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Working Party No. 3 on Co-operation and Enforcement

UNILATERAL DISCLOSURE OF INFORMATION WITH ANTICOMPETITIVE EFFECTS (E.G. THROUGH PRESS ANNOUNCEMENTS)

-- Background Paper --

The attached document is submitted to Working Party No.3 of the Competition Committee FOR DISCUSSION under item III of the agenda at its forthcoming meeting on 14 February 2012.

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BACKGROUND PAPER

By the Secretariat*

1. Introduction

1. Explicit collusion, resulting from "naked" cartels to fix prices, allocation of customers or rig bids is almost universally condemned as unlawful. Conversely, conduct resulting purely from oligopolistic interdependence (tacit collusion) is generally not seen as a violation of competition law. It is also undisputed, however, that between explicit and tacit collusion there are situations in which firms engage in a range of practices that may help them to reduce strategic uncertainty and align their conduct more effectively. There are various strategies that firms can put in place to this purpose. These include artificially increasing market transparency by exchanging information with competitors or setting up more formalized industry-wide information sharing systems, as well as engaging in unilateral communications to the market (e.g. via press releases or other media) about future strategies, such as planned price increases, capacity, output limitations or other future conduct. In doing so, firms offer focal points on which competitors can align themselves, which can result in higher prices and harm for social welfare.

2. The Competition Committee has already examined the complexity of enforcing competition rules in oligopoly markets[1] and how competition authorities have dealt with facilitating practices.[2] The Committee also has focused its attention on those business practices which facilitate collusion by increasing market transparency. In October 2007, the Working Party No. 3 held a roundtable on anti-competitive practices within trade and business associations,[3] which included a discussion of associational information exchange programs. In October 2010, the Competition Committee specifically addressed the issue of how competition authorities assess direct and/or indirect exchange of information between competitors under antitrust rules. It reviewed in particular the pro- and anti-competitive effects of transparency and the main factors which authorities take into account when determining if an exchange of information has anti-competitive effects or not.[4]

3. The purpose of this paper is to build on previous OECD work, and review policy and enforcement questions related to purely unilateral communications by firms directed either to competitors or to the public at large. There can be considerable uncertainty surrounding the issue of whether/when competition law should intervene against unilateral disclosures of information (as opposed to reciprocal exchanges of information). There is little guidance from enforcement authorities and courts and the economic literature is at times equivocal. Making a distinction between purely unilateral conduct, such as

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* This paper was prepared by Antonio Capobianco, with the research assistance of Anna Pisarkiewicz.

1 See OECD, 1999.

2 See OECD, 2007(a); and OECD, 2006(a), para 15.

3 See OECD, 2007(b). See also an revised version of the background paper of this roundtable circulated in preparation of the Latin American Competition Forum session on Competition Issues in Trade Associations (Session I), which took place on 13-14 September 2011 (Colombia).

4 See OECD, 2010.

unilateral communications (or signalling) which falls outside of the reach of competition laws, and co-ordinated conduct which could in principle fall within these laws, can be a difficult task for competition enforcers. While explicit collusion is viewed by most competition authorities as one of the most serious violation of competition law, tacit collusion or conscious parallel behaviour are on the contrary not considered as illegal despite the fact that the outcome can be the same as in explicit collusion cases: prices jointly rise to the supra-competitive levels and possibly to the monopoly level. This raises an enforcement dilemma on how to deal with those practices which do not amount to explicit collusion but favour tacit collusion.

4. The present paper is organised around three main parts. The first part offers an overview of the economics of collusion and the role of transparency in establishing effective collusive agreements. This will also include an overview of the literature on "cheap talk" and on the differences between private and public exchanges. The paper then discusses the legal constraints facing enforcement authorities when dealing with unilateral actions, such as unilateral disclosures of information. It will discuss how authorities have used the concept of agreement to address these practice, or how they have to look beyond the notion of formal agreements to address other forms of concerted actions between competitors with anti-competitive effects. The last part of the paper focuses on the factors and criteria that competition authorities should take into consideration when assessing if a unilateral disclosure of information may have anti-competitive effects.

5. A number of points emerge from this paper. These include:

- Unilateral price announcements can be a practice facilitating collusion and can be prohibited as anti-competitive if, as a result of this practice, competitors can reach some type of formal or informal understanding to reduce competition on their future conduct;

- The pro or anti-competitive effects of unilateral announcements depend on the specific circumstances in which they occur; in particular, the risk of anti-competitive effects is higher in concentrated markets with homogeneous products;

- Private announcements (i.e. between competitors only) of future conduct are generally viewed as having an anti-competitive purpose and can hardly be justified by pro-competitive efficiency reasons;

- Public announcements (i.e. to customers as well as to competitors) of future conduct can in theory be used to facilitate collusion, but are generally viewed as pro-competitive as they generate a wide range of benefits, including providing better information to customers who can make better informed choices.

2. An overview of the economic theory on collusion and the role of transparency

6. This first part of the paper reviews the main economic literature associated with the competition analysis of information disclosures. After a review of the general theory of collusion, this section reviews the factors which generally lead to a stable collusive outcome, focusing particularly on transparency as an important factor[5] to establish a collusive agreement, monitor its enforcement and punish possible deviations from it. It will then review the efficiency enhancing effects of public disclosures (as opposed to

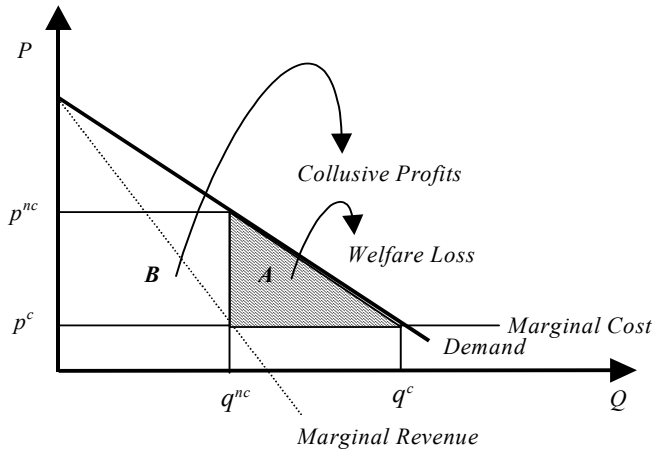
[5] Particularly in concentrated markets with homogeneous products, transparency is a major factor (but not the only one) which allows firms to raise the general level of price to a level which approximates the monopoly price by enjoying the benefits of the market structure and staying clear from explicit forms of co-ordination.

the collusion enhancing effects of private disclosures) and the literature on 'cheap talk' as a possible way for competitors to establish focal points for price collusion.

2.1. The notion of collusion as a market outcome

7. In the economic literature,[6] the term 'collusion' refers to any form of co-ordination or agreement among competing firms with the objective of raising prices (or lowering output) to a level which is higher than the non-collusive equilibrium.[7] In other words, collusion is a joint profit maximization strategy put in place by competing firms in order to achieve monopoly prices and profits jointly, rather than competing independently. Firms can collude on different competitive variables. In most cases, co-ordination involves keeping prices above the competitive level. In other markets, however, collusion may aim at limiting production or the amount of new capacity brought to the market. Firms may also co-ordinate by dividing the market, for instance by geographic area or other customer characteristics, or by allocating contracts in bidding markets.

8. The diagram below shows the effect of collusion on social welfare.[8]



9. In a perfectly competitive market (i.e. a market with an infinite number of firms, homogeneous products and perfect information) prices will be set at marginal cost. The competitive equilibrium will then be at q^c and firms will not make any economic profits. If firms succeed in cartelizing the market, they will be able to move the equilibrium from q^c to the non-competitive equilibrium and quantity q^{nc} will be available at the cartel price of p^{nc} (i.e. where marginal costs equal marginal revenues). In the new cartelized outcome, the net social welfare will fall (shaded area A). At the same time, the cartelists' profit will increase (non-shaded area B).

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6 For further details, see Stigler, 1964; Tirole, 2002; Carlton and Perloff, 1999; Scherer and Ross, 1990; Bishop and Walker, 2010; Phlips, 1995; Ivaldi, Jullien, Rey, Seabright and Tirole, 2003; Creatini, 2002; and the extensive literature cited in these texts.

7 Generally, economists would identify this level with as Bertrand equilibrium price, if firms compete on prices; or the Cournot equilibrium quantity, if firms compete on output.

8 For the simplicity's sake we have assumed that the collusive outcome equals to monopoly and that absent collusion the market would be perfectly competitive. Collusion, however, can lead to prices higher than the competitive price, but not necessarily as high as the monopoly price.

10. Differently from the legal approach, which is more focused on the *means* and the *form* used by competitors to collude,[9] the economic theory focuses on *market outcomes*, i.e. the impact of business practices on prices and output. Hence, regardless of whether collusion is achieved by way of a formal cartel between competing firms (explicit collusion) or by a tacit interdependence between the members of a tight oligopoly, economists consider that the economic effect of collusion is the same: a higher level of price to the detriment of social welfare. As we will discuss later in this paper this raises an important policy questions on if and when competition law should be concerned with collusion, and particularly with situation of tacit interdependence.

2.2. Factors which favour collusive outcomes – an overview

11. To reach and maintain over time a collusive equilibrium it is necessary that the colluding parties are in a position (i) to agree on a "common policy"; (ii) to monitor whether the other firms are adopting this common policy; and (iii) to enforce it. In other words, rivals must be in a position to reach a common understanding to restrict competition, they need to have an incentive not to depart from the agreed common policy and, if they do, the other must be in a position to punish the deviation. Without these three conditions firmly in place, a collusive equilibrium is not possible.[10]

12. Various factors may facilitate rivals reaching collusive outcomes and maintaining them over time.[11] Some of these factors refer to the structure of the market or to the characteristics of the products at stake; other relate more to the functioning of market and to its competitive dynamics.[12] Not all of these factors, however, are necessary t for collusion to be possible in a given market:[13]

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9 E.g. agreements to fix price or quantities. See, for example, the US Sherman Act, 15 U.S.C. § 1 according to which "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal." Similarly, Article 101 TFEU lists (although in a non-exhaustive manner) what are generally considered the most common ways in which competition can be restricted. In particular, it prohibits "*all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market, and in particular those which: (a) directly or indirectly fix purchase or selling prices or any other trading conditions; (b) limit or control production, markets, technical development, or investment; (c) share markets or sources of supply; (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage; (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection.*"

10 See Stigler, 1964; Tirole, 1988; Carlton and Perloff, 1990; Scherer and Ross, 1990; Ayres, 1987.

11 For a general discussion of these factors see Levenstein and Suslow, 2006. The authors also point to other factors which make cartels stable, such as the cartel internal organisation and its ability to learn about the market and its dynamics, or factors related to social pressure more generally.

12 See for example, the Horizontal Merger Guidelines of the US department of Justice and of the Federal Trade Commission (available on the website of the two agencies); the European Commission's Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations Between Undertakings (OJ 2004 C 31/5–18); or the Merger Assessment Guidelines of the Competition Commission (CC) and the Office of Fair Trading (OFT) in the United Kingdom (available on the web sites of the two agencies).

