an obligation to refrain from taking any step which could undermine the Commission’s ability to investigate and/or find the infringement. The Commission therefore stated that a leniency applicant could not invoke a legitimate expectation that confidentiality may not be part of point 11(a) of the 2002 Leniency Notice.<sup>54</sup>

The decisive evidence qualifying Deltafina for conditional immunity would by its very nature constitute “significant added value” pursuant to Section B of the 2002 Leniency Notice since the Commission did not possess any material evidence in respect of the same facts. However, the Commission stated that a full application of Section B on Deltafina would be bizarre since a failure to comply with the provision set out in point 11 “*may result in the loss at any stage of any favourable treatment*”. Consequently, Deltafina did not receive *any* reduction of fines.<sup>55</sup>

In February 2007 the European Commission fined five members of a *lifts and escalators cartel* for the installation and maintenance of lifts and escalators in Belgium, Germany, Luxembourg and the Netherlands. Between at least 1995 and 2004 the undertakings had rigged bids for procurement contracts, fixed prices and allocated projects to each other. Projects that were rigged included: lifts and escalators for hospitals, railway stations, shopping centres and commercial buildings. As maintenance is often made by the undertakings that installed the equipment in the first place the Commission presumed the effects of the cartel to last from twenty to fifty years. The fine imposed on the cartel therefore amounted to €992 312 300, which is the largest fine ever imposed by the Commission for cartel violations.

KONE subsidiaries received full immunity in respects of the cartels in Belgium and Luxembourg, as they were first to provide information on these cartels. In respect to the Dutch market, Otis Netherlands enjoyed full immunity under the 2002 Leniency Notice. Yet, in its press release the

---

<sup>54</sup> COMP/C.38.281/B.2, *Raw Tobacco Italy*, p. 95-96.

<sup>55</sup> COMP/C.38.281/B.2, *Raw Tobacco Italy*, p. 108.



Commission does not specify the underlying circumstances for its decision.<sup>56</sup>

### 3.2.2.3 Effects of the 2002 Leniency Notice

As a result of the 2002 Leniency Notice the applications for leniency and the size of fines exponentially increased. In the period from 14 February 2002 until the end of 2005 the Commission received 167 applications under the 2002 Leniency Notice. Of these applications 87 were requests for immunity and 80 were requests for reduction in fines.<sup>57</sup> It has been argued that the increased amount of applications was much due to the fact that the 2002 Leniency Notice got rid of vague concepts such as “instigator” and “determining role”, and that the evidentiary hurdle to climb for the applicant somewhat decreased. Another novelty pursuant to Point 8 (b) of the 2002 Leniency Notice was that the first undertaking to step forward, even *after* the Commission had commenced an investigation could be guaranteed immunity if it provided the Commission with sufficient information.<sup>58</sup>

Besides the above-mentioned improvements, some uncertainties remained in the 2002 Leniency Notice, especially the evidentiary thresholds for leniency applicants, which were accused of lacking transparency and predictability. It has been argued that the reason for this was the absence of explicit guidelines and that the formulations of point 8 (a) and (b) were too elastic. In addition, the fact that the application procedure under point 13 required the applicant to provide already packed evidence was criticized as was the absence of a marker system accepting immunity applications on the basis of limited information.<sup>59</sup>

Despite the many opinions in favour of a possibility for leniency applicants to file a simultaneous application in the jurisdictions affected by a cartel, the 2002 Leniency Notice did not introduce a “one stop leniency shop”. As a result, an application to one European competition authority still could not be counted as an application for leniency to another.<sup>60</sup> Another effect of the 2002 Leniency Notice was that once the Commission had prohibited a cartel, its decision also revealed the identity of the leniency applicants. As a result of this exposure, it has been argued that leniency applicants compared to non-cooperating cartel participants jeopardised to a larger extent their defence in private damage action cases in front of National courts.<sup>61</sup>

---

<sup>56</sup> IP/07/209 Press Release, 2007-02-21, *Commission fines members of lifts and escalators cartels over €990 million*.

<sup>57</sup> Press Release, *Competition proposes changes to the Leniency Notice – frequently asked questions*, MEMO/06/357, 29<sup>th</sup> September 2006.

<sup>58</sup> Geradin, D. & Henry, D., *The EC fining policy for violation of competition law: An empirical review of the Commission decision practice and the Community courts' judgements*, (2003), p. 15-17.

<sup>59</sup> Joshua, J., *That Uncertain Feeling: The Commission's 2002 Leniency Notice*, (2006), p. 8-9.

<sup>60</sup> Joshua, J., *That Uncertain Feeling: The Commission's 2002 Leniency Notice*, (2006), p. 14.

<sup>61</sup> Baer, W., et al, *International leniency coordination*, (2007).

### 3.3 The ECN Model Leniency Programme

As stated above, undertakings that take part in cross-border cartels on the common market expose themselves to penalties in several jurisdictions. Even though leniency programmes today are offered simultaneously in a number of countries, each race for immunity is run separately. Therefore, an application for leniency to one national competition authority is not considered as an application for leniency to another country's authority.<sup>62</sup> Concerns have been raised that the co-existence of several leniency programmes with different rules and procedures might dissuade applicants from reporting cross-border cartels. In order to increase the predictability for applicants and avoid different requirements for leniency in the Member States, the European Competition Network (ECN) representing the network of the EC Member States' Competition Authorities and the European Commission, launched the *ECN Model Leniency Programme* in September 2006.<sup>63</sup>

The ECN Model Programme is seen as a first step towards a harmonised leniency policy throughout the EU but it is not a legally binding instrument. The possibility to create a mutual recognition system has been discussed within the ECN, but has not yet been considered a realistic alternative. The ECN Model Leniency Programme sets out the principal elements which the ECN members believe should be common in all leniency programmes such as, termination and cooperation duties and the type of information an applicant should provide in order to get immunity. The programme also introduces a model for a uniform summary application system at national level for immunity applications concerning more than three Member States.<sup>64</sup>

### 3.4 Comparison between the American and European Model

The American and European systems have gradually become more closely aligned. A common feature of the EU and the US leniency programmes is for example that only the first party to self report is entitled to full immunity.<sup>65</sup> However, the EU leniency programme also offers reduction of fines to undertakings which are not the first to come forward, while the US programme only awards leniency to the very first undertaking which "blows the whistle".<sup>66</sup>

---

<sup>62</sup> 2006 ECN Model Leniency Programme, p. 1.

<sup>63</sup> Press Release, MEMO/06/356, 29<sup>th</sup> September 2006.

