

INFORMATION EXCHANGES AND PRICE SIGNALING: AN ECONOMIC PERSPECTIVE

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Price signalling has a long history in European Competition law. In the landmark *Wood Pulp* case, which concerned quarterly public price announcements by wood pulp manufacturers, the European Court of Justice (ECJ) reversed the Commission's decision and prominently stated that public announcements of future prices did not infringe competition rules and constituted "*market behaviour which does not lessen each undertaking's uncertainty as to the future attitude of its competitors.*" The Court further considered in *Wood Pulp* that the Commission had failed to rule out alternative non-collusive explanations for the observed parallel price movements.¹

More than 20 years later, price signalling has recently regained interest as a possible antitrust infringement in Europe, following the European Commission's investigation into liner-shipping. According to the European Commission's initial press release in this case, it was concerned that a number of liner-shipping companies had been making "*regular public announcements of price increase intentions through press releases on their websites and in the specialised trade press.*" In particular, the Commission was concerned that the announcements were made "*successively a few weeks before the announced implementation date*" and that "*this practice may allow the companies to signal future price intentions to each other and may harm competition and customers by raising prices.*"²

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¹ *Wood Pulp*, Judgment of the Court (Fifth Chamber) of 31 March 1993. *Ahlström Osakeyhtiö and others v Commission of the European Communities*. Joined Cases C-89/85, C-104/85, C-114/85, C-116/85, C-117/85 and C-125/85 to C-129/85.

² European Commission's press release of 22 November 2013, Antitrust: Commission opens proceedings against container liner shipping companies, available at http://europa.eu/rapid/press-release_IP-13-1144_en.htm.

It now appears that liner-shipping companies have offered commitments to alleviate the Commission's concerns,³ which may lead to a decision under Article 9 of Regulation (EC) N° 1/2003. Hence one should not expect more clarity in the form of a clear precedent setting the boundaries of price communications that are permitted under EU law, and subject to judicial review.

Therefore, given the apparent similarities of the conducts under investigation in the *Wood Pulp* and liner-shipping cases, it appears legitimate to question where one currently stands on price signalling and whether the European Commission's renewed interest in this matter constitutes sound antitrust policy. To partially address this question, this article proposes i) an economic framework to determine whether and in what circumstances price signalling is likely to have anticompetitive effects, and ii) some thoughts on a desirable standard to be adopted by the Commission in such cases.

This article is structured as follows. First, it discusses the potential pro- and anti-competitive effects of information exchanges. Second, it proposes a framework to test whether price signalling leads to anticompetitive effects. Finally, the article concludes with a call for caution, highlighting the risks associated with any lowering of the standard of proof for establishing antitrust infringements resulting from price signalling.

I. Information exchanges

Information exchanges may cover a wide variety of different data and information, such as prices, sales, costs, production, demand or investments plans. These exchanges may vary across factors such as the strategic nature of the data, the timing dimension (old, recent, future data), the level of aggregation, the market coverage of the respective companies, whether the data is shared directly or via an industry aggregator, the public or private nature of the information exchanges, the private versus public nature of the exchanges, and whether they involve firm commitments or just intentions.⁴

³ European Commission's press release of 16 February 2016, Antitrust: Commission seeks feedback on commitments offered by container liner shipping companies, available at http://europa.eu/rapid/press-release_IP-16-317_en.htm.

⁴ Communication from the Commission - Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, *Official Journal* C 11, 14 January 2011, p. 1, (hereafter the European Commission's Guidelines on Horizontal Agreements), paras 86-94.

While there is widespread agreement about the importance of some of these distinctions (e.g. there is little controversy that an exchange of old data is unlikely to lead to any anticompetitive effects),⁵ there is no general agreement among policy makers on the likely effects of information exchanges, since it appears that under virtually any circumstances, a wide set of outcomes are theoretically possible.⁶

In this context, this section discusses the potential pro- and anti-competitive effects of information exchanges, which will form the basis for the recommended approach to price signalling presented in the remainder of the article.