13 It must be noted that the analysis of these factors does not provide evidence of actual collusion on the market but it only provides an analytical framework to analyze if the market conditions are conducive to a collusive outcome. An extensive review of the main factors which facilitate collusion in included in the OECD, 1999.

- Collusion is more likely to occur in concentrated markets given the positive correlation between the number of firms in the market and the degree of competition: the fewer the firms in the market, the easier it is for them to collude successfully.[14]

- Collusion is easier to reach, monitor and sustain over time if the products concerned are homogeneous. It is also easier to co-ordinate on a price for a single, homogeneous product, than on hundreds of prices in a market with many differentiated products. In the latter situation, co-ordination and monitoring of deviations is much more difficult as rivals are not in a position to know whether price differences are due to cheating or to differences in the products concerned.

- Collusion is easier if incumbents are shielded from competition by new entrants. If barriers to entry/expansion are high or if there are no substitute products, collusion is more likely to occur and firms more likely to join a conspiracy. Entry of new suppliers attracted by the high profits of cartel members is a fundamental factor that jeopardizes the stability of the cartel itself.

- The number and the strength of the outsiders to the collusive understanding is also an important factor to assess whether collusion is a likely market outcome. Collusive prices are not sustainable if buyers can successfully resist the price increase by diverting their demand to alternative supply sources.[15]

- It is also easier to co-ordinate firms' commercial strategies in markets in which conditions (i.e. the demand and supply functions) are relatively stable. In a market with volatile demand or frequent entry by new firms, collusion may not be sustainable.

- A collusive equilibrium is only possible if the same firms regularly meet and interact in the market place. Only in this case are firms capable of adapting their respective strategies by acting and reacting to those of their competitors.

- If firms meet in more than one market (so-called *multi-market contacts*), it is more likely that punishment mechanisms will be credible and effective. Deviations in one market may trigger punishment in all markets, with greater losses for the cheater. Intuitively, collusion is also more likely if firms are similar.[16]

- Asymmetries in size or cost structures, which are likely to result in differences in market shares, can prevent firms from correctly allocating the reduction in output required to obtain the expected collusive price increase.[17]

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14 The evidentiary value of structural evidence, however, is limited. There are examples of highly concentrated industries selling homogeneous products which are 'benign' in terms of competition and where one experiences fierce rivalry. Conversely, cartels are known to have existed and prospered for many years in industries with numerous competitors and differentiated products. See OECD, 2006(a), at para 15.

15 If the cartel is facing a concentrated structure of demand, it is likely that the buyers can leverage their bargaining power to stimulate price competition between the participants in the cartel (i.e. providing incentives for cheating) and between the cartel members and residual competitors. See Snyder, 1996.

16 There are economic studies which support this intuition and conclude that if there are significant differences in the size, market share and cost structure of the colluding firms, the collusive strategy is unlikely to be sustained over time. See Compte, Jenny and Rey, 2002; Kühn and Motta, 1999.

17 On the impact on the likelihood of collusion of production capacities and capacity utilization rates, see Phlips, 1995, Chapter 9.

2.3. The role of market transparency as a relevant factor for collusive or competitive outcomes[18]

13. Market transparency is an important factor which affects the likelihood of competitive or collusive outcomes. A market's degree of transparency can be loosely defined as the speed with which leading firms can reliably inform themselves of rivals' actions.[19] The economic literature has historically placed transparency and access to information at the centre of the competition process and of the economic benefits that it generates. The economic thinking on market transparency and its relevance for antitrust purposes is twofold. In 1776 Adam Smith warned us about the possible consequences of competitors' communications on competition.[20] However, in order for the invisible hand to produce benefits for society as a whole it is necessary for independent actors to plan and conduct their economic activity according to price signals. Therefore, market transparency, can either facilitate collusion or competition, depending on the circumstances:[21]

- On the one hand, market transparency should be encouraged; after all, the model of perfect competition presumes the availability of perfect information about demand and supply in any given market. Increased knowledge of market conditions mostly benefits consumers, who can choose between competing products with a better understanding of the product characteristics; customers can also compare terms and conditions of the various offerings and freely choose the most suitable one for their needs. Enhanced transparency benefits consumers by lowering search costs.[22] On the supply-side, the knowledge of the market and its key features (e.g., characteristics of demand, available production capacity, investment plans, etc.) facilitates the development of efficient and effective commercial strategies by market players. New entrants or fringe players may benefit from this information and enter the market more effectively and compete more fiercely against incumbents.

- Increased transparency, on the other hand, is one of the factors required to reach a collusive understanding and make sure that it is sustainable over time. Transparency generally contributes to the ease of reaching an "agreement", and decreases incentives to cheat by reducing the time before cheating is detected. In order to reach terms of co-ordination, to monitor compliance with such terms and to effectively punish deviations, companies need to acquire detailed knowledge of competitors' pricing and/or output strategies. The artificial removal of the uncertainty about competitors' actions, which is at the basis of the competitive process, can in itself eliminate the normal competitive rivalry.[23] This is particularly the case in highly concentrated markets where increased transparency enables companies to better predict or anticipate the conduct of their competitors and thus align themselves to it.

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18 For a general discussion of pro and anti-competitive effects of information exchange see OECD, 2010 and Capobianco, 2004.

19 See OECD, 1999.

20 In The Wealth of Nation of 1776, Adam Smith observed: "*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*." (Vol. I, Bk. I, Ch. 10 (1776).

21 See OECD, 2010. See also Mollgaard and Overgaard, 2001; Phlips, 1988.

22 See OECD, 2001.

23 See, Court of Justice of the European Union in case C-8/08, *T-Mobile*, of 4 June 2009, para 33.

2.3.1. Public transparency and private transparency

14. It follows from the previous discussion that when assessing the relevance of transparency for collusion a distinction should be made between *public* transparency and *private* transparency. Public transparency (i.e. when the information is disclosed to all market players, including consumers) has the potential to intensify competition, while private transparency (i.e. the information is only disclosed to suppliers) is likely to restrict it.[24] An information exchange is genuinely public if it makes the exchanged data equally accessible to suppliers and customers at no cost.[25] The assumption is that information disclosed publicly may be used to decrease the likelihood of a collusive outcome to the extent that competitors unaffiliated to the exchange, potential entrants, buyers and end customers are able to constrain any potential restrictive effect on competition.

15. The reason the distinction between public market transparency and private market transparency should have a bearing on defining a sound policy is that the economic literature associates with public disclosures a number of pro-competitive effects which are not associated with private communications.[26] First and foremost, increased transparency and better knowledge of market conditions benefit consumers. In 1961, Stigler emphasised the importance of search costs for consumers.[27] Buyers need to identify sellers and their prices, while customers need to search for knowledge on the quality of goods. The more information is available on the market (i.e. on the products and services and their suppliers), the better placed consumers are to choose between competing products, as they will have a greater understanding of the product characteristics. Consumers can knowledgeably compare terms and conditions of the various offerings and freely choose the most suitable one for their needs.[28] The positive effects of price advertising are generally considered outweighing in magnitude the collusive effects of the announcements.[29]

16. In these circumstances, enhanced market transparency through disclosure to the public can benefit consumers by lowering consumers' search costs.[30] Reinforcing the conclusion of traditional economics, behavioural economics have shown that better informed consumers can be instrumental in developing vigorous competition between suppliers.[31] This stream of literature has also shown that information asymmetries and absence of information may not only distort consumer behaviour but may

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24 See Kühn and Vives, 1995.

25 Collins and Bennett argue that "Public information that is repackaged with additional functionality that, for example, allows a more detailed interrogation of the data and then is sold on to firms would not be considered public under this definition. Neither would information that is placed on a website that is inaccessible to the general public or hidden away from public view" (Bennett and Collins, 2010).

26 See Motta, 2004. Benefits on the supply side of market transparency will not be discussed here as they are common to both public and private communications. For a more in-depth review of the pro-competitive effects of transparency for suppliers see OECD, 2010.

27 See Stigler, 1961.

28 Greater transparency may increase customers' switching. However, the effects of this are ambiguous. Bjorkroth, for example, argued that increased consumer switching increases the profits from deviating (reducing the incentive to co-ordinate), but also increases the ability to punish the deviator (increasing the incentive to co-ordinate). See Bjorkroth, 2010. See also Farrell and Klemperer, 2006; Bos, Peeters and Pot, 2010.

29 For a review of the empirical and theoretical literature on price advertising, see Fumagalli and Motta, 1999.

30 For a discussion on the links between increased transparency to the benefit of consumers and switching costs, and their effects on competition, see the discussion on retail banking in OECD, 2006(b).

31 For a further discussion on this, see Bennett, Fingleton, Fletcher, Hurley and Ruck, 2010.

also adversely impact competition and competitive outcomes.[32] In these circumstances, increased transparency may improve social welfare.[33] From a more empirical and pragmatic perspective, if the intention of unilateral announcements is to provide focal pricing points for competitors, private communications are significantly less costly and more effective than public announcements.[34] Moreover, public announcements are by definitions visible. As such, they increase the risk of detection by competition enforces, and facilitate the evidence gathering exercise should these practices be investigated at a later stage.

2.3.2. How valuable is "cheap talk"?

17. If transparency is an important factor to assess whether collusion is a likely market outcome, then there is a question surrounding which kind of information disclosures contribute to artificially increasing the degree of transparency and therefore to establishing a risk of collusion. One factor that the literature points out is that communications between firms may have little value in facilitating co-ordination if disclosed information is not *credible* and *verifiable*. If it is meant to offer a focal point for co-ordination, the disclosing party will have the incentive to reveal the information which will likely move the focal point the closest to its own optimum equilibrium. Similarly, if the disclosure is to ensure the monitoring of an existing collusive arrangement, incentives to lie on possible departures from that arrangement will be high. A rational rival will therefore discount any information not compatible with the incentives of the disclosing firm, and the information will become meaningless: this is the so called "cheap talk" critique.[35]

18. Economists, however, have reached different conclusions on the question of how much "cheap talk" can contribute to reaching collusive outcomes. Despite the fact that when talk is cheap there are no incentives to tell the truth, some economists suggest that communications between firms, even if not verifiable, can lead players to Nash equilibria.[36] In particular, they argue that "cheap talk" can assist in a meeting of minds and allow firms to reach an understanding on acceptable collusive strategies.[37] It is necessary however that the information disclosed is *self-committing*. Only then players should be able to co-ordinate on a stable Nash equilibrium.[38] Others scholars have suggested that cheap talk can assist in creating and sustaining those personal relationships which play an important role in sustaining collusion

32 See Klemperer, 1995, according to which high switching cost allow firms to maintain higher prices and earn higher profits.

33 Bennett and Collins have, however, emphasise the importance that access to the information must be accompanied by the ability of the consumer to assess it and to act upon it. In this respect, some have warned of the effects on consumer choices and consequently on social welfare of firms' strategies to "overflow" consumers with information on products and services, the only purpose being to complicate the assessment of the information and therefore making consumer choice more difficult. See Bennett and Collins, 2010; see also, Ellison and Ellison, 2009; Gabaix and Laibson, 2006.