<sup>64</sup> Press Release, MEMO/06/356, 29<sup>th</sup> September 2006.

<sup>65</sup> Buccirosi, P., & Spagnolo, G., *Optimal Fines in the Era of Whistleblowers*, (2006), p. 19.

<sup>66</sup> Buccirosi, P., & Spagnolo, G., *Optimal Fines in the Era of Whistleblowers*, (2006), p. 19.

It has also been argued that the American Leniency Programme is more predictable and less complicated than the European version. One example of this is the American system for granting *automatic* immunity for the first undertaking to a self-report. This system is said to have generated nervousness and uncertainty among cartel members and creates a will to win “the race to the courtroom door”.<sup>67</sup> In addition, the application procedure after an investigation has started is more complicated in the EU since the possibility for an undertaking to receive leniency depends on the amount and the novelty of the information reported.<sup>68</sup> Another difference between the American and European Leniency Programme concerns the treatment of “cartel ringleaders”. Contrary to the European system the United States does not allow ringleaders to obtain a reduction of fines.<sup>69</sup> Further on, before 2006 the European leniency programme did not entail a confidentiality policy corresponding to the one offered in the United States.

Also the interpretation of the concept “leniency” is different in the two systems. The European interpretation of leniency is that it stands for a *reduction* in fines whereas leniency usually means *full immunity* in the American system. Consequently in the American system “leniency” is equivalent with the term “immunity”.<sup>70</sup>

Perhaps the most fundamental difference between the two systems is the fact that the Commission must act without criminal justice. Since there is no Federal Criminal Law in Europe addressing cartel delinquency the only target of EC Competition Law is “undertakings”. Instead, the Commission has to rely on heavy fines to deter cartels and induce amnesty applications.<sup>71</sup> As a result of this, the fines imposed by the Commission are considerably greater than the criminal fines being imposed for conduct of similar scale in the United States. That is true not only in terms of the total amount of fines imposed but also in terms of the relative level of the fines in proportion to the amount of commerce affected by the company's participation in each country.<sup>72</sup>

---

<sup>67</sup> Joshua, J., *Regulating Cartels in Europe - A Study of Legal Control of Corporate Delinquency*, (2003), p. 215.

<sup>68</sup> Spagnolo, G., *Leniency and Whistleblowers in Antitrust*, (2006), p. 14-15.

<sup>69</sup> Buccirossi, P., & Spagnolo, G., *Optimal Fines in the Era of Whistleblowers*, (2006), p. 14.

<sup>70</sup> Hammond Scott, *Cornerstones of an Effective Leniency Programme*, (2004).

<sup>71</sup> Joshua, J., *The Criminalisation of Antitrust, Leniency and Enforcement: the Carrot and the Stick – A view from Europe*, p. 5-6.

<sup>72</sup> Hammond Scott, *Cornerstones of an Effective Leniency Programme*, (2004).

## 4 Game Theory

In 1944 John von Neumann and Oskar Morgenstern introduced the concept of game theory by publishing *The Theory of Games and Economic Behaviour*. The concept of game theory was further developed in the 1950s when the scientists at RAND, a non-profit research organization originally set up by the United States Army Air Forces, published their theory on the “prisoners’ dilemma”.<sup>73</sup>

### 4.1 The Normal Form Game

The normal form game consists of three elements:

1. The players in the game.
2. The strategies available to the players.
3. The payoff each player receives for each possible combination of strategies.

If both players know everything about the structure of the game and can observe the strategy choice of the other player, the game is characterised by *complete and perfect information*. However, strategic problems arise in games of *complete but imperfect information* where two players interact with each other and each must decide what to do without knowing what the other player is doing.<sup>74</sup>

### 4.2 The Prisoners’ Dilemma

The name “prisoner’s dilemma” comes from a story which illustrates the strategic interactions of two arrested criminals who both want to minimize their time in prison, but are indifferent to how much time the other criminal spends behind bars. The prosecutor has sufficient evidence to convict both prisoners for a minor crime resulting in two years of prison (-2, -2), but can not convict either of the prisoners for the maximum penalty without at least one confession. If one of the prisoners confesses and the other does not, the former will go free and the latter will be tried and given the maximum penalty of ten years in prison (0, -10). If both confess, the prosecutor will not ask for the maximum penalty, but will send both criminals to prison for six years (-6, -6).<sup>75</sup>

Since the prisoners are kept in separate rooms they can not communicate with one another. Instead, they have to decide strategy: whether to confess or to keep quiet without knowing what the other prisoner chooses to do. The structure of the game is presented in the diagram shown in Figure 2,

---

<sup>73</sup> Baird, D. G., et al., *Game Theory and the Law*, (1994), p. 33.

<sup>74</sup> Baird, D. G., et al., *Game Theory and the Law*, (1994), p. 10.

<sup>75</sup> Baird, D. G., et al., *Game Theory and the Law*, (1994), p. 33.

commonly referred to as the “pay-off matrix” where the pay-offs are negative as they represent years in prison.

		<b>Prisoner 2</b>	
		Silent	Confess
<b>Prisoner 1</b>	Silent	<b>-2, -2</b>	<b>-10, 0</b>
	Confess	<b>0, -10</b>	<b>-6, -6</b>

**FIGURE 2.** The Prisoners’ Dilemma.<sup>76</sup>

The figure shows that confessing is a dominant strategy – the optimal move for each player to make regardless of what the other player is doing. If prisoner 2 is silent, prisoner 1 is better off confessing, and if prisoner 2 confesses, prisoner 1 is still better off confessing.<sup>77</sup>

The solution that both prisoners confess and therefore each will spend six years in prison is often called equilibrium; there is no reason for either player to change his or her strategy. There is a famous concept in game theory that characterizes this equilibrium – *Nash equilibrium*. In such equilibrium, no individual player can do any better by changing his or her behaviour *as long as the other players do not change theirs*. However the Nash equilibrium has shortcomings since some games have no Nash equilibrium while others have several. In the prisoners’ dilemma confessing is a Nash equilibrium for both prisoners, but it is not a *Pareto-efficient* solution to the game since both prisoners would spend less time in prison if they both kept quiet.<sup>78</sup> The prisoners’ dilemma can therefore be characterised as a game of trust requiring each player *not* to confess in order to achieve a Pareto-superior outcome where no other strategy can make one of the prisoners as well off or strictly better. To keep quiet is however, an impossible solution since the isolated suspects cannot make binding commitments not to confess.<sup>79</sup>

When discussing fundamental concepts of game theory, standard changes to the basic Prisoners’ Dilemma model include increasing the number of players and the number of games. If the same players play the same game

<sup>76</sup> Baird, D. G., et al., *Game Theory and the Law*, (1994), p. 33.