A. Potential efficiencies

There appears to be, and in some specific cases rightly so, a suspicion among enforcers that firms exchanging information could lead to anticompetitive effects. Before considering the specific conditions in which this may be the case however, it is useful to remember that access to information is the bedrock of a well-functioning economy. Indeed, our economy depends on agents making well-informed decisions about the future, leading to fruitful investments and efficient allocation of scarce resources.

More specifically, information plays a crucial role in the performance of competitive markets in a number of ways, including the following:⁷

1. First, access to information allows companies to benchmark their performance to ensure efficient production processes.
2. Second, access to information improves market predictions, which form a basis for sound investments.
3. Third, access to information speeds up responses to new market developments, allowing a more efficient allocation of resources.
4. Fourth, access to information may improve risk assessment, which is for example the case with insurers pooling customer data.

⁵ For example, the Guidelines indicate that “*in past cases the Commission has considered the exchange of individual data which was more than one year old as historic and as not restrictive of competition within the meaning of Article 101(1), whereas information less than one year old has been considered as recent*” – footnote 2 to para. 90.

⁶ See K.-U. KÜHN, “Designing Competition Policy towards Information Exchanges – Looking Beyond the Possibility Results”, in *OECD Report, Policy Roundtables: Information Exchanges Between Competitors under Competition Law* (DAF/COMP(2010)37), p. 416.

⁷ European Commission’s Guidelines on Horizontal Agreements, paras 95-100.

5. Fifth, information exchanges may lower search costs. For instance, exchanges of past and present data related to market shares may benefit consumers by allowing companies to use such data as a signal of quality. More generally, public announcements by companies, e.g. regarding their current prices or input costs, may help reduce search costs by potential customers and hence intensify competition.⁸

These pro-competitive aspects of access to information do not mean that information exchanges cannot be anticompetitive. Rather, the positive role played by information suggests that competition authorities should be particularly careful to build a solid theory of harm if they are to intervene in this field. Indeed, analysing information exchanges without reference to a proper economic framework would carry serious risks of type I errors, where benign or pro-competitive information exchanges would be wrongly considered as anticompetitive.

B. Potential anticompetitive effects

The theory of collusion is well established and has been firmly grounded in economics and game theory since the pioneering work of Stigler.⁹ The economic reasoning behind collusion is the following: companies may find it in their best interest to compete less aggressively if they understand that as a result their competitors would act in the same way. To follow such a course, companies trade-off the short-term gains that they could achieve by competing more aggressively (and gain sales from their competitors) for the long-term gains of less intense competition. Practically, this will first require that firms reach a common understanding or focal point of the coordination. Second, an enforcement mechanism is necessary in order to sustain collusion among firms: companies must be able to detect and retaliate against any firm deviating from the collusive understanding (by competing more aggressively in the short term).

⁸ Note that the European Commission's Guidelines on Horizontal Agreements (para. 99) specify that such benefits are less likely to be generated by exchanges of future price intentions "because companies which announce their pricing intentions are likely to revise them before customers actually purchase based on that information". However, the Guidelines also recognize that "companies may be disciplined not to change the announced future prices before implementation when, for example, they have repeated interactions with consumers and consumers rely on knowing the prices in advance or, for example, when consumers can make advance orders. In those situations, exchanging information related to the future may improve customers' planning of expenditure."

⁹ G.J. STIGLER, "A Theory of Oligopoly", *The Journal of Political Economy*, Vol. 72, issue 1, February 1964, 44-61.

In this context, information exchanges between competitors may lead to collusive outcomes through two distinct channels:

1. First, information exchanges may help companies monitor adherence to the terms of coordination. By exchanging recent data, e.g. on price, cost, capacity..., the firms use such data to check whether their competitors have been following the terms of coordination, or whether they have been “cheating”.
2. Second, information exchanges may help companies reach a focal point for coordination. Since firms have to reach a common understanding of what the collusive price would be, exchanging information may facilitate or speed up this process.