34 Public announcements have a smaller risk of under-enforcement (see Bennett and Collins, 2010). For this reason, their effects on competition should be analysed on a case-by-case basis. As for private exchanges, while they should not be viewed as presumptively anti-competitive in all circumstances, most competition authorities are very cautious and looked at very closely to assess if there is any benefit/efficiency that can justify them under the competition rules.

35 See Baliga and Morris, 2002; Bennett and Collins, 2010.

36 A Nash equilibrium is a strategic selection such that no firm can gain by altering its strategy, given the existing strategies of its rivals. Thus, a Nash equilibrium represents the best response by each firm to the given strategies of others. See Nash, 1951; see also Fudenberg and Tirole, 1989; Shapiro, 1989; Neumann and Morgenstern, 1980.

37 See Farrel, 1987; Overgaard and Møllgaard, 2007.

38 See Farrell, 1988.

and overcoming the problems of trust.[39] Others have shown that cheap talks can matter in a variety of economic interactions involving private information: cheap talk can matter in bargaining[40] or in political contexts.[41] Finally, even "cheap talk" which is not immediately verifiable may be of some concern as announced plans can often be verified later or revoked, whereas wrong announcements can be punished, which in long-term commercial relationships may be enough to create credibility.[42]

The Airline Tariff Publishing Company case in the US

An example of an enforcement action based on cheap talk as a means to provide anti-competitive focal points is the US Airline Tariff Publishing Company case (ATP). In December 1992, the US Department of Justice (DOJ) sued eight of the largest U.S. airlines and the Airline Tariff Publishing Company (ATP) for price fixing and for operating ATP in a way that facilitated collusion, in violation of Section 1 of the Sherman Act.[43] ATP collected fare information from the airlines and disseminated it on a daily basis to all airlines and to the major computer reservation systems that served travel agents.

According to the DOJ, ATP thus allowed air carriers to respond quickly to each others' prices and made the deterrence more imminent which in itself facilitated collusion. ATP provided both a means for the airlines to disseminate fare information to the public and a means for them to engage in essentially a private dialogue on fares. The defendants designed and operated ATP's computerized fare exchange system in a way that unnecessarily facilitated co-ordinated interaction among them so that they could

- communicate more effectively with one another about future fare increases, restrictions, and elimination of discounted fares,
- establish links between proposed fare changes in one or more city-pair markets and proposed changes in other city-pair markets,
- monitor each other's changes, including changes in fares not available for sale, and
- reduce uncertainty about each other's pricing intentions.

The ATP case involved a typical example of "cheap talk": carriers communicated price information but did not commit to a course of action: they could announce a future price increase but left open the option to rescind or revise it before it took effect. If the terms of agreement are complex (e.g., specifying prices in numerous markets) but there is a common desire to reach agreement, cheap talk can help firms reach a collusive equilibrium. ATP collected fare information from the airlines and distributed it daily to all the airlines and to the major computer reservation systems that serve travel agents. This arrangement was an efficient instrument for cheap talk.[44]

The case was resolved with a consent decree crafted to ensure that the airlines did not continue to use any fare dissemination system in a manner that unnecessarily facilitated price co-ordination or that enabled them to reach specific price-fixing agreements.

19. Empirical evidence on the role of informal communications in supporting collusion is also ambiguous. First, most cartel cases involve a significant amount of communication between participants;

39 See Farrell and Rabin, 1996.

40 See Farrell and Gibson, 1989; Mathews and Postlewait, 1989.

41 See Austen-Smith, 1990; Austen-Smith, 1993; Matthews, 1989.

42 See Nitsche and von Hinten-Reed, 2004; Bigoniy, Fridolfssonz, Le Coq and G Spagnolo, 2010.

43 United States v. Airline Tariff Publishing Co., 1994-2 Trade Cas. (CCH) ¶70,687 (D.D.C. Aug. 10, 1994). For more details on the case, see US submission to the OECD Report on *Oligopoly*, 1999, Paris.

44 See also Borenstein, 1999.

face to face communications are those which seem to work best and are used to create trust.[45] Empirical studies have also concluded that pre-play communication facilitates collusion, and particularly that the mere knowledge that one will be informed about the other players' actions can substantially enhance the likelihood of co-ordination when there is also a signal about intended play. Otherwise there are no effects.[46] In contrast, the experimental literature on non-binding price signalling shows that although price signalling often increases transaction prices, this increase is very often temporary and the equilibrium behaviour may be unaffected by these non-binding price signals.[47] More permanent price increases due to price signalling seem to be more likely when sellers compete in multiple markets.[48] Similarly, the impact of cheap talk seems to depend on the signalling language available to sellers: very restrictive language (e.g. one price proposal per period) is unlikely to have a lasting effect on prices, while multiple-round signalling structures can generate persistently higher prices.[49]

3. The role of communication in establishing an anti-competitive agreement or concerted practice

20. So far, we have seen how the term 'collusion' refers to any form of co-ordination or agreement among competing firms on a market, with the objective of raising prices (or lowering output) to a level which is higher than the non-collusive equilibrium. This second part of the paper explores the approach of economics and law to explicit and tacit collusion, and the policy implications of enforcing cartel rules.[50] In particular, it discusses how the traditional concepts of 'agreement' and 'concerted practices' have been used by competition enforcers to address situations where collusion between rival firms is facilitated by business practices aimed at increasing market transparency without the need for competitors to enter into explicit agreements.

3.1. Explicit and tacit collusion

21. The most direct way to achieve a collusive outcome is for the firms to interact directly and agree on the optimal level of price or output. Any form of direct contact between firms is defined as *explicit* (or sometimes *overt*) *collusion*.[51] Collusion, however, may not necessarily involve an explicit understanding

45 See Levenstein and Suslow, 2006(b); Potters, 2005.

46 See Charness and Grosskopf, 2004.

47 See Cason, 1995; Holt and Davis, 1990.

48 See Caslon and Davis, 1995.

49 See Harstad, Martin and Normann, 1997. This is the position that was taken by the US Department of Justice in the ATP case, discussed further in this paper, which involved "cheap talk" such as announcing a future price increase but leaving open the option to rescind or revise it before it took effect. The Department argued that if the terms of agreement are complex but there is a common desire to reach agreement, cheap talk can help firms reach a collusive equilibrium. See US submissions in OECD, 2007(b). See also Farrell and Rabin, 1996.

50 This paper will not discuss how collusion can be addressed through other competition provision. In particular through merger control provisions which prohibit mergers which can lead to co-ordinated effects post transaction. Similarly, it will not discuss the use of the concept of joint or collective dominance under unilateral conduct rules against business practices similar to those discussed in this paper.

51 The fact that the firms have direct interactions does not necessary imply that explicit collusion is easier to reach and to sustain over time. On the contrary, the likelihood of reaching an explicit as well as a tacit collusive agreement strictly depends on the structural and behavioural factors that discussed above. What really matters over time is the incentive of each firm to cheat on any agreed term and the ability of the other firms to detect and punish any such deviation. The need for *all* of these conditions to be met applies equally to tacitly collusive understandings *and* to explicit agreements.

between firms. In oligopolistic markets, firms tend to be interdependent in their pricing and output decisions so that the actions of each firm impact on, and result in, a counter response from the other firms. In such circumstances, oligopolistic firms may take their rivals' actions into account and co-ordinate their actions as if they were a cartel, but without an explicit agreement. Such co-ordinated behaviour is referred to as *tacit* (or sometimes *implicit*) *collusion*, *oligopolistic interdependency* or *non-cooperative oligopoly*.[52]

Specific features of explicit collusion

As opposed to tacit collusion, explicit collusion makes the reaching of a collusive outcome more efficient, at least in the initial phase of the cooperation. Through explicit collusion the colluding firms may co-ordinate on a price level which is higher than the price level that they could have achieved under tacit co-ordination. Explicit collusion can also help structuring the cooperation in such a way as to simulate some of the required conditions for the sustainability of collusion. In particular, if the market is not inherently transparent, firms can improve transparency by setting up an institutionalized exchange of information.[53] Finally, explicit collusion may facilitate co-ordination among a larger number of firms than under tacit collusion. Explicit cartels are also more easily detectable (as they leave trails which can be used as evidence against the members) and are clearly caught by antitrust rules, which expose their members to severe monetary and (in some jurisdictions) criminal sanctions. For these reasons, firms normally only turn to an explicit cartel if the market structure cannot sustain a tacitly collusive equilibrium.

22. In contrast to explicit collusion, in a tacitly collusive context, the non-competitive outcome is achieved by each participant deciding on its own profit maximizing strategy independently of its competitors. This occurs when the market is extremely concentrated, stable, homogeneous and transparent. Under these conditions, the pricing and output actions of each firm have a significant impact upon those of rivals, and after a period of repeated actions/reactions, firms become conscious that their respective strategic choices are interdependent.

23. No profit-maximising firm wants to make zero profits forever and each firm knows that it could earn supra-competitive profits by collectively charging a non-competitive price. The indefinitely repeated interaction makes the threat of punishment credible so that each firm knows that any deviation from the non-competitive equilibrium would trigger a price war pushing prices towards the competitive equilibrium. Therefore, such oligopolistic interaction renders individual strategies conducive to an equilibrium at non-competitive prices/output rational, without actually communicating or agreeing explicitly. This form of conscious parallel behaviour generally has the same economic outcome as a cartel that fixes prices or restricts output, without however the need to enter into an explicit agreement.

24. In reality, however, there can be a considerable gap between the intention to co-operate and the ability to do so successfully. It can be difficult to reach mutually acceptable terms of co-operation, and to ensure that firms do not deviate from them. In order to increase the chances for successful collusion, and in particular to improve abilities to detect and punish cheating, co-operating firms may employ what are known as "facilitating practices".

3.2. Competition and oligolistic interdependence – the policy dilemma

25. The previous discussion on explicit and tacit collusion shows how, under certain market conditions (i.e. markets with few sellers and homogenous products), supra-competitive price strategies may be the normal outcome of rational economic behaviour of each firm on the market. It is for this reason that tacit collusion or conscious parallelism falls outside the reach of competition laws on cartels. However,

52 For a general overview on the theory of tacit collusion see Tirole, 2002; Carlton and Perloff, 1999; Scherer and Ross, 1990; Bishop and Walker, 2010; Phlips, 1995.

53 For a discussion on information sharing arrangements in the context of trade associations see OECD, 2007.

from a policy perspective, such a tacitly collusive outcome may not be desirable as it confers on firms the ability to significantly suppress output or raise prices to the detriment of consumers. This is the so-called *oligopoly problem*, which has generated a large debate on whether competition policy should be concerned with tacit collusion or not.[54] Cartel rules generally are not designed to tackle individual and rational market strategies of a single firm, even if the overall result of similar individual strategies has an equivalent outcome to a cartel.