<sup>77</sup> Leslie, Christopher R., *Antitrust Amnesty, Game Theory, and Cartel Stability*, (2006), p. 456.

<sup>78</sup> Cooter, R. & Ulen, T., *Law & Economics*, (2004), p. 40-41.

<sup>79</sup> Cooter, R. & Ulen, T., *Law & Economics*, (2004), p. 40-42.

according to the same rules repeatedly, it is possible that cooperation can arise and that the players establish a reputation for trustworthiness. Depending on whether the game will be repeated a fixed number or an indefinite number of times the strategies will differ. If the prisoner's dilemma is to be repeated ten times, the players may agree to keep quiet. However, the last time the game is to be played (in game 10) things will be different. For example, if prisoner 2 sticks to the agreement not to confess in game 10, then prisoner 1 will have a strong incentive to confess in order to avoid prison. Knowing that prisoner 1 in the last game has this incentive to cheat on the agreement not to confess, the best strategy for prisoner 2 is also to confess in the final game. However, in that case game 9 becomes the final game, and in deciding on the optimal strategy for that game, exactly the same logic applies as it did for game 10. Consequently in the terminology of game theory, the repeated game unravels so that confession becomes the dominant strategy for each player every time the game is played.<sup>80</sup>

If the game is to be repeated an *indefinite* number of times there may be an inducement to cooperation. In *The Evolution of Cooperation* (1984) and by arranging game tournaments Robert Axelrod showed that when games like the prisoners' dilemma are repeated a definite number of times the optimal strategy is the so called *Tit-for-Tat* strategy. A person playing the Tit-for-Tat strategy begins by cooperating on the first play and then simply mimics the other player's move from the round before. If player 1 cooperated in the previous game, player 2 will consequently cooperate in the following game. If both parties follow a Tit-for-Tat strategy and both parties cooperate in Round One this should create a long-term pattern of cooperation. When more players are added to the game the complexity of playing Tit-for-Tat strategy increases, but the logic of the strategy remains intact.<sup>81</sup>

### 4.3 The Application of Game Theory to Leniency Programmes

The traditional prisoners' dilemma is a static game where each player has to make a choice between to confess or not to confess. Unlike in the traditional prisoners' dilemma model it is however not enough for cartel participants just to confess. An undertaking has to be the *first* in order to maximize the gains from confession. However, descending discounts for subsequent confessing undertakings is also an important incentive for confessing. If all confessions did not receive some reward in relation to a non-confession, then confession would not be a dominant strategy and there would be no prisoners' dilemma.<sup>82</sup>

The prisoners' dilemma is a game of trust. Competition authorities around the world therefore offer a deal to cartel participants - cooperation in

---

<sup>80</sup> Cooter, R. & Ulen, T., *Law & Economics*, (2004), p. 42.

<sup>81</sup> Leslie, C. R., *Trust, Distrust and Antitrust*, (2004), p. 523-524.

<sup>82</sup> Leslie, C. R., *Antitrust Amnesty, Game Theory, and Cartel Stability*, (2006), p. 465.

exchange of leniency or reduction of fines. However, in many cases the prisoners' dilemma is eliminated since competition authorities do not always possess sufficient evidence of a provable minor crime. Instead, such situations constitute a coordination game with two potential equilibriums, mutual confession or non-mutual confessions, which means that there is no dominant strategy. For the participating undertakings this means that in the absence of a strictly dominant strategy it will be more profitable to continue the cartel than to expose it. In a stable, undetected cartel characterized by mutual trust, it is consequently more rational for participants to keep quiet in order to generate greater profits in the long run.<sup>83</sup>

In such an event where no true prisoners' dilemma can be created, an attempt to destabilize the cartel should be made in order to create distrust among the cartel participants. Consequently, Competition Authorities seeking to motivate confessions from cartel members have two goals. Firstly they should try to create a prisoner's dilemma in which confession appears to be the dominant strategy. Secondly they should insure that the cartel members are not able to generate mutual trust in order to solve the prisoners' dilemma.<sup>84</sup>

---

<sup>83</sup> Leslie, C. R., *Antitrust Amnesty, Game Theory, and Cartel Stability*, (2006), p. 457-458.

<sup>84</sup> Leslie, C. R., *Antitrust Amnesty, Game Theory, and Cartel Stability*, (2006), p. 463- 465 .

# 5 The 2006 Revised Leniency Notice

The Commission launched a revised Leniency Notice on the 8<sup>th</sup> of December 2006. The primary aim of the 2006 Leniency Notice is to clarify further what information an applicant has to present to the Commission in order to benefit from immunity. Furthermore, the revised Leniency Notice introduces a new “marker system” for immunity applicants. In order to ensure that applicants are not discouraged to cooperate with the Commission due to discovery orders issued in civil litigations, the Commission has also developed a procedure to protect corporate statements. Corporate statements will, pursuant to point 35 of the 2006 Leniency Notice, only be transmitted to competition authorities of the Member States provided that

*“the conditions set out in the Network Notice are met and that the level of protection against disclosure awarded by the receiving competition authority is equivalent to the one conferred by the Commission”.*<sup>85</sup>

## 5.1 Clarified immunity thresholds

In order for an undertaking to receive immunity it has to be the first to submit information and evidence which enables the Commission to carry out a *targeted inspection* or find an infringement of Article 81 EC in connection with the alleged cartel.<sup>86</sup> In point 9–12 of the 2006 Leniency Notice the content of such *corporate statement* is specified to consist of a detailed description of the alleged cartel including its aims, activities, functioning and duration. A corporate statement shall also identify the products or services concerned, the geographic scope, and the estimated market volumes affected by the alleged cartel. Moreover, specific dates, locations, names and addresses of the participants of the cartel, including involved individuals shall be specified. In addition, information on other competition authorities approached or intended to be approached inside or outside the EU shall be included in the corporate statement.

In conformance with previous Leniency Notices the requirements on undertakings to cooperate genuinely, fully and on a continuous basis throughout the Commission’s administrative procedure remain in point 12 (a) of the 2006 Leniency Notice. Also the condition that reduction but not immunity may be granted to undertakings which have taken steps to coerce

---

<sup>85</sup> *Commission notice on the immunity from fines and reduction of fines in cartel cases*, (2006/C 298/11), p. 35.