While these are channels through which information exchanges can possibly lead to collusion among market players, this does not mean that it will necessarily do so. In this respect, it is important to go beyond mere theoretical possibilities, and rather consider how strong and how likely the effect is likely to be.¹⁰

For example, virtually any information exchange will – by definition – increase market transparency. However, an increase in market transparency is not sufficient to expect anticompetitive effects. In fact, one has to consider whether the information exchange makes coordination significantly more likely or sustainable, taking into account the role that this information can play, and also more generally the characteristics of the market (and in particular whether it is prone to coordination). An information exchange can therefore not be analysed in isolation, but should be taking into account its role in a coordination mechanism and the specificities of the market concerned. Any failure to do so would risk discouraging benign or efficient business practices.

While exchanges of recent price or cost data may in specific circumstances help companies monitor adherence to the terms of coordination, price signalling concerns the second channel mentioned above. The remainder of this article therefore discusses how public announcements – and price signalling in particular – can be assessed in reference to the role they may play in helping companies reach a focal point of coordination.

¹⁰ On this point, see K.-U. KÜHN, “Designing Competition Policy towards Information Exchanges – Looking Beyond the Possibility Results”, in *OECD Report, Policy Roundtables: Information Exchanges Between Competitors under Competition Law* (DAF/COMP(2010)37), p. 416.

II. Public announcements

As explained in the European Commission's Guidelines on Horizontal Agreements, it is a well-accepted principle that when a company makes a genuinely public announcement, it does not constitute an infringement of article 101(1).¹¹

The Guidelines however foresee two exceptions to this principle. First, the Guidelines exclude from this principle unilateral announcements that constitute an "invitation to collude".¹² Second, the Guidelines foresee an exception to the principle for unilateral announcements that would help companies reach a common understanding of coordination: *"[...] 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 coordination."*¹³

These two exceptions are discussed below, with a particular emphasis on how the coordination hypothesis can be tested in concrete cases.

A. Invitation to collude

As stated in the Guidelines, the principle according to which genuinely public announcements do not infringe article 101(1) does not cover situations where the announcements involve invitations to collude. Invitations to collude concern unilateral declarations made by a company inviting a competitor to coordinate on key market variables and outcomes, such as prices or customer allocations.

The FTC has pursued a number of such "invitation to collude" cases under Section 5 of the FTC Act, which prohibits "unfair methods of competition". One such well-known case concerned the company Valassis Communications, whose CEO opened an earnings conference call in 2004 by detailing the company's new strategy for increasing prices, indicating

¹¹ European Commission's Guidelines on Horizontal Agreements, para. 63.

¹² European Commission's Guidelines on Horizontal Agreements, para. 63, footnote 10.

¹³ European Commission's Guidelines on Horizontal Agreements, para. 63.

that Valassis would: i) seek to retain its current share but not to encroach upon its competitor's position; ii) submit bids at a level substantially above current prices for the competitor's existing customers with expiring contracts, and; iii) monitor its competitor's response to this overture and resume a price war if its competitor targeted its customers: *"We expect that concrete evidence of [Competitor]'s intentions will be available in the marketplace in short order. If [Competitor] continues to pursue our customers and market share then we will go back to our previous strategy"*.¹⁴

There is little doubt that such communications aimed at sharing the market or colluding with a rival serve no pro-competitive purpose. Such conduct is thus seen as inherently suspect and pursuing such blatant attempts at collusion leads to little risk of deterring pro-competitive activity.

Contrary to the US experience however, the European Commission has not so far pursued such cases as such, perhaps due to the difficulty of establishing concerted practices in the absence of some form of implicit acceptance of the announcement. Despite the lack of precedents, future action by the Commission in this area should not be entirely discarded however, as the Commission has been willing to adopt creative interpretations of the concept of concerted practices in the past.

Yet, the Commission has so far chosen to focus on price signalling instead. This European approach may however appear rather counter-intuitive since price signalling is much closely related to a normal market activity – publicly communicating one's own price – than enticing competitors to collude. While price signalling may in some circumstances lead to collusion, such an outcome cannot simply be assumed. The following section discusses how to test whether these specific circumstances apply in concrete cases.

B. Price signaling: testing the coordination hypothesis

Contrary to invitations to collude, price signalling appears a priori much more benign. Indeed, one could expect that many companies communicate their current – and possibly future – prices to the market irrespective of any collusive intent, simply to ensure that customers can make well informed choices. Therefore, any theory of harm regarding price signalling would need to rely on solid evidence suggesting that price signalling

¹⁴ Valassis Communications, FTC File No. 051 0008 (April 19, 2006).

is effectively and materially increasing the scope for coordination in the industry concerned.