26. Between explicit collusion (which should always be regarded as illegal under competition rules) and mere conscious parallelism (which should fall outside the reach of competition law as it does not entail any form of co-ordination between competitors), there is a grey area of business behaviour which goes beyond conscious parallelism but at the same time does not involve an express agreement between competitors. This is a situation which may arise particularly in oligopolistic markets where competitors are able to co-ordinate on prices and increase the likelihood of a tacitly collusive outcome by engaging in activities (so called "facilitating practices" or signalling) which make co-ordination easier (e.g. because they facilitate communications) and more effective (e.g. because they facilitate detection of cheating and administration of punishment of deviations).[55]

Facilitating Practices – Definition and examples

According to the OECD, the concept of facilitating practices refers to "conduct by firms, typically in an oligopolistic market, which does not constitute an explicit, "*hardcore" cartel agreement, and helps competitors to eliminate strategic uncertainty and co-ordinate their conduct more effectively.*"[56]

Competition authorities have investigated a broad range of conducts as facilitating practices. One of the most commonly cited examples of facilitating practices or signaling devices[57] include direct or indirect communications between competitors, which may take the form of information exchanges between competitors[58], public speeches or announcements (such as media dissemination of price information or advance price announcements).

Other types of facilitating practices include pricing systems that facilitate collusive outcomes, such as most favored customer clauses, alignment clauses, English clauses, resale price maintenance clauses, uniform delivery pricing methods and multiple basing point pricing systems.[59] Facilitating practices can also include vertical arrangements that may facilitate co-ordination among suppliers, such as certain minimum advertised price programs and interlocking directorates, which can facilitate co-ordination among competitors. Product standardisation and benchmarking are also often considered as facilitating practices.

27. Leaving aside structural regulatory solutions to the oligopoly problem,[60] which would imply an intervention affecting the structure of the market to favour a more competitive market outcome, competition policy makers have devised different ways of addressing the oligopoly problem. They have expanded the traditional notions of 'agreement' and 'concerted practice' to tackle these practices which

54 For a general overview of the policy implication of the 'oligopoly problem', see Hovenkamp, 1994, Chapter 4; Turner, 1962; Posner, 1969; Posner, 1976. See also Hay, 1999.

55 See Kovacic, 1993; Page, 2009; Arquit, 1993; Hay, 2008; Blechman, 1979; Ayres, 1987.

56 See OECD, 2007(a).

57 See generally Areeda and Hovenkamp, 2003; Hay, 1982.

58 See OECD, 2010; Capobianco, 2004.

59 For a general review of these pricing practices see Capobianco, 2007.

60 The oligopoly problem is fundamentally a structural problem which requires structural solutions which could be pursued by sector regulator. See Turner, 1962.

facilitate a non-collusive equilibrium in markets where pure oligopolistic interdependence would not be feasible or because it would be insufficient to yield monopoly profits. Moreover, in many countries, competition authorities have used *ex ante* merger control rules to prevent structural changes which could favour co-ordinated effects[61] or *ex post* unilateral conduct rules which try to address the oligopolistic interdependence under the notion of joint or collective dominance.

28. The question, however, remains of whether behavioural rules prohibiting anti-competitive agreements and concerted practices are suited to address situations leading to oligopolistic interdependence and under which circumstances cartel rules are designed to pursue practices which facilitate collusion absent evidence of actual conspiracy between the firms. These intermediary situations between explicit and tacit collusion are becoming more and more frequent in sophisticated economies, where old fashioned "agreements" are increasingly replaced by more discrete, looser forms of co-ordination and informal understandings between firms. Such forms of interaction between competitors may still have anti-competitive effects and might require scrutiny under competition rules.

29. The main challenge for competition enforcers, however, is to distinguish between lawful conduct that is the result of oligopolistic interdependence and certain additional conduct that can be characterized as unlawful facilitating practices. Unfortunately, there is no bright line test to make this distinction. Most conduct characterized as facilitating practice can have pro and anti-competitive effects, depending on the circumstances in which it occurs. Given such ambiguous nature, a careful examination of a specific practice, its anti-competitive effects and efficiencies, as well as its objective or purpose, will usually be necessary to determine whether a given practice can be considered unlawful.[62] In exceptional cases, on the other hand, the circumstances may support a presumption that certain practices are anti-competitive so that a competition authority can condemn such practices under an abbreviated analysis without proof of actual anti-competitive effects. These practices are considered to restrict competition *per se* or by object.

30. The rest of the paper will discuss when unilateral disclosures of information can raise concerns under competition laws.

3.3. Unilateral disclosures of information and cartel agreements

3.3.1. Unilateral disclosures as an ancillary practice to a main illegal agreement

31. Unilateral disclosures are less problematic when competitors chose to use them as part of a wider anti-competitive agreement, for example by fixing prices or sharing customers. The disclosure is then just an ancillary mechanism used to support the enforcement and monitoring of the main anti-competitive agreement.[63]

32. The analysis of this situation is relatively straightforward and competition authorities would assess it as part of the main anti-competitive agreement. If a price fixing agreement can be successfully established, competition authorities would assess the possible restrictive effects of unilateral disclosures in the broader context of the cartel or the agreement to which they are ancillary.[64]

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61 Merger control is a partial answer to this policy dilemma and is used to prevent mergers which affect the market structure to the point where they are likely to lead to tacit collusion in the future (so-called *co-ordinated effects* of mergers). See discussion in Capobianco, 2007.

62 See OECD, 2008.

63 See also the discussion below on price leadership.

64 See OECD, 2010; Bennett and Collins, 2010; Capobianco, 2004; Kühn and Vives, 1995.

3.3.2. Agreements to disclose information

33. Competitors can also agree on an industry-wide practice of rivals' unilaterally disclosing sensitive information, such as an agreement to announce list prices. One should distinguish between the case where rivals agree to adhere to terms announced and the case where they simply agree to disclose the information without an obligation to abide by the particular terms of dealing disclosed. The legality of these two different practices depends on whether the facilitating practice consists of an agreement to adhere to particular terms of dealing or an agreement to share information. While both types of agreement may facilitate price co-ordination, an agreement on terms of dealing should be viewed with greater suspicion.

34. An agreement that facilitates price co-ordination by fixing rivals' terms of dealing is likely to be held illegal *per se*.[65] In the United States, for example, the Supreme Court in *Sugar Institute*[66] found that an agreement among rivals to adhere to publicly announced prices was illegal. The agreement to abide by particular terms of dealing was the decisive factor in the Court's judgement. Similarly in *Catalano*,[67] the Court condemned an agreement not to offer secret discounts which amounted to an agreement by each firm to adhere to announced list prices. Similar reasoning would apply to agreements to adopt other facilitating practices, such as resale price maintenance or basing point or delivered pricing, that enhance price transparency by restricting terms of dealing.[68]

35. The assessment of an horizontal agreement to adopt a practice of simply disclosing information, without an agreement to adhere to a common commercial policy, would depend on case-by-case analysis of the pro- and anti-competitive effects of the increased transparency. Competition authorities and courts' assessment of such effects normally depends on the nature of the information exchanged, the type of disclosure, and the effects of the practice, given the characteristics of the market.[69]

3.3.3. Unilateral disclosures as evidence of an illegal agreement

36. Unilateral announcements could also be seen as an indirect evidence of a secret illegal agreement. The argument for the latter would be that firms would not voluntarily share confidential information unless they had already agreed to restrict competition between them.

37. Competition law enforcement officials always strive to obtain direct evidence of agreement in prosecuting cartel cases, but sometimes such direct evidence is not available. Circumstantial evidence is employed in cartel cases in all countries. There are two general types of circumstantial evidence: communication evidence and economic evidence. Of the two, communication evidence is considered to be the most important. Communication evidence is evidence that cartel operators met or otherwise communicated, but it does not describe the substance of their communications. It includes, for example, records of telephone conversations among suspected cartel participants, of their travel to a common destination and notes or records of meetings in which they participated. Communication evidence can be highly probative of an agreement many of the circumstantial cases included communication evidence; in some the evidence was compelling.[70]

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65 See Page, 2010; Lande and Marvel, 2000.

66 Sugar Inst., Inc. v. United States, 297 U.S. 553 (1936).

67 Catalano, Inc. v. Target Sales, Inc., 446 U.S. 643 (1980).

68 See Page, 2010.

69 For an extensive review of these factors, see OECD, 2010; see also Capobianco 2004.

70 See contributions to the OECD 2006(a).

3.4. Unilateral disclosure of information outside a cartel agreement

38. More complex is the situation where rivals adopt parallel facilitating practices, such as individual disclosures of information, for anti-competitive purposes without entering into an agreement. To address this issue, some jurisdictions have relied on the concept of "agreement" and looked at whether an agreement could be inferred from evidence suggesting that competitors have not acted independently. Other jurisdictions have relied on the concept of "concerted practice".

3.4.1. The notion of agreement and concerted practice in the EU

39. Article 101 of the Treaty on the Functioning of the European Union (the 'TFEU') prohibits "*all agreements […] and concerted practices […] which have as their object or effect the prevention, restriction or distortion of competition within the internal market […]*." The Treaty, however, does not provide a definition of an agreement or a concerted practice. This is left to the case law of the European courts and to the enforcement practice of the European Commission.

40. The notion of 'agreement' within the meaning of Article 101 TFEU has been construed very broadly. According to the General Court, "*[…] an agreement […] must be founded upon the direct or indirect finding of the existence of the subjective element that characterizes the very concept of an agreement, that is to say a concurrence of wills between economic operators on the implementation of a policy, the pursuit of an objective, or the adoption of a given line of conduct on the market, irrespective of the manner in which the parties' intention to behave on the market in accordance with the terms of that agreement is expressed.*"[71] Two elements are therefore central to the notion of agreement: (i) the existence of a concurrence of wills between at least two parties and (ii) the implicit or explicit manifestation of such concurrence. The existence of a common will (or a commitment) and its manifestation are therefore essential.

41. Article 101 TFEU distinguishes "agreements" from "concerted practices" and the reason for that is to provide the European Commission with a legal category which could be sufficiently flexible to embrace all multilateral conducts which restrict competition, even in the absence of a formal agreement or commitment.[72] If competition authorities could only enforce competition rules against agreements, the effectiveness of the enforcement policy could be significantly hampered as the increasing difficulties in finding sufficient evidence to show that firms have actually entered into an agreement would seriously limit the number of cases which could be successfully investigated and prosecuted by the authority. This would be the case for companies interacting in oligopolistic and concentrated markets, where market conditions and the repeated interaction between the existing few players may lead to collusive outcomes. In these cases, competition authorities may have difficulties demonstrating the existence of an agreement and may therefore find it easier to presume illegal collusion, in the form of a concerted practice, from parallel conduct.

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71 Case T-41/96, *Bayer AG v Commission*, [2000] ECR II-3383, para 173.

72 It must be noted that the notion of agreement and that of concerted practice are not mutually exclusive. Certain conduct may well likely be an agreement but it may just as easily end up being investigated and prohibited as a concerted practice. This may be the case where the Commission does not have sufficient evidence to show that the parties have entered into a restrictive agreement, but it has sufficient evidence showing that there is parallel conduct which restricts competition and which cannot be explained in any other way than by a collusive understanding. In practice, most cartels are investigated as agreements and concerted practices at the same time, as they exhibit features of both.