<sup>86</sup> *Commission notice on the immunity from fines and reduction of fines in cartel cases*, (2006/C 298/11), p. 8.



other undertakings to join the cartel is comprised by the revised Leniency Notice.

## 5.2 The Marker System

The 2006 Leniency Notice offers a new possibility for undertakings to gather necessary information and evidence before approaching the Commission. In order to protect immunity and an applicant's place in the queue, the Commission has therefore launched a possibility to grant a marker for a period to be specified on a case-by-case basis. When the Commission grants a marker it also determines the period within which the applicant has to perfect the marker. If the applicant perfects the marker within this period, the information and evidence provided will be deemed to have been submitted on the day when the marker was granted.<sup>87</sup>

To secure the marker the applicant has to provide the Commission with information such as name and address, parties to the alleged cartel, affected products and territories and the duration and nature of the alleged cartel. To justify further the request for a marker the applicant should also inform the Commission on other past or possible future leniency application to other authorities in relation to the alleged cartel. If it becomes apparent that immunity is not available or that the undertaking fails to meet the conditions set out in Article 8(a) or 8(b), the undertaking may withdraw the evidence disclosed for the purposes of its immunity application.<sup>88</sup>

## 5.3 Reactions on the revised Leniency Notice

In October 2006 the Commission published the received comments of the consulted parties on the draft of the 2006 Leniency Notice. The comments received were those of law firms and interest organizations such as *Linklaters, Baker & McKenzie*, the *International Bar Association (IBA)*, and the *Competition Law Association (CLA)*.

### 5.3.1 Level of necessary evidence

The opinion of the consulted parties, concerning the Commission's intention to provide greater guidance and clarity, was in general positive. The opinions differed however whether this intention was successfully implemented into a more transparent and predictable Leniency Notice. In particular the meaning of the concepts *corporate statement* and *targeted*

---

<sup>87</sup> *Commission notice on the immunity from fines and reduction of fines in cartel cases* (2006/C 298/11) Art. 14-15.

<sup>88</sup> *Commission notice on the immunity from fines and reduction of fines in cartel cases* (2006/C 298/11) Art. 15-16.

*inspection* as set out in Article 9 of the Draft Leniency Notice were questioned in a majority of the received comments.

One amendment as set out in point 8 (a) of the 2006 Leniency Notice is the change of wording from “evidence *enabling* the Commission to carry out an inspection” to “evidence enabling the Commission to carry out a *targeted* inspection”. *Crowell & Moring* questioned whether the unclear change of wording implied a heightened evidentiary standard for the leniency applicant and therefore encouraged the Commission to clarify further the concept of “targeted inspection”.<sup>89</sup> *Linklaters* argued that the undefined concept of “targeted inspection” will deter undertakings from coming forward and extend the discretion of the Commission when deciding whether a leniency application under point 8 (a) will qualify for immunity.<sup>90</sup>

The majority of the consulted parties were also concerned about the formalized information required for a *corporate statement* pursuant to point 9 (a) of the 2006 Leniency Notice. *CLA* stated that point 9 (a) lacked flexibility and imposed a heightened evidentiary burden on the applicant early in the process.<sup>91</sup> *IBA* held that a corporate statement in the stages before the Commission has granted immunity was unnecessary in order to enable a targeted investigation and that such a requirement only will cause considerable delay in the application process.<sup>92</sup> In contrast, *Burges Salmon* was positive to the detailed content of the corporate statement set out in point 9 and stressed that:

*“Immunity applicants will now be able to realistically assess whether they are in a position to meet the requisite threshold”*.<sup>93</sup>

In its opinion *Shearman & Sterling* held that despite assurances of the Commission to protect corporate statements, leniency applicants will fear that their corporate statements will end up with competition authorities entitled to impose criminal sanctions. Due to this, *Shearman & Sterling* suggested that the Leniency Notice should provide an explicit ban on sharing information with any competition authority that could provide the information to authorities capable of initiating criminal proceedings.<sup>94</sup>

---

<sup>89</sup> *Crowell & Moring, Comments on the Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*, p. 1.

<sup>90</sup> *Linklaters, Response to the European Commission’s Draft Leniency Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*, p. 3.1.

<sup>91</sup> *Competition Law Association, Response to Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*, p. 1.

<sup>92</sup> *International Bar Association, Response to Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*, p. 2.7-2.8.

<sup>93</sup> *Burges Salmon LLP, Response to Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*, p. 2.2

<sup>94</sup> *Shearman & Sterling LLP, Comments on the Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*, p. 10.

Also, the criterion of “significant added value” was discussed among the consulted parties. In order to qualify for a reduction of fines an undertaking must provide the Commission with evidence of the alleged infringement representing significant added value with respect to the evidence already in the Commission’s possession.<sup>95</sup> *UNICE* stated that a well-functioning leniency programme needs clear binding conditions and that the criterion for significant added value is too vague in order for undertakings to assess their position.<sup>96</sup> *Maclay, Murray & Spens* held in its comment that the requirement of significant added value is asking a lot of those undertakings which are third or later on coming forward which at the most will receive a 20% reduction in fines. *Maclay, Murray & Spens* further held that since less culpable undertakings also is likely to have less evidence of significant added value; a possible negative consequence may be that these undertakings end up paying larger fines than more culpable undertakings which can present more evidence of significant added value.<sup>97</sup>

### 5.3.2 The introduction of a marker system

Each and every one of the consulted parties welcomed the introduction of a marker system. For example, CLA considered the marker system to be “*helpful in “encouraging undertakings to self-report more quickly after learning about a violation”*”, and ABA considered it to be “*a very important step forward*”.

However, a majority of the consulted parties expressed concern about the detailed and discretionary nature of the marker procedure. Pursuant to point 15 of the 2006 Leniency Notice the Commission *may* grant a marker to protect an immunity applicant’s place in the queue. As a consequence of this discretionary marker procedure, ABA held that:

*“potential immunity applicants may hesitate to apply for leniency if they are unsure whether the information known to them is detailed and precise enough”*.<sup>98</sup>

Also, Baker & McKenzie believed that the proposed marker system would slow down the cartel race and advocated that the need for an almost automatic right to obtain a marker was an essential characteristic of a successful marker system. Consequently, Baker & McKenzie considered that the European discretionary marker system not be aligned with the

---

<sup>95</sup> Commission notice on the immunity from fines and reduction of fines in cartel cases, (2006/C 298/11), p. 24.

<sup>96</sup> UNICE, *Draft Commission Notice on Immunity from fines and reduction of fines in cartel cases*, p. 3-4.