Using the economic framework of collusion, testing the coordination hypothesis (*i.e.* the hypothesis that price signalling would lead to collusion) would thus require answering the following questions in light of the case specificities.

1. Do the announcements provide a focal point for coordination?

Since any theory of harm related to price signalling rests on the announcements' role in reaching a focal point of coordination, testing the theory requires checking whether such signalling provides a mechanism for reaching a common understanding.

A key question in this respect is the usefulness of the information provided by the public announcement. In particular, one should check whether the announced prices provide a clear or noisy signal, *i.e.* how closely the announced price increases were applied in practices. If signals appear noisy, they are unlikely to provide particularly effective information for reaching a focal point of coordination.

Second, the Commission appears concerned that companies would use public announcements to somehow "talk" to each other and align their prices. This could be referred to as the *dialogue hypothesis*, according to which firms would adjust their announcements in response to competitors' announcements until they reach the focal point of coordination. Once again, such a hypothesis can be directly tested with a systematic analysis of past announcements, by checking whether the data indicates that firms often revise their announcement in successive rounds until they align prices. If on the contrary the data indicates that firms rarely revise their announcements, or that when they do, this is not systematically to align them, then there would be little support for such a hypothesis.

In the line-shipping case, the Commission considers *General Rate Increase* (GRI) announcements¹⁵ as problematic because such announce-

¹⁵ The Commission's press release decrease the General Rate Increases in the liner-shipping case as follows: "*These price announcements, known as General Rate Increases or GRI announcements, do not indicate the fixed final price for the service concerned, but only the amount of the increase in US-Dollars per transported container unit (twenty-foot equivalent unit, "TEU"), the affected trade route and the planned date of implementation. They generally concern sizable increases of several hundred US Dollars per TEU.*"

ment would allegedly allow carriers to explore each other's intentions and possibly align their prices.

“General Rate Increase announcements are made typically 3 to 5 weeks before their intended implementation date, and during that time some or all of the other carriers announce similar intended rate increases for the same or similar route and same or similar implementation date. Announced General Rate Increases have sometimes been postponed or modified by some carriers, possibly aligning them with the General Rate Increases announced by other carriers.

*The Commission has concerns that General Rate Increase announcements may not provide full information on new prices to customers but merely allow carriers to explore each other's pricing intentions and coordinate their behaviour.”*¹⁶

However, the standard of proof used by the Commission in this case appears rather light – what does it specifically mean that General Rates Increases were sometimes postponed or modified, possibly to align prices? How often was this the case? And when they were modified, did one usually see an alignment or were changes randomly distributed? It is of course impossible to answer these questions on the basis of the limited public information available in the Commission's press release, but one would hope that such cases would only be brought forward on the basis of *systematic* evidence showing that the price announcements were used as an effective tool for coordination.

Furthermore, in the liner-shipping case, the Commission appears particularly concerned about announcements with long lead time.¹⁷ The idea seems to be that announcement with long lead time would provide more opportunities for companies to align prices. Such a hypothesis can in fact be tested by checking how announcements with long lead times compare to announcements with shorter lead times. If this hypothesis was validated, one would expect to find that announcements with longer lead times are associated with higher price increases. Moreover, if announcements with longer lead times are used to align prices, one should expect materially more adjustments for such announcements than for announcements with

¹⁶ European Commission's press release of 16 February 2016 regarding liner-shipping.

¹⁷ As evidenced in the commitment proposal in the liner-shipping case described in the European Commission's press release of 16 February 2016, which specifies that price announcements will not be made more than 31 days before their entry into force.

shorter lead times, which are not under suspicion of serving as a collusive tool. These are all facts that can generally be checked on the basis of the companies' own pricing data and announcement history.