Australia – Agreement and price signalling amendments

The Australian experience shows that the difficulties in establishing that firms have actually entered into an "agreement" may result in a serious impediment to efficient enforcement of cartel rules.

In November 2011, the Australian Parliament passed amendments to the Competition and Consumer Act 2010 (CCA) (previously known as the Trade Practices Act 1974) targeting what has been termed "price signaling". The amendments are designed to address, at least in part, the fact that potentially anti-competitive information exchanges may not be caught by the cartel provisions in the CCA. This is because the cartel provisions require the existence of a "contract, arrangement or understanding" and the Australian courts have held that in order to meet that requirement it is necessary to have evidence of a "meeting of the minds" and a commitment or obligation of some kind.

The new provisions, which come into force on 6 June 2012, target the public and private disclosure of pricing and related information. The amendments include a *per se* prohibition of private disclosure of pricing information to one or more competitors; and a prohibition on other disclosures of pricing information (including public disclosures) which depends on whether it can be established that such practices have substantially lessened competition in a market. The new provisions also include a number of exceptions for certain legitimate disclosures, for example the disclosure of pricing information to a related corporate body or a disclosure required under the continuous disclosure obligations in the Corporations Act 2001.

The new prohibitions carry only civil sanctions (unlike the cartel provisions which carry both civil and criminal sanctions). The remedies available include pecuniary penalties which can be up to the greater of AUD10 million, 10% of a business's annual turnover or three times the benefit gained. The new provisions, however, will only apply to classes of goods and services prescribed by regulation. Under regulations currently proposed by the Australian government, the provisions will initially only apply to the banking sector.

42. The first important pronouncement on what constitutes a "concerted practice" under the European competition rules dates back to the early seventies when the Court of Justice of the European Union ("ECJ") reviewed on appeal the Commission's decision in the *ICI* case (more commonly known as the *Dyestuffs* case).[73] The Court, endorsing on appeal the Commission's approach, offered for the first time a comprehensive definition of concerted practice: "*[…] a form of co-ordination between undertakings which, without having reached the stage where an agreement properly so-called has been concluded, knowingly substitutes practical cooperation between them for the risks of competition. By its very nature, a concerted practice does not have all the elements of a contract but may inter alia arise out of co-ordination, which becomes apparent from the behaviour of the participants*."[74]

43. The notion of concerted practice was further refined in the *Sugar* case, where the ECJ rejected the argument that a concerted practice requires "*the working out of an actual plan*" and confirmed that, under European competition law, companies have the right to adapt intelligently their market strategy to the conduct of their competitors.[75] In the *Polypropylene* case, the ECJ held that "*a concerted practice implies, beside undertakings' concerting together, conduct on the market pursuant to those collusive practices, and a relationship of cause and effect between the two.*" [76] The Court then established that if the Commission has shown satisfactorily that concertation has taken place the market behaviour can be presumed, reversing the burden of proof onto the parties. Finally, according to the Court, a concerted

73 OJ 1969 L 195/11.

74 Case 48/69, *ICI v Commission*, [1972] ECR 619, paras 64 and 65. See also Joined Cases C-89/85 and others, *Wood Pulp*, [1993] ECR 1307, paragraph 63, and more recently Case C-8/08, T-Mobile Netherlands, paragraph 26.

75 Joint cases 40-48, 50, 54-56, 111, 113 and 114/73, *Suiker Unie v Commission*, [1975] ECR 1663.

76 Case C-49/92P, *Commission v Anic Partecipazioni*, [1999] ECR I-4125, para 118.

practice falls under Article 101 TFEU even in the absence of anti-competitive effects on the market, as long as it has an anti-competitive object.

44. Based on the Court case-law, there are three constituent elements of a concerted practice:

(i) it requires a direct or indirect interaction between competitors which is likely to affect their independence of judgment;[77]

(ii) it requires some form of manifested consensus to replace competition with forms of collusion between the participants; and[78]

(iii) co-ordination must result in common conduct on the market and a relationship of cause and effect between the two (so-called *causality link*).[79]

45. In the 2010 Guidelines on the applicability of Article 101 TFEU to horizontal co-operation agreements[80] the European Commission applied this test to unilateral disclosures of information and concluded that "*[a] situation where only one undertaking discloses strategic information to its competitor(s) who accept(s) it can also constitute a concerted practice Such disclosure could occur, for example, through contacts via mail, emails, phone calls, meetings etc. It is then irrelevant whether only one undertaking unilaterally informs its competitors of its intended market behaviour, or whether all participating undertakings inform each other of the respective deliberations and intentions. When one undertaking alone reveals to its competitors strategic information concerning its future commercial policy, that reduces strategic uncertainty as to the future operation of the market for all the competitors involved and increases the risk of limiting competition and of collusive behaviour.*"[81]

3.4.2. The notion of agreement in the US and the standard of proof

46. In the United States, courts do not draw any fine distinction between the concepts of "*contract, combination in the form of a trust or otherwise, or conspiracy*", which are listed in Section 1 of the Sherman Act. In practice these are all different terms to indicate an agreement.[82] According to long-standing case-law of the Supreme Court under the Sherman Act, an agreement need not be 'explicit',[83]

77 In *Züchner* (Case 172/80, *Züchner v Bayerische Vereinsbank*, [1981] ECR 2021) the Court confirmed that, in order to have a concerted practice, it is not necessary that there has been contact, but a simple 'exchange of information' is sufficient for this purpose (see para 12).

78 What matters is that, through direct or indirect contacts, firms deliberately influence the conduct of other firms by disclosing to each other their respective course of conduct. Such disclosure is bound to affect the market behaviour of the participants, as it eliminates in advance the uncertainty about the future conduct of the others, which is the essence of competitive rivalry and of secret competition. See Alese, 1999; Black, 2003.

79 Case C-49/92P, *Commission v Anic Partecipazioni*, [1999] ECR I-4125, para 118 et seq. However, the threshold for establishing that co-ordination has resulted in a market conduct is fairly low under the current case law. It is sufficient for the Commission to establish that companies, which have participated in concerting arrangements (i.e. have entered into direct or indirect contacts with competitors), have remained active on the market. When this is the case, it is presumed that their market conduct has been affected by such contacts.

80 OJ 2011 C 11/01.

81 At para 62.

82 See Posner, 2001; Areeda and Hovenkamp, 2001; Handler, 1953.

83 United States v. Gen. Motors Corp., 384 U.S. 127, 142–3 (1966).

'express',[84] or 'formal',[85] so long as two factors can be established: the firms have (i) "*a unity of purpose or a common design and understanding, or a meeting of minds in an unlawful arrangement*"[86] and (ii) "*a conscious commitment to a common scheme*."[87]

47. This very broad definition, which in principle is able to cover also situations of mere parallelism of conduct, did not prove helpful in providing clear guidance on how to distinguish legitimate parallel behaviour from concerted actions to restrict competition. In practice, however, courts have not focused too much on the notion of 'commitment', which requires some form of express assurance that each competitor will adhere to the common design or understanding, and focused more on whether an agreement can be inferred from evidence suggesting that the defendant did not act independently. The Supreme Court in Matsushita held that a plaintiff seeking damages for a violation of Section 1 of the Sharman Act must present evidence "*that tends to exclude the possibility that the alleged conspirators acted independently*".[88] In other cases, the courts required evidence that "*tend[s] to exclude the possibility that the defendants merely were engaged in lawful conscious parallelism*".[89]

48. Another way courts express this standard is by requiring the plaintiff to produce evidence amounting to a 'plus factor'.[90] In other words, plaintiff is required to show that there was something else or something more than conscious parallelism or oligopolistic interdependence to meet the standard under Section 1.[91] The courts have given little guidance on what sort of evidence must be submitted by the plaintiff to prove that the parallel conduct is actually the result of a conspiracy and not just a mere parallel conduct. Following the Supreme Court judgment in *Twombly*,[92] however, courts have begun to consider as a key element for establishing an agreement whether the parties have communicated to each other their intentions to act in a certain way and their reliance on each other to do the same.[93]

3.4.3. Communication as a "plus factor"

49. The standard set by the courts in the US and in the EU appears to be rather circular in its logic: to prove unlawful collusion from parallel behaviour, one has to show that parallel behaviour can only be the result of unlawful collusion. It is clear, however, that enforcers cannot simply rely on evidence of parallel

84 United States v. Paramount Pictures, Inc., 334 U.S. 131, 142 (1948) (noting that *'[i]t is enough that a concert of action is contemplated and that the defendants conformed to the arrangement'*).

85 Am. Tobacco Co. v. United States, 328 U.S. 781, 809–10 (1946) (adding that evidence of a violation 'may be found in a course of dealings or other circumstances as well as in any exchange of words'). The Supreme Court has also stated that an agreement need not involve 'letters, agreements, or other testimonials to a conspiracy'. Norfolk Monument Co. v. Woodlawn Mem'l Gardens, Inc., 394 U.S. 700, 703–4 (1969).

86 Interstate Circuit Inc v United States, 306 US 208, 810 (1939); Am. Tobacco Co. v. United States, 328 U.S. 781, 809–10 (1946), at 810.

87 Monsanto Co. v. Spray- Rite Serv. Corp., 465 U.S. 752, 768 (1984); In re Flat Glass, 385 F.3d at 357.

88 Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 588 (1986).

89 City of Tuscaloosa v. Harcros Chems., Inc., 158 F.3d 548, 571 n.35 (11th Cir. 1998).

90 See, e.g., Blomkest Fertilizer, Inc. v. Potash Corp. of Sask., 203 F.3d 1028, 1032–4 (8th Cir. 2000) (holding that the plaintiff 'has the burden to present evidence of consciously paralleled pricing supplemented with one or more plus factors'). On the "plus factors" see discussion further below.

91 Kovacic, 1993; Snider and Scher, 2008.

92 Bell Atl. Corp. v. Twombly, 127 S. Ct. 1955, 1964 (2007).

93 See Page, 2009; Page, 2007; Black, 2005; Page, 2010.

behaviour to prove a concerted action in violation of competition rules. The legal and economic problem with such evidence is that parallel behaviour could have causes other than collusion. In oligopoly settings, parallel price movements for example could arise simply through independent rational behaviour. To convince courts that parallel behaviour has arisen through some sort of agreement rather than mere oligopolistic interdependence, competition authorities must usually demonstrate that something more has occurred. Parallel conduct is therefore a necessary, but not a sufficient, condition.[94]

Conscious parallelism is not anti-competitive

Courts have generally embraced the economic conclusion that tacit collusion should not be considered anti-competitive. In the United States, for example, in Brooke Group, the Supreme Court characterized "tacit collusion," which it equated with conscious parallelism and "oligopolistic price co-ordination," as "not itself unlawful."[95] Similarly, in Twombly, the Court held that parallel conduct is "*consistent with conspiracy, but just as much in line with a wide swath of rational and competitive business strategy unilaterally prompted by common perceptions of the market.*"[96] The Court of Justice of the European Union reached similar conclusions. Already in *Dyestuffs*, the Court clearly held that *"parallel behaviour may not itself be identified with a concerted practice."*[97] In *Wood Pulp*, the Court confirmed that "*[…] although Article 85 [now 101] of the Treaty prohibits any form of collusion which distorts competition, it does not deprive the economic operators of the right to adapt themselves intelligently to the existing and anticipated conduct of their competitor*".[98] The Court added that if the parallel conduct can be explained by plausible reasons other than concertation, the parallelism cannot be regarded as illegal, because it is the lawful market outcome of tacit collusion.