<sup>97</sup> Maclay Murray & Spens, *Comments on the Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*, p. 2.

<sup>98</sup> American Bar Association, *Public Comment on Draft Commission Notice on Immunity from Fines and Reduction in Fines in Cartel Cases*, p. 6.

successful US version which permits undertakings to seek a marker on the basis of less extensive information.<sup>99</sup>

A number of the consulted parties also considered the period for perfecting the marker as uncertain. For example the *European Competition Lawyers Forum* (ECLF) alleged that it would be helpful if the Commission were to state that the Commission would not discuss leniency with any other subsequent applicants within the time granted to the marker applicant to perfect its marker.<sup>100</sup>

*Allen Overy* was negative to the fact that the EU Member States had a discretionary option to introduce a marker system and held that if some Member States have a marker system and others do not the result will be a confusing framework for leniency that gives little legal certainty and an increased cost of enforcement and application. For that reason *Allen Overy* advocated a marker system where applicants have the opportunity to file multiple marker applications using a single application document.<sup>101</sup> Several other parties also expressed concern about the fact that the new marker would not solve the problem of multiple parallel applications with competition authorities in other Member States. UNICE therefore recommended the Commission to

*“introduce a system where an application for a marker with one of the competition authorities which are part of the ECN and have a leniency programme would suffice to protect an applicant’s place in the queue in the framework of both the Community programme and relevant national leniency programmes”.*<sup>102</sup>

---

<sup>99</sup> Baker & McKenzie, *Response to Consultation on the Draft Leniency Note*, p. 3.

<sup>100</sup> *Comments by the ECLF Working Group on the Draft Commission Notice on Immunity from Fines and Reduction in Cartel Cases*, p. 5.

<sup>101</sup> *Allen Overy, Draft Commission Notice on Immunity from fines and reduction of fines in cartel cases*, p. 1.

<sup>102</sup> UNICE, *Draft Commission Notice on Immunity from fines and reduction of fines in cartel cases*, p. 2.

## 6 Analysis

The European leniency programme has improved over time, but after studying the opinions of the consulted parties it is evident that the revised 2006 Leniency Notice is not considered to be fully satisfactory. After going through the development of leniency programmes in the United States and Europe as well as game theory, it is therefore time to analyse what components a successful European leniency programme should contain, and how such a programme could be influenced from the prisoners' dilemma.

### 6.1 Cartels and the Prisoners' Dilemma

For the prisoners in the prisoners' dilemma confessing is always the dominant strategy regardless of how the other prisoner may act. Thus, in illegal cartels on the common market confessing, has for various historical reasons, *not* always been a dominant strategy. Before the European Commission started operating a leniency programme, cartels were even a tolerated feature in many European countries.

A cartel can be compared to a normal form game characterised by *complete but imperfect information*. Each undertaking participating in a cartel must consequently interact with all others and decide what strategy to follow without knowing the strategy of the other undertakings. From my point of view cartel collaborations also entail a kind of prisoners' dilemma. Each undertaking has to decide on whether to remain silent or to "blow the whistle" and inform the antitrust authority about the cartel. In order to prevent cartel participants from colluding it is therefore also useful for antitrust authorities to study the prisoners' dilemma.

It has been argued that the prisoners' dilemma is a game which can be solved by mutual trust among its players.<sup>103</sup> Consequently, cartel participants should be able to solve the prisoners' dilemma by cooperating. In addition, contrary to the prisoners in the traditional prisoners' dilemma, cartel participants also have the possibility to strengthen further the mutual trust by communicating.

Initially this communicated trust is the very foundation of the cartel since a cartel without trust would immediately collapse. However, over a long haul it must be very difficult, if not impossible, to maintain trust among cartel members. In a scenario where cooperation stops being an advantage for a member, maintenance of mutual trust must be of less importance compared to lost profits. Further on, it must not be forgotten that a cartel often is a nervous and potentially unstable form of organization, and that the members of the cartel in fact are, or should be, independent competitors.

---

<sup>103</sup> Leslie, C. R., *Trust, Distrust and Antitrust*, (2004), p. 528.

A cartel with several participants must also to a larger extent run a greater risk of being disclosed than undertakings participating in a two-firm cartel. The ringleader in a two-firm cartel has an incentive not to disclose the cartel since it cannot receive a 100% immunity, and with this in mind, the second undertaking has no reasons to “blow the whistle” as long as the cooperation is profitable. This way of thinking was illustrated in *Fine Art Auction Houses*; Sotheby’s CEO thought that the auction house cartel was stable since Christie’s had as much to lose as Sotheby’s if the conspiracy were exposed.<sup>104</sup> However, the eventual collapse of the cooperation in *Fine Art Auction Houses* shows that also a cartel consisting of only two actors in fact is capable of crashing.

As already discussed, cartelization brings the participants to face a prisoners’ dilemma, whether to blow the whistle or not. Thus, actions on a market economy influenced by continuous changes in the surrounding world cannot be directly compared to a static normal form game. Further on, unlike in a traditional prisoners’ dilemma most antitrust authorities lack evidence to prove a minor crime, which means that the structure of the game will change.

The revised structure of the prisoners’ dilemma is presented in the diagram shown in Figure 3; where the negative pay-offs instead of years in prison *symbolically* represent the fines imposed on the undertakings participating in a cartel.

		<b>Undertaking 2</b>	
		Silent	Confess
<b>Undertaking 1</b>	Silent	<b>0, 0</b>	<b>-10, 0</b>
	Confess	<b>0, -10</b>	<b>-6, -6</b>

**FIGURE 3.** The Prisoners’ Dilemma, in the absence of a provable minor crime<sup>105</sup>

The figure shows the absence of a dominant strategy. The worst outcome is still to remain silent when the other party confesses, but unlike in the traditional prisoners’ dilemma, confessing is no longer the optimal move for each player to make regardless of what the other player does. As a result of

<sup>104</sup> Leslie, C. R., *Antitrust Amnesty, Game Theory, and Cartel Stability*, (2006), p. 460.

<sup>105</sup> Leslie, C. R., *Antitrust Amnesty, Game Theory, and Cartel Stability*, (2006), p. 460.

this, Figure 3 does not indicate whether an undertaking should confess or remain silent when its partner is silent (0, 0), (0, -10).

## 6.2 Incentives for betrayal

Since the diagram presented in Figure 3 does not give undertakings of any guidance whether to confess or to remain silent, a successful leniency programme has to comprise both deterrent and appealing factors to make at least one of the cartel's participants break the silence of conspiracy.