2. Do the announcements provide a plausible mechanism for coordination?

In order to determine whether price signalling provides a plausible mechanism for coordination, one should not ignore the costs associated with price signalling. Indeed, price signalling used as a tool to reach a collusive understanding may be particularly costly: if some customers already book in advance at the initially announced prices, then announcing public prices with a view of eventually aligning prices to a collusive level after some iterations creates a situation where orders are made at prices that are not optimal for the collusive companies, which could be avoided via alternative mechanisms. So if customers book in advance, price signalling appears to be a particularly inefficient way to reach a common focal point for coordination. In such instances, one has to wonder whether it is plausible that such a mechanism would be used, especially when other – potentially less costly – alternatives are available.

In order to determine whether the announcements are merely cheap talk or contain actual commitments, one can inspect sales data to determine how much in advance customers book (and the proportion of customers booking with long lead times). If it is found that a significant amount of customers make their orders well in advance, then price signalling would be a particularly costly tool for coordination. In such instances, the Commission has to closely investigate why price signalling would provide a plausible coordination mechanism.

3. Are there other reasons for the announcements (potentially pro-competitive), unrelated to a potential coordination mechanism?

Do announcements with long-lead times have pro-competitive effects/benefit customers? Is it the case that customers value being able to either i) order in advance at set prices, or ii) predict what likely future prices will be in advance. Information in this respect can of course be gathered from customers, but can also be obtained from an analysis of the parties' sales data, showing the distribution of orders through time.

For example, if an analysis of the parties' data indicates a significant proportion of customers booking well in advance, answering customers' demands would appear to be a more plausible explanation for the observed price announcements, and the standard should be particularly high for any antitrust intervention based on price signalling in such circumstances.

**4. Are the announcements likely to lead to coordination
(or to make coordination more sustainable)
in the specific industry?**

Is coordination likely in light of industry characteristics and dynamics? It is indeed not sufficient to establish that price signalling may increase transparency – which by definition it mechanically does – if there is no indication that the fundamentals of the market make it prone to coordination. Rather, the relevant question is whether price signalling makes coordination particularly likely in the industry.¹⁸ The market coverage of the companies, and the potential reaction of outsiders are also particularly relevant factors to consider in this context.

Finally, are the observed market outcomes consistent with both competitive interactions and coordination, or with only one of the two hypotheses? The Commission should bear the burden of discarding alternative non-collusive explanations for the observed prices, as already stated by the ECJ in *Wood Pulp*.

Companies making public announcements to their customers about their current and/or future prices is part of many well-functioning markets and should not be viewed with suspicions by competition authorities. It is only in truly exceptional circumstances that price signalling may in theory lead to – or reinforce – coordination. Given the risk of false positive, any anti-trust enforcement against price signalling can only rest on a fully-fledged and substantiated theory of harm showing how the information exchange would effectively lead to collusion by helping the companies reach a focal point for coordination in the specific case under review.

In conducting such analysis, the Commission would be well-advised to remain extremely cautious about any lessening of its burden of proof in

¹⁸ For an analysis of market characteristics that are conducive to collusion, see e.g. M. IVALDI, B. JULLIEN, P. REY, P. SEABRIGHT and J. TIROLE, "The Economics of Tacit Collusion", *IDEI Working Paper*, No. 186, "Final Report for DG Competition, European Commission", 2003.

information exchange cases, and all the more so in the realm of price signalling. Indeed, while this article has highlighted the theoretical channels through which such conduct may lead to collusion, what ultimately matters is not the mere possibility that the conduct may lead to coordination, but rather whether it really does given the specifics of the case.

This article has proposed a framework to empirically test the coordination hypothesis in the context of price signalling. It suggests that the Commission should only proceed with such cases (even via commitment decisions) if it can successfully validate its coordination hypothesis with a high standard of proof – otherwise, price signalling risks being equated with a term devoid of any meaningful connection to the economic theory of collusion, leading to undesirable enforcement that would deter perfectly benign or pro-competitive conduct.

Form a social welfare and optimal rule design perspective, one may go even further and argue that a better alternative would be to consider that price signalling (not including invitations to collude) simply does not constitute an antitrust infringement. Indeed, public authorities should minimise error costs and focus their enforcement activities on conducts that would most deserve being deterred, and there is no reason to believe that price signalling should occupy a high position on this list.

In this sense, a return to the ECJ's *Wood Pulp* wisdom may be advisable following the liner-shipping detour.