50. Courts have indeed made clear that something more than conscious parallelism is required (the so-called *plus factors* or *parallelism plus*), although they have not clearly defined what this "something more" should be. These *plus factors* include *inter alia*:[99]

94 See Van Gerven and Navarro Varona, 1994.

95 *Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 227 (1993). See also JTC Petroleum, 190 F.3d at 780 (also equating tacit collusion with oligopolistic interdependence, and observing that no court has held it to be illegal under § 1 of the Sherman Act.

96 *Bell Atl. Corp. v. Twombly*, 127 S. Ct. 1955, 1964 (2007).

97 See Case 48/69, *ICI v Commission*, [1972] ECR 619, para 65. The judgment, however, left doubts as to whether under certain conditions tacit collusion could nevertheless amount to a concerted practice. In paragraphs 66 and 67 the Court said that parallel behaviour "*may however amount to strong evidence of such a [concerted] practice if it leads to conditions of competition which do not correspond to the normal conditions of the market, having regard to the nature of the products, the size and number of the undertakings, and the volume of the said market. This is especially the case if the parallel conduct is such as to enable those concerned to attempt to stabilize prices at a level different from that to which competition would have led, and to consolidate established positions to the detriment of effective freedom of movement of the products in the common market and of the freedom of consumers to choose their suppliers."*

98 Joint Cases C-89/85, C-104/85, C-114/85, C-116 and 117/85, C-125-129/85, *Ahlström Osakeyhtiö and others v Commission*, [1993] ECR I-1307, para 71. For commentaries see Jones, 1993; Van Gerven and Navarro Varona, 1994; Raffaelli, 1996; Pardolesi, 1994.

99 Kovacic, 1993, identifies as plus factors in this broader sense "[e]xistence of a rational motive for defendants to behave collectively," "[a]ctions contrary to the defendant's self-interest unless pursued as part of a collective plan," "[m]arket phenomena that cannot be explained rationally except as the product of concerted action," "[d]efendant's record of past collusion-related antitrust violations," "[e]vidence of inter-firm meetings and other forms of direct communications among alleged conspirators," "[d]efendant's use of facilitating practices," "[i]ndustry structure characteristics that complicate or facilitate the avoidance of

- Evidence that the market in question is not conducive to tacit collusion and lawful parallelism of conduct (i.e. tacit collusion is not a likely outcome of market interaction).[100]

- Evidence that there are no other exogenous factors which could justify the parallelism (e.g. increases in input prices for all suppliers, increase in inflation, exchange rate fluctuations, increase in property prices, etc.).[101]

- Evidence of direct or indirect contacts or communications between firms which have influenced the market conduct of the firms.[102]

- Evidence that the firms are acting "*against their own interest*", i.e. that a firm would not have engaged in the parallel conduct if it had been acting unilaterally pursuing its own interests.[103]

51. Two types of evidence seem to be playing a particularly important role: economic evidence[104] and evidence of communications between competitors. The importance of communications to establish a violation of competition law is emphasised clearly by the Court of Justice of the European Union in *Suiker Unie*. The Court stressed that economic operators' strategic decisions must be taken in total independence from competitors which "*strictly precludes any direct or indirect contact between such competitors, the object or effect whereof is either to influence the conduct on the market of an actual or potential competitor or to disclose to such a competitor the course of conduct which they themselves have decided to adopt or contemplate adopting on the market.*"[105]

52. Although the requirement of independence does not deprive economic operators of the right to adapt intelligently their strategy to that of other market players, it does however strictly preclude any *direct or indirect contact* between competitors, whose object or effect is either to influence the conduct on the market of an actual or potential competitor or to disclose to such a competitor the future course of conduct, which they themselves have decided to adopt or contemplate adopting on the market. Therefore, any interaction between competitors which is likely to affect the independence of their decision-making is likely to be viewed as evidence of an anti-competitive agreement or concerted practice.

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competition," and "[i]ndustry performance factors that suggest or rebut an inference of horizontal collaboration."

100 See discussion of these factors in the first part of this paper.

101 See Motta, 2004.

102 See the detailed discussion above on the constituent factors of a concerted practice under the case law of the European courts.

103 This is a concept employed by U.S. courts in recent years. It assumes that an action against one's self interest is one that would otherwise be against the self interest of the actor in the absence of an agreement. Concrete cases where U.S. courts have applied this criteria are described in OECD, 2006(a), at para 51 *et seq*.

104 On the use of economic evidence to prove a cartel, see OECD, 2006(a). Economic evidence is particularly important in markets where the concentrated structure of the supply and the intrinsic transparency of pricing policies of each participant can sufficiently explain the parallelism.

105 Joint cases 40-48, 50, 54-56, 111, 113 and 114/73, *Suiker Unie v Commission*, [1975] ECR 1663, para 174.

4. Should any form of communication amongst rivals be suspicious?

53. Not all communication between rivals, however, should be treated as suspicious. On the contrary, most forms of communications are benign.[106] Prices after all are meant to be communicated and the simple disclosure of price information cannot be considered as anti-competitive as such. In order to assess if direct or indirect communications between competitors should be viewed as anti-competitive, competition enforcers should follow a structured approach whereby they should first assess the market structure and whether the product characteristics are such that there is a risk of collusion should transparency increase. If the answer to this preliminary question is positive, the analysis should then move to the types and the nature of the information which is communicated and to the characteristics of the dissemination.

4.1. Market structure and product characteristics

54. The structure of the market and the nature of the product in question *ceteris paribus* are key elements in the analysis of whether collusion is likely to occur in a given market. If a market is highly concentrated or there are only a few large firms on the supply side, collusion will be more likely. The costs of organizing a sustainable collusion will be low, it will be easier to find terms of co-ordination and to monitor compliance. Punishment mechanisms will be more effective since cheating firms will be exposed to much higher losses. In contrast, in fragmented markets, firms will have greater incentives to deviate from any collusive understanding in order to try and gain market shares over their competitors and monitoring such deviations will be much more difficult. Such incentives to deviate will jeopardize the stability of a cartel.[107] A collusive agreement is also easier to reach, monitor and enforce over time if it concerns products which are homogeneous. If products characteristics differ in attributes such as quality and durability, it becomes difficult for firms to detect whether variations in sales are due to changing buyer preferences or cheating strategies by firms in the form of secret price cuts.[108]

55. In an oligopolistic market with homogeneous products, direct or indirect communications between competitors are a key factor that facilitates collusion. In particular, communication (i) facilitates the reaching of a common understanding on the terms of co-ordination; (ii) helps monitoring whether the terms of co-ordination are being followed; and (iii) improves the ability or reduces the cost of punishing deviations from the terms of co-ordination.

56. Reaching terms of co-ordination on prices or volumes may not be easy, particularly when a number of different collusive equilibria are possible. Communication between competitors artificially increases market transparency and thus is one of the facilitating factors for collusion.[109] Information disclosures can facilitate this exercise as they offer firms points of co-ordination or focal points.[110] In this

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106 For a discussion on pro and anti-competitive effects of competitors' communications see OECD, 2010 and Capobianco 2004.

107 The evidentiary value of the market structure, however, is imperfect. There are examples of highly concentrated industries which are very competitive and where one experiences fierce rivalry. Conversely, cartels are known to have existed and prospered for many years in industries with numerous competitors and differentiated products. See, OECD, 2006(a).

108 Economists, however, also note that under certain circumstances the differentiated nature of the products may also facilitate collusion. In case of differentiated products, deviations are in fact less profitable because the cheating firm cannot expect to gain large market shares from such strategy, unless it is prepared to cut prices significantly. In such circumstances, therefore, product differentiation makes collusion more likely.

109 See Albaek, Mollgaard and Overgaard, 1997.

110 See Levenstein and Suslow, 2006.

way, communications can help firms co-ordinate their behaviour even in the absence of an explicit anti-competitive agreement.

57. Artificially increased transparency allows firms to monitor adherence to the collusive arrangement, and provides better information on when and how to punish firms when they deviate.[111] For collusion to be sustainable it is necessary that firms can detect deviations from the collusive equilibrium. The sharing of information may therefore support the internal stability of the collusive arrangement through greater precision in punishments of deviations. Firms will be in a better position to identify which firm has deviated and on what product if they have access to precise and individualised information on their competitors. Artificially increased transparency also allows existing firms to better identify entry opportunities for new firms and to co-ordinate a response. This increases the external stability of the collusive understanding.

4.2. Private and public announcements

58. The first part of this paper looked at the differences between *public* and *private* transparency. This distinction has important implications for competition policy which are discussed in this section.

4.2.1. Private communications to competitors are unlikely to have efficiency justifications

59. It is generally accepted that "private" announcements, which are directed to competitors only, should be forbidden as they don't have any efficiency justification and can only be motivated by the intention to help rivals to co-ordinate on a particular collusive price, and avoid costly periods of price wars and price instability.[112] Conversely, public announcements, which are directed to both rival firms and consumers, are widespread[113] and may provide significant benefits to customers as they allow them to "shop around" for the best offer.[114] This positive effect is generally considered stronger than the collusive effects of the announcements. For this reason, many conclude that competition enforcers should be stricter in reviewing private announcements than public announcements.[115]

111 See Genesove and Mullin, 2001.

112 See Kühn, 2001; Motta, 2007; Bennett and Collins, 2010.

113 For example, manufacturers of electronic goods regularly announce the future prices of their new products. Retailers may announce the prices of products that will be placed in forthcoming sales.

114 See discussion in the first part of this paper.

115 To would be the case, for example, of a competitor sending a fax or an email to rivals where it announces its intention to set a certain price in the future.

Unilateral announcement of future price and the Wood Pulp ECJ judgement

A generally more lenient approach towards public announcement has also been endorsed by courts. In Europe, for example, the Court of Justice found in *Wood Pulp* that if the communication of prices between competitors arises from announcements to the public they "*[…] constitute in themselves market behaviour which does not lessen each undertaking's uncertainty as to the future attitude of its competitors. At the time when each undertaking engages in such behaviour, it cannot be sure of the future conduct of the others*."[116]

According to the Court, therefore, advanced price announcements are not illegal as such if these communications are addressed to the public (and not to competitors)[117] and do not have as their declared purpose the co-ordination of competitors' market conduct. The Court noted that, in order to have a concerted practice, it is necessary that the uncertainty as to the future conduct of the competitors is eliminated or lessened, which is not the case when each competitor remains free to determine its own future conduct independently.