However, for undertakings facing a decision whether to confess or not, the negative consequences of a potential betrayal may appear as dominating. A decision to confess will in all likelihood cost millions in foregone cartel profits and certainly eliminate all possibilities for the undertaking to participate in cartels in the future. A confession will also open up the cartel participants to private antitrust lawsuits. In addition, large fines will be imposed on those undertakings which are late in faxing a leniency application to the Commission.

Considering the above mentioned negative consequences of confessing, antitrust authorities have to develop other incentives in order to create a situation which does not give undertakings any choice but to blow the whistle. In my opinion there are three major areas for the Commission to improve in the future: increase the transparency and predictability of the Leniency Notice, solve the problem with parallel applications by introducing a one-stop-shop procedure and impose criminal sanctions on individuals participating in a cartel

### 6.2.1 Increased transparency and predictability

The major reason for revising both the 1996 and the 2002 Leniency Notice was the need to solve the problem of lacking transparency and predictability. As a result of the revised 2002 Leniency Notice the applications for leniency increased, but the criticism of vague and uncertain evidentiary thresholds remained. The critics held that the lack of transparency and predictability of the 2002 Leniency Notice was a result of the absence of explicit guidelines and the elastic formulations of Point 8 (a) and (b).<sup>106</sup>

When the 2002 Leniency Notice was revised in 2006 the elastic formulations set up in order to fulfil point 8 were formalized. The underlying idea was that undertakings more would easily fulfil the evidentiary thresholds if the information required for a corporate statement were detailed. However, according to the opinion of the consulted parties, the new formalistic approach was not fully appreciated. As a result of the

---

<sup>106</sup> See for example, Joshua, J., *That Uncertain Feeling: The Commission's 2002 Leniency Notice*, (2006), p. 8-9.

detailed requirements for immunity and the introduction of new and undefined concepts such as targeted inspection, the majority of the consulted parties also held that the effect of the amendments would lead to reduced predictability and increased uncertainty.

The criticism of lacking transparency and predictability also comprised the introduction of a marker procedure. Several of the consulted parties feared that a new discretionary marker procedure would slow down the cartel race and make applicants less willing to apply for leniency. This criticism is contrary to the Commission's aim with the 2006 Leniency Notice which was that nothing should argue in favour of hesitation when an applicant is considering to apply for immunity.

The public debate therefore, must still be characterized as critical towards the design of the European Leniency Notice. The only difference compared to the criticism towards previous Leniency Notices is that the new criticism on the lack of transparency and predictability is based not only on the discretion of the Commission but also on the undefined, but formalized, requirements replacing previous elastic formulations.

In order to avoid a further shortage of the incomplete prisoners' dilemma as presented in Figure 3, the problems with transparency and predictability concerning corporate statements and the marker system have to be solved. However, in my view, the European Leniency Notice will probably, to some extent, always be blamed of lacking transparency and predictability since undertakings in a position to reveal a secret cartel will always be worried whether they fulfil the evidentiary threshold or not. Nevertheless, I believe that the situation will be improved automatically over time, given that the Commission gets the opportunity to further define existing vague and uncertain concepts and develop the marker system towards a more American approach, which automatically permits markers. Also, a further developed legal practice presenting the underlying reasons for immunity and the exact reduction in fine is desirable in order to work as guidance for undertakings applying for immunity.

## **6.2.2 One-stop-shop procedure**

An important calculation on the part of potential whistleblowers is to be able to reduce the risk of punishment by confessing with immunity in one system without exposing itself to legal sanctions under the competition law of other states.<sup>107</sup> Today, undertakings that take part in cross-border cartels on the common market expose themselves to penalties in several jurisdictions. Competition Commissioner Neelie Kroes has expressed concern about the potential shortcomings in the current leniency system and has therefore advocated the need to introduce a European one-stop-shop

---

<sup>107</sup> Harding, C., & Joshua, J., *Regulating Cartels in Europe - A Study of Legal Control of Corporate Delinquency*, p. 222.



model.<sup>108</sup> The ECN Model Programme is seen as a first important step towards such a harmonised leniency policy throughout the EU, but it is not a legally binding instrument. The reason for this is that the possibility to create a mutual recognition system has not yet been considered a realistic alternative.

Nevertheless, the introduction of a European one-stop-shop programme giving immunity to the first leniency applicant who reports sufficient information must be an indispensable solution for the future. It is however possible that the Commission will wait for aspects of the existing leniency programme such as the new marker system and the evidentiary thresholds for a corporate statement to work before introducing a one-stop-shop. The fact that some Member States do not yet operate a leniency programme is also a possible reason for waiting.

The one-stop-shop procedure is also closely connected with the protection of corporate statements introduced by the Commission under the 2006 Leniency Notice. The Commission's confidentiality policy is however not as extensive as the American version which absents prior disclosure or agreement with the applicant and treats the identity of amnesty applicants or any information obtained from the applicant as confidential, unless authorized by court order. The Commission reserves the right to transmit the information provided by leniency applicants to competition authorities of the Member States when the conditions of the Network Notice are met, or the level of protection is equivalent to the one offered by the Commission. The DOJ on the other hand will not disclose the identity of, or any information received from amnesty applicants to authorities in any other legal system unless prior agreement with the applicant.

Once a leniency applicant has provided the Commission with a corporate statement, the handling of that information is consequently beyond the control of the leniency applicant. A possible consequence of this is that leniency applicants will hesitate about what to include in its corporate statement in order not to risk criminal sanctions in another jurisdiction.

### **6.2.3 Criminal sanctions**

Due to the fact that individual conspirators face no proceedings or sanctions within the common market, the European Leniency Notice may appear as less deterrent than the American Leniency Policy. To compensate for the lack of criminal sanctions the Commission has gradually started to impose larger fines to deter cartels and induce leniency applications. This "stricter approach" is illustrated by the Commission's decision in the lifts and escalators cartel. As a result of being a repeat offender the fine imposed on ThyssenKrupp was increased by 50% up to €479 669 840, which is the largest fine ever imposed on a single undertaking in EU history.

---

<sup>108</sup> IP/06/1288 Press Release, 2006-09-29, *Commission and other ECN members cooperate in use of leniency to fight cross border cartels*.