Beyond the statement reported above, the circumstances of the Wood Pulp case offer some indications as to when price signaling could be found illegal under EC competition law: [118]

- There was a clear business justification for the advance price announcements;
- The announcements were public;
- There was no commitment to follow the announced price.

4.2.2. Public announcements with possible anti-competitive effects

60. Not every public announcement, however, is necessarily pro-competitive. To generate efficiencies, announcements of future intentions must concern *effective* price changes, i.e. they should carry a commitment value *vis-à-vis* consumers.[119] Only this type of public dissemination of future intentions notifies customers of changes before they take place and allows them to plan their responses in advance.[120] Otherwise, uncommitted announcements might be a tool to avoid costly experimentation with

116 Joint Cases C-89/85, C-104/85, C-114/85, C-116 and 117/85, C-125-129/85, *Ahlström Osakeyhtiö and others v Commission*, [1993] ECR I-1307, para 64. The conclusion in WoodPulp reversed an older judgement in the Dyestuffs case found that advanced price announcements were illegal, as a form of undue communication between competitors with the sole effect of eliminating uncertainty as to each competitors' future conduct (Case 48/69, ICI v Commission, [1972] ECR 619).

117 A different assessment applies to private price communications (i.e. communications addressed only to competitors and not to the customers), which have as their only purpose "*eliminating in advance uncertainty about the future conduct of its competitors*" (see Case T-7/89, SA Hercules Chemicals NV v Commission, [1991] ECR II-1711, para 259).

118 See van Gerven and Varona, 1994.

119 See discussion on cheap talk in the first part of this paper.

120 See, for example, footnote 4 of the EU Guidelines on the Applicability of Article 101 TFEU to Horizontal Co-operation Agreements (OJ 2011, C 11/01), which explains the notion of 'intended future prices: "*In specific situations where companies are fully committed to sell in the future at the prices that they have previously announced to the public (that is to say, they cannot revise them), such public announcements of future individualised prices or quantities would not be considered as intentions, and hence would normally not be found to restrict competition by object. This could occur, for example, because of the repeated interactions and the specific type of relationship companies may have with their customers, for instance since it is essential that the customers know future prices in advance or because they can already take advanced orders at these prices. This is because in these situations the information exchange would be a more costly means for reaching a collusive outcome in the market than exchanging information on future intentions, and would be more likely to be done for pro-competitive reasons. However, this does not imply*

the market and reach collusive outcomes more effectively and faster. A firm might announce that it will increase its price to a certain level at a specific date in the future, but then revert to the current price if other firms do not follow suit with similar announcements of price changes. This way, firms might arrive at a commonly agreed price without incurring the risk of losing market shares or triggering price wars during the period of adjustment to the new prices.

Public announcements - EU Guidelines on horizontal agreements

This approach was endorsed by the European Commission in its Guidelines on the applicability of Article 101 TFEU to horizontal co-operation agreements[121] which state: "*Where a company makes a unilateral announcement that is also genuinely public, for example through a newspaper, this generally does not constitute a concerted practice within the meaning of Article 101(1). However, depending on the facts underlying the case at hand, the possibility of finding a concerted practice cannot be excluded, for example in a situation where such an announcement was followed by public announcements by other competitors, not least because strategic responses of competitors to each other's public announcements (which, to take one instance, might involve readjustments of their own earlier announcements to announcements made by competitors) could prove to be a strategy for reaching a common understanding about the terms of co-ordination.*"

4.2.3. Invitations to collude through price sharing

61. Another instance where public announcements might be harmful to competition is where the public communication includes an invitation to collude. Invitations to collude are generally understood as unilateral solicitations to enter into unlawful horizontal price-fixing or market allocation agreements.[122] While this is rather uncontroversial for private communications, which can always be construed as invitations to collude, public announcements can also be construed as invitations to collude depending on how the communication is formulated.

62. This would generally be the case of announcements which:

(i) contain not only information which must, as a matter of commercial policy, be conveyed to customers but also information which is not intended for that audience, for example including references to specific competitors;

(ii) disclose more information than strictly necessary for the purpose of the announcement;

(iii) make the announced behaviour contingent on what other market players or the industry at large will do; and

(iv) include threats (e.g. a price war) in case other market players do not accept the invitation to collude.

63. Competition authorities have also looked at the competitors' reaction to the invitation and have construed as acceptance of the invitation any specific market conduct which is in line with the offer to

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that in general price commitment towards customers is necessarily pro-competitive. On the contrary, it could limit the possibility of deviating from a collusive outcome and hence render it more stable."

121 OJ 2011, C 11/01, at para 62.

122 The classic example of such a practice is the 1983 call of the American Airlines president to the president of competing carrier Braniff Airlines: "I think it's dumb as hell […] to sit here and pound the **** out of each other and neither one of us making a **** dime. […] Raise your goddamn fares twenty percent. I'll raise mine the next morning." (US v. American Airlines, 743 F.2d 1114)

collude. For example, reacting to an invitation to raise prices by raising its own prices would be taken as a form of acceptance, unless it can be shown that the price increase was contemplated before the invitation was extended. Similarly, not reacting to the perceived invitation with a clear statement taking distance from it could be taken as a sign that the target of the invitation has the intention to accept it.

US Federal Trade Commission recent practice on invitations to collude[123]

Two recent cases in the US clearly illustrate the meaning of invitation to collude.

In *Valassis Communications*,[124] the FTC challenged the announcement made by Valassis president and chief executive officer, in a public call with analysts, detailing its strategy to increase prices. In order to regain market shares lost in the previous years to its competitor News America, Valassis decided to communicate to News America an offer to cease competing for News America customers, provided that the latter ceased competing for Valassis customers. If accepted, both firms could raise prices within their respective protected customer bases and end their price war. Valassis proposed that prices be restored by both firms to the pre-price war levels and described how business with shared customers and outstanding bids to News America's customers would be handled. Valassis would monitor News America's response, looking for "concrete evidence" of reciprocity in "short order." If News America continued to compete for Valassis customers and market share, then the price war would resume. To resolve these allegations, Valassis entered into a consent order with the FTC that prohibits unilateral communications, both public and private, concerning the company's willingness to refrain from competing with rivals or to co-ordinate pricing with them.

The FTC case against *U-Haul*[125] involved both private and public communications. According to the complaint, U-Haul's CEO instructed U-Haul's regional managers and dealers to reach out privately to their counterparts at Budget (U-Haul closest competitors in the market for consumer truck rental) to exhort them to match U-Haul's higher rates. A year later, U-Haul's CEO allegedly instructed managers to raise their rates, anticipating that "Budget will come up." But Budget did not immediately follow. Then, during a conference call with stock analysts, in response to a question about U-Haul's pricing strategies, U-Haul's CEO explained that U-Haul was trying to "show price leadership" for the good of the entire industry. He said that U-Haul was attempting to indicate to competitors that they should not "throw the money away," and that they should "[p]rice at cost at least." The CEO then indicated that he had instructed U-Haul managers to wait a while longer for Budget to respond and that he was optimistic that Budget would respond by raising prices. He also added that Budget need not match the U-Haul prices exactly, but could lag behind by 3–5%.

4.3. Disclosures of future intentions

64. The subject matter of the communication is also relevant in establishing whether the unilateral communication is likely to facilitate collusion. Not all information can have a meaningful impact on the likelihood of price co-ordination. *Historical* information, for example, has generally lost its value as a competitive asset that can affect future conduct of the companies involved; therefore, their exchange is generally not considered harmful.[126]

65. Competition enforcers are usually concerned with communications regarding *future* strategies, including prices, sales, and capacities trends.[127] This information is particularly sensitive and should remain within the corporate knowledge of each competitor. The disclosure of future pricing intentions directly to competitors (private communications) is probably the most useful information in enabling rivals

123 Both cases where brought by the Federal Trade Commission the Section 5 of the Federal Trade Commission Act prohibits "unfair methods of competition" (15 U.S.C. § 45).

124 Valassis Communications, 2006, FTC File No 051 0008.

125 Matter of U-Haul Int'l, Inc and AMERCO, 2010, FTC File No 081-0157.

126 Information about past behavior, however, may allow rivals to detect and, therefore, deter deviations.

127 See country contributions to the OECD, 2010.

to reach a focal point, and hence is viewed as the most harmful by competition authorities.[128] Information regarding future behaviour can be particularly useful when there are several possible equilibria and rivals need to communicate to focus on just one of them, and to establish a focal point.[129]

66. Since its earlier judgements (mostly concerning exchanges in the context of trade associations), the US Supreme Court has focussed on communications which included "*suggestions as to both future prices and production*".[130] The Court held that the exchange of this type of information intended to reduce production and raise prices.[131] The Court also focused its attention on the private nature of the information sharing schemes.[132] Public exchanges of information, on the contrary, can be beneficial for competition if the information is disseminated in the widest possible way (*i.e.,* the information is available not only to the association's members, but also to their customers) and in aggregated form, even if the exchange calls for detailed information on individual sales, prices and monthly information on production and new orders.[133] The US Antitrust Guidelines for Collaborations among Competitors[134] endorse this approach and consider that the competitive concerns with information sharing depend, among other things, on whether the information disseminated concerns current operating and future business plans, which is more likely to raise concerns than the sharing of historical information.

128 See for example, EU Guidelines on the Applicability of Article 101 TFEU to Horizontal Co-operation Agreements (OJ 2011, C 11/01), para 66.

129 See Kühn, April 2001; Møllgaard and Overgaard, 2006.

130 See *American Column and Lumber Co v. US*, 257 US 377 (1921, at 398-99.

131 The judgment was criticised for not having taken into account the pro-competitive effects of the exchange of information. Justice Brandeis and Justice Holmes dissented and saw no evidence of any serious attempt to limit production, and found that there was simply a reporting of "market facts". The dissenting judges concluded that not allowing the exchange of information could lead to the elimination of competition in the wood industry.

132 See *US v. American Linseed Oil Co*, 262 US 371 (1923), where the Court struck down another associational information exchange programme concerning price lists, price variations and the names and addresses of buyers who received special prices.

133 See *Maple Flooring Manufacturers Association v. US*, 268 US 563 (1925).

134 Available at http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf.

EU – Information exchange and restrictions by object

The European Commission has also taken a firm stand against the dissemination of information concerning the future conduct regarding price or quantities.[135]

"[…]

73. Exchanging information on companies' individualised intentions concerning future conduct regarding prices or quantities is particularly likely to lead to a collusive outcome. Informing each other about such intentions may allow competitors to arrive at a common higher price level without incurring the risk of losing market share or triggering a price war during the period of adjustment to new prices [...]. Moreover, it is less likely that information exchanges concerning future intentions are made for pro-competitive reasons than exchanges of actual data.

74. Information exchanges between competitors of individualised data regarding intended future prices or quantities should therefore be considered a restriction of competition by object. In addition, private exchanges between competitors of their individualised intentions regarding future prices or quantities would normally be considered and fined as cartels because they generally have the object of fixing prices or quantities. Information exchanges that constitute cartels not only infringe Article 101(1), but, in addition, are very unlikely to fulfill the conditions of Article 101(3)."