In my opinion, the consequences of entering cartels and the incentives to apply for leniency must increase even more when individuals risk imprisonment. Cartelization has for a long time been characterised as white-collar crime carried out by people usually regarded as law-abiding citizens.<sup>109</sup> The majority of individual cartel members must therefore be very well aware of the fact that their participation in the cartel is illegal, otherwise they would not adopt code names, summon secret meetings and destroy documents in order to avoid detection. In the United States the DOJ has observed how the threat of criminal prosecution has deterred a significant number of global cartels from extending their conspiracy into the United States. The American threat of individual exposure has also tilted the balance at the margins, and as a result of this, the DOJ has observed undertakings reporting violations they would not otherwise have reported if they were only facing financial penalties.<sup>110</sup>

Therefore, the eventual risk of getting caught and going to jail must, in addition to large fines, be seen both as a major deterrent factor when deciding on entering a cartel agreement and as a decisive incentive to self-report for those undertakings already participating in a cartel.

---

<sup>109</sup> "Crime committed by a person of respectability and high social status in the course of his occupation", [http://www.law.cornell.edu/wex/index.php/White-collar\\_crime](http://www.law.cornell.edu/wex/index.php/White-collar_crime) (2007-05-20, 11:37)

<sup>110</sup> Hammond Scott, *Cornerstones of an Effective Leniency Programme*, (2004).

## 7 Conclusions

Cartelization constitutes a kind of prisoners' dilemma. The difference lies in the absence of a provable minor crime and a dominant strategy. It has been argued that undertakings participating in a cartel can solve their prisoners' dilemma by trust. However, mutual trust must be difficult, if not impossible to maintain when profits go down.

Since a prisoners' dilemma without a dominant strategy does not give any guidance whether to blow the whistle or to remain silent, a successful leniency programme must comprise both deterrent and appealing factors in order to make at least one undertaking break the silence.

The European leniency programme has certainly improved since the introduction in 1996; both the number of leniency applications and the size of fines have exponentially increased. Only during the period January – April 2007, the Commission imposed record-high fines amounting to more than €2000 million on undertakings participating in cartels.

The Commission's intention with every Leniency Notice adopted since 1996 has been to increase transparency and predictability in order for leniency applications to be able to rely on legitimate expectations when disclosing the existence of a cartel. Despite a good intention, every attempt to design a successful leniency notice has failed in one aspect or another. Consequently, there are still a few aspects for the Commission to improve in the future.

The most important measures for the future comprise:

- *Increased transparency and predictability of the Leniency Notice.* Especially in relation to the evidentiary thresholds for a corporate statement and a well functioning marker system.
- *The introduction of a European one-stop-shop procedure.*
- *The imposition of criminal sanctions on individuals participating in a cartel.*

In addition, the possibility for cartel ringleaders to obtain immunity and the introduction of a well functioning confidentiality policy need to be further investigated and developed in order for the Commission to operate a successful leniency programme in the future.

# Bibliography

## Literature

Baird, Douglas G., Gertner, Robert H. & Picker, Randal C., *Game Theory and the Law*, (1994), 1<sup>st</sup> Edition, Harvard University Press, Cambridge, Massachusetts, and London.

Cooter, Robert & Ulen, Thomas, *Law & Economics* (2004), 4<sup>th</sup> Edition, Pearson Addison Wesley, Boston.

Furse, Mark, *Competition Law of the UK and EC* (2002) 3<sup>rd</sup> Edition, Oxford University Press, Oxford.

Gellhorn, Ernest, Kovacic, William E & Calkins, Stephen, *Antitrust Law and Economics*, (2004), 5<sup>th</sup> Edition, Thomson West, St Paul.

Harding, Christopher & Joshua, Julian, *Regulating Cartels in Europe - A Study of Legal Control of Corporate Delinquency*, (2003), 1<sup>st</sup> Edition, Oxford University Press, Oxford.

Lidgard, Hans Henrik, *Competition Classics - Material and Cases on European Competition Law and Practices*, (2006), Faculty of Law, Lund.

Rodger, Barry J., & MacCulloch, Angus, *Competition Law and Policy in the European Community and the United Kingdom*, (2001), 2<sup>nd</sup> Edition, Cavendish Publishing, London.

Van Bael, Ivo & Bellis, François, *Competition Law of the European Community*, (2005), 4<sup>th</sup> Edition, Kluwer Law International, The Hague.

## Articles

Aubert Cécile, Rey Patrick & Kovacic William E., *The Impact of Leniency Programs and Whistleblowing Programs on Cartels*, (2006), International Journal of Industrial Organization, Vol. 24, No. 6, p. 1241.

Baer William, Frazer Tim, Gyselen Luc and Liss Frank, *International Leniency Coordination*, (2007), Global Competition Review.  
[http://arnoldporter.com/pubs/files/International\\_Leniency\\_2007.pdf](http://arnoldporter.com/pubs/files/International_Leniency_2007.pdf)

Brisset, Karine & Thomas, Lionel, *Leniency Program: A New Tool in Competition Policy to Deter Cartel Activity in Procurement Auctions*, (2004) European Journal of Law and Economics 17: 5-19, Kluwer Academic Publishers, The Hague.

Buccirossi Paolo & Spagnolo Giancarlo, *Optimal Fines in the Era of Whistleblowers*, (2006), CEPR Discussion Paper no. 5465, London, Centre for Economic Policy Research.

<http://www.cepr.org/pubs/dps/DP5465.asp>

Geradin, Damien & Henry, David, *The EC fining policy for violation of competition law: An empirical review of the Commission decision practice and the Community courts' judgements*, (2003), GCLC Working Papers Series 03/05, p. 14-17, College of Europe, Bruges.

Joshua, Julian, *That Uncertain Feeling: The Commission's 2002 Leniency Notice*, (2006), European Competition Law Annual 2006: Enforcement of Prohibitions of Cartel, Hart Publishing, Oxford/Portland, Oregon.

Joshua, Julian, *The Criminalisation of Antitrust, Leniency and Enforcement: the Carrot and the Stick – A view from Europe*, (2000), International Bar Association, Amsterdam.

[http://www.morganlewis.com/pubs/013FB9BA-8DD0-4247-966A2DED530FE33D\\_Publication.pdf](http://www.morganlewis.com/pubs/013FB9BA-8DD0-4247-966A2DED530FE33D_Publication.pdf)

Leslie, Christopher R., *Antitrust Amnesty, Game Theory, and Cartel Stability*, (2006), Journal of Corporation Law, Iowa City, Vol. 31, No. 2, p. 453-488.

Leslie, Christopher R., *Trust, Distrust and Antitrust*, (2004), Texas Law Review, Austin, Vol. 82, No. 3, p. 515-680.

Spagnolo, Giancarlo, *Leniency and Whistleblowers in Antitrust*, (2006), CEPR Discussion Paper No. 5794, London, Centre for Economic Policy Research.

<http://www.cepr.org/pubs/dps/DP5794.asp>

## **Regulations**

*Council Regulation No. 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty.*

## **Guidelines**

*Guidelines on the method of setting fines imposed pursuant to Article 23(2) (a) of Regulation No 1/2003*, (2006/C210/02).

## **Notices**

*Commission Notice on the non-imposition or reduction of fines in cartel cases*, (1996/C 207/04).

*Commission Notice on the immunity from fines and reduction of fines in cartel cases*, (2002/C 45/03).

*Commission Notice on the immunity from fines and reduction of fines in cartel cases*, (2006/C 298/11).

## **American legislative material**

GovTrack.US. H.R. 1086--108th Congress (2003): *Antitrust Criminal Penalty Enhancement and Reform Act of 2004*, GovTrack US (database of federal legislation)

<http://www.govtrack.us/congress/bill.xpd?bill=h108-1086>

United States Department of Justice, *Clayton Act*, 15 U.S.C. §§ 12-27, 29 U.S.C. §§ 52-53

<http://www.usdoj.gov/atr/foia/divisionmanual/two.htm#a3>

United States Department of Justice, *Corporate Leniency Policy*, (1993).

<http://www.usdoj.gov/atr/public/guidelines/lencorp.htm>

United States Department of Justice, *Individual Leniency Policy*, (1994).

<http://www.usdoj.gov/atr/public/guidelines/lenind.htm>

United States Department of Justice, *Sherman Antitrust Act*, 15 U.S.C. §§ 1-7.

<http://www.usdoj.gov/atr/foia/divisionmanual/two.htm#a1>

## **Opinion of Consulted Parties**

Allen Overy, *Draft Commission Notice on Immunity from fines and reduction of fines in cartel cases*.

<http://ec.europa.eu/comm/competition/cartels/legislation/allenoverly.pdf>

American Bar Association, *Public Comment on Draft Commission Notice on Immunity from Fines and Reduction in Fines in Cartel Cases*.

<http://ec.europa.eu/comm/competition/cartels/legislation/aba.pdf>

Baker & McKenzie, *Response to Consultation on the Draft Leniency Notice*.

<http://ec.europa.eu/comm/competition/cartels/legislation/bakermckenzie.pdf>

Burges Salmon LLP, *Response to Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*.

<http://ec.europa.eu/comm/competition/cartels/legislation/burges.pdf>

Competition Law Association, *Response to Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*.

<http://ec.europa.eu/comm/competition/cartels/legislation/cla.pdf>

Crowell & Moring, *Comments on the Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*.

<http://ec.europa.eu/comm/competition/cartels/legislation/crowell.pdf>

ECLF, *Comments by the ECLF Working Group on the Draft Commission Notice on Immunity from Fines and Reduction in Cartel Cases.*

<http://ec.europa.eu/comm/competition/cartels/legislation/eclf.pdf>

International Bar Association, *Response to Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases.*

<http://ec.europa.eu/comm/competition/cartels/legislation/iba.pdf>

Linklaters, *Response to the European Commission's Draft Leniency Notice on Immunity from Fines and Reduction of Fines in Cartel Cases.*

<http://ec.europa.eu/comm/competition/cartels/legislation/linklaters.pdf>

Maclay Murray & Spens, *Comment on the Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases*

<http://ec.europa.eu/comm/competition/cartels/legislation/mms.pdf>

Shearman & Sterling LLP, *Comments on the Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases, p. 10.*

<http://ec.europa.eu/comm/competition/cartels/legislation/shearman.pdf>

UNICE, *Draft Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases.*

<http://ec.europa.eu/comm/competition/cartels/legislation/unice.pdf>

## **Press Releases**

IP/05/1656 Press Release, 2005-12-21, *Commission fines four firms €75.86 million for rubber chemical cartel.*

IP/06/1288 Press Release, 2006-09-29, *Commission and other ECN members co-operate in use of leniency to fight cross border cartels.*

IP/07/209 Press Release, 2007-02-21, *Commission fines members of lifts and escalators cartels over €990 million.*

MEMO/06/356, 2006-09-29, *The European Competition Network launches a Model Leniency Programme – frequently asked questions.*

MEMO/06/357, 2006-09-29, *Competition proposes changes to the Leniency Notice – frequently asked questions.*

MEMO/07/70, 2007-02-21, *Commission action against cartels – Questions and answers.*

## **Speeches**

Hammond, Scott, *A Summary Overview of the Antitrust Division's Criminal Enforcement Program*, presented at The New York Marriott Marquis, New York, United States, January 23, 2003.

<http://www.usdoj.gov/atr/public/speeches/200686.htm>

Hammond Scott, *Cornerstones of an Effective Leniency Programme*, presented before the ICN Workshop on Leniency Programmes, Sydney, Australia, November 22-23, 2004.

<http://www.usdoj.gov/atr/public/speeches/206611.htm>

Spratling, G. R., *The Corporate Leniency Policy: Answers to Recurring Questions*, presented at the ABA Antitrust Section Spring Meeting, Washington D.C., April 1, 1998.

<http://www.usdoj.gov/atr/public/speeches/1626.htm>

## **Other**

EC cartel statistics, period 2002 – 2007.

<http://ec.europa.eu/comm/competition/cartels/statistics/statistics.pdf>

European Competition Network, 2006-09-29, *ECN Model Leniency Programme*,

[http://ec.europa.eu/comm/competition/ecn/model\\_leniency\\_en.pdf](http://ec.europa.eu/comm/competition/ecn/model_leniency_en.pdf)

Fredblad, Mikael, *Immunitet och Nedsättning av böter i kartellärenden*, (2003), Faculty of Law, Lund University.

[http://www.jur.lu.se/Internet/Biblioteket/Examensarbeten.nsf/0/746027B06079270BC1256D97004F52D0/\\$File/xsmall.pdf?OpenElement](http://www.jur.lu.se/Internet/Biblioteket/Examensarbeten.nsf/0/746027B06079270BC1256D97004F52D0/$File/xsmall.pdf?OpenElement)



# Commission Decisions

COMP/E-1/36.212 - *Carbonless Paper.*

COMP/E-1/37.512 - *Vitamins.*

COMP/E-2/37.784 - *Fine Art Auction Houses.*

COMP/33.708 - *British Sugar.*

COMP/36.490 - *Graphite Electrodes.*

COMP/36.604 - *Citric Acid.*

COMP/C.38.281/B.2 - *Raw Tobacco Italy.*

COMP/F/38.443 - *Rubber Chemicals.*