According to the Guidelines, unilateral announcements of individualised future price intentions will be considered a restriction "by object" of EU competition law if the announcement is private (i.e. is made only to competitors). For public announcements of intended individualised prices the Commission will review possible efficiency arguments that the parties can bring under Article 101(3) TFEU.[136]

4.4. Collusive price leadership

67. The fact that the unilateral (price) disclosures are made by a price leader is another element that has been identified as a factor in the assessment of whether unilateral disclosures should be considered an illegal facilitating practice.

68. The literature identifies three types of leadership:[137]

a) *Dominant firm price leadership*: in this situation, a large (dominant)[138] firm sets its price first and smaller firms simply take this price in determining their profit maximizing levels of production. In this case, the price determined by the monopoly firm is not the outcome of a strategy to circumvent competition but rather the inevitable consequence of the market structure. The acceptance by the industry of a price leader and the decision to follow the price leadership of a dominant firm generally falls outside the reach of competition laws.

b) *Barometric price leadership*: this situation may arise where some firms are better informed than others. Less informed firms may then delay their decisions until a better informed firm moves. Thus, providing a signal about market conditions, the leader acts as a "barometer". In this scenario, where there is no monopolist, the price leader is frequently (but not necessarily) the

135 See EU Guidelines on the Applicability of Article 101 TFEU to Horizontal Co-operation Agreements (OJ 2011, C 11/01).

136 See EU Guidelines on the Applicability of Article 101 TFEU to Horizontal Co-operation Agreements (OJ 2011, C 11/01), footnote 5.

137 See Stigler, 1947; Bain, 1960; Cooper, 1997; Deneckere and Kovenock, 1992.

138 Similar conclusions could be reached for a large incumbent firm, which is not dominant but has an information advantage over its rivals.

largest firm. Barometric leadership is generally competitive given that as for the most part the price leader cannot impose the rest of the industry to accept its price. Prices would eventually be set at the same level at which they would have been set by the competitive forces.

c) *Collusive price leadership*: this type of price leadership allows firms to replace explicit collusion (which is illegal) with a system of public (pre-) announcements to co-ordinate on a collusive outcome. The first to study collusive price leadership was Markham in 1951,[139] and he identified a number of market features as prerequisite to effective price leadership:

(i) Few and sufficiently large number of rival firms in the market;[140]

(ii) High entry barriers, which ensure that the price set by the price leader remains close to the oligopolistic price;

(iii) The goods produces are homogeneous, or at least each producer must view the output of all the other firms as closely substitutable;

(iv) A sufficiently rigid demand curve to ensure that the gains from adopting a price leadership are not eroded or eliminated by competing products;

(v) Symmetry in the cost curves of the individual firms so that a particular price allows all firms to operate at a satisfactory rate of output.

69. Subsequent studies on collusive price leadership concluded that asymmetric information can contribute to collusive leadership, leaving however open the question as to whether price leadership may still facilitate collusion in the absence of asymmetric information.[141] More recent literature emphasizes the fact that collusive leadership may enhance the sustainability and thus the efficiency of collusion.[142] In particular, it concludes that (i) price leadership is a more effective collusive device when firms compete in prices rather than in quantities; (ii) when firms differ in their costs then the leader is likely to be the less efficient firm; and finally, (iii) regardless of whether firms compete in prices or quantities, in order to facilitate collusion the firm acting as a follower in a given period should get a higher market share and earn a higher profit in that period.

70. These theoretical conclusions are supported by empirical evidence which indicate how price leadership is present in many cartel cases. For example, in the EU decision on the vitamin case, the parties "*agreed that one producer should first 'announce' the increase, either in a trade journal or in direct communication with major customers. Once the price increase was announced by one cartel member, the others would generally follow suit.*"[143] Similar evidence was also found in recent cartel cases in industries,

139 Markham, 1951.

140 If there are several small firms with no dominant firm, they are likely to engage in promiscuous price cutting and, at least on downwards price adjustments, take the role of price leader.

141 Rotemberg and Saloner, 1990.

142 Mouraviev and Rey, 2011.

143 See the European Commission Decision, *Vitamins*, OJ 2003 L 6/1, para 203.

such as sorbates, high pressure laminates, rubber chemicals, graphite electrodes, polyester staple and organic peroxides.[144]

4.5. Reciprocal disclosure is not a condition for establishing an infringement

71. The discussion above clearly indicates that for purpose of establishing a tacitly collusive arrangement it is irrelevant whether only one firm unilaterally informs its competitors of its intended market behaviour, or whether all participating firms inform each other of their respective deliberations and intentions.

72. In the *Cement* case,[145] the General Court of the European Union established that the simple fact that a company is the passive recipient of information on the future conduct of a competitor (i.e. because it participated in meetings where such information was disclosed) is sufficient to establish participation in the illegal conduct. The Court noted that the fact that the recipient of the information did not disclose its own strategy was not a sufficient defence when that company had arranged the meeting and did not object when informed of the competitor's strategy. The Court inferred that the information was disclosed to reduce uncertainty as to the future competitive strategies of the participants and to enable them to align their respective strategies in an anti-competitive way.

73. The European Commission has established that, for example, the mere attendance at a meeting where a company discloses its pricing plans to its competitors is likely to be caught by Article 101 TFEU, even in the absence of an explicit agreement to raise prices.[146] When a company receives strategic data from a competitor (be it in a meeting, by mail or electronically), it will be presumed to have accepted the information and adapted its market conduct accordingly unless it responds with a clear statement that it does not wish to receive such data.

74. But reciprocity should not be confused with some form of acknowledgment that the information has been received and used by the target(s) of the communication. In other words, it is necessary that the information communicated has some influence on the pricing of competitors.[147] Simple acquiescence can be considered as acceptance of the information received. It is for this reason that particularly in the context of private exchanges (e.g. a price announcement made by a competitor during a meeting of the trade association), courts have considered necessary that participants to the meeting had to publicly distance themselves from the discussion in order to escape liability.[148] The fact that communication has influenced

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144 Marshall, Marx, Raiff, 2008. Other evidence can be found in Mouraviev and Rey, 2011. In this latter paper, the authors found evidence of collusive price leadership in 16 of 49 cartel decisions adopted by the European Commission between 2001 and 2010.

145 Joined Cases T-25/95, *Cimenteries CBR and Others v Commission,* [2000] ECR II-491: "*[…] the concept of concerted practice does in fact imply the existence of reciprocal contacts […]. That condition is met where one competitor discloses its future intentions or conduct on the market to another when the latter requests it or, at the very least, accepts it.*" (para 1849).

146 See EU Guidelines on the Applicability of Article 101 TFEU to Horizontal Co-operation Agreements (OJ 2011, C 11/01), para 62.

147 For more information on country perspective on the role of reciprocity in finding an infringement of competition rules, see the contributions of Denmark, Hungary, Netherlands and Spain to the OECD, 2008.

148 See, for example, the EU case law in T-141/89, *Tréfileurope v Commission*, [1995] ECR II-791, para 85. See also Case T-311/94, *BPB de Eendracht NV v Commission*, [1998] II-1129, para 203; Case T-168/01, *GlaxoSmithKline Services Unlimited v Commission*, not yet reported, para 87.

the behaviour of the intended recipient can be inferred from the market conduct of the latter.[149] Should price move to the announced level, and absent other justifications for the price increase, a competition authority could legitimately infer the existence of a concerted action.[150]

5. Conclusions

75. Competition authorities are faced with complex issues when enforcing cartel rules in oligopoly markets, where it is often difficult to distinguish legitimate business behaviour from illegal collusive practices. In market, with few sellers and homogenous products, supra-competitive prices may be the normal outcome of rational economic behaviour of each firm on the market. This conscious parallelism, although its outcome may be the same as that of a cartel, falls outside the reach of competition laws on cartels.

76. This paper reviewed unilateral announcements by firms as one of the "facilitating practices" that firms can put in place to achieve stable collusive outcome without entering into an explicit cartel arrangement. These are practices, typically in an oligopolistic market, which fall short of an explicit, "hardcore" cartel agreement, but reduce uncertainty in the market and help rivals coordinate their conduct more effectively. Competition authorities are confronted with two issues in particular: (i) how unilateral disclosures of information can be reconciled with the notion of anti-competitive agreement; and (ii) how to distinguish legitimate business practices, such as announcing prices to the market, from practices which offer focal points to rivals and facilitate collusion.

77. In most competition regimes, unilateral price announcements can be condemned as unlawful only if it can be shown that as a result of the practice firms have reached some type of formal or informal agreement on their future conduct. In some countries this may require an expansive interpretation of the concept of "agreement". In other countries the use of the notion of "concerted practice" has allowed competition authorities to pursue more discrete, looser forms of co-ordination and informal understandings between firms which cannot be reconciled with the notion of an agreement. To find an infringement of competition rules it not necessary that the announcements are reciprocal, but to satisfy the necessary legal standard it must be shown that the recipients or addressees of a unilateral announcement did not protest and that the announcement resulted in actual anti-competitive effects.

78. Distinguishing between a lawful business practice and an unlawful facilitating practice can be particularly challenging, as there is no bright line test to make this distinction. Most facilitating practices, depending on the circumstances, can have pro- as well as anti-competitive effects. For example, practices like unilateral price disclosures can restrict competition when the information disclosed concerns future prices or strategic conduct. However, market transparency due to these disclosures can also be efficiency enhancing as it provides more and better information to customers, who can make a more informed choice between competing products and suppliers.

79. From the analysis in this paper, competition authorities can draw a number of lessons concerning their enforcement policy *vis-à-vis* unilateral announcements:

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149 The contribution of Canada to OECD, 2010, states: "*[…] a situation in which one party unilaterally makes information available to other competitors, such as information about intended price increases or other future competitive conduct, may be sufficient to infer the existence of an agreement contrary to the Act. For the purpose of determining whether an agreement exits, it does not matter whether information is made available only to competitors or to the marketplace generally, although the Bureau will typically view private exchanges with greater suspicion.*"

150 See for example the contributions of the Netherlands to OECD, 2008.

- The potential for unilateral announcement to have anti-competitive effects is much higher in concentrated markets with homogeneous products, where increased transparency is an important factor which facilitates reaching of tacitly collusive agreements, their monitoring and their enforcement.

- Private announcements (i.e. to competitors only) of future prices cannot have any legitimate business justification, but only help rivals to co-ordinate on the right collusive equilibrium. Since customers do not have access to such information, it involves little commitment, and it is hard to see the "efficiency defence" for this type of practice.

- Public announcements (i.e. to customers as well as competitors) of future prices that permit customers to trade on these (so they involve commitment) are in most cases efficiencies enhancing and should not be viewed as anti-competitive.

- Uncommitted public announcements or public announcements which involve some form of invitation to collude should be carefully reviewed by competition authorities to assess whether they have anti-competitive effects on the market.

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