

Unclassified**English - Or. English****13 November 2019****DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
COMPETITION COMMITTEE****Hub-and-spoke arrangements – Note by Greece**

4 December 2019

This document reproduces a written contribution from Greece submitted for Item 7 of the 132nd Competition Committee meeting on 3-4 December 2019.
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<http://www.oecd.org/daf/competition/hub-and-spoke-arrangements.htm>

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1. Introduction

1. According to economic theory, cartels are notoriously fragile arrangements: given the opportunity, any member of the collusive agreement may have the incentive to deviate from the agreed upon conduct in order to expand its market share by undercutting its rivals. It follows that a cartel's success relies on three factors: (i) the members' ability to reach an understanding and coordinate their conduct; (ii) the active monitoring of the fellow cartelists' compliance with the rules of the cartel; and (iii) the possibility of retaliation in case of cheating.¹

2. Under certain circumstances, the members of the cartel may assign monitoring duties to a common trading partner entrusted with policing the cartel and enforcing its rules. The common trading partner's contribution to the collusive agreement may take different forms. For example, it may act as a vehicle for the indirect exchange of sensitive commercial information among the cartelists. Alternatively, it may undertake to enforce different types of vertical restraints, such as resale price maintenance ('RPM'), exclusive territories or retail most-favoured-nation ('MFN') clauses. Lastly, in the digital era, the common trading partner may develop and implement a common pricing algorithm designed to stabilise the collusive equilibrium without human intervention. Such collusive arrangements in the context of which a third party undertakes to police the illegal agreement and enforce its rules are known as 'hub-and-spoke' cartels.

3. The main concern of the participants to these conspiracies is to facilitate the implementation of the cartel even if they do not benefit from its effects directly (although they might receive some other form of compensation from the cartel members). The presence of these intermediaries on vertically related upstream or downstream markets or on markets that are simply not related to the one the cartel operates may introduce some non-horizontal/triangular element in the collusion, thus making its qualification more complex, the concerted practice being indirect rather than direct. A common characteristic of these situations of indirect concerted practice is that the undertakings in this triangular relation are all concerned with the implementation of the horizontal collusion scheme.

4. The emergence and expansion of e-commerce as an alternative distribution channel has sparked renewed interest, on the one hand, in the contribution of artificial intelligence to anti-competitive coordination and, on the other, in the welfare effects of vertical restraints. As a general proposition, the digital environment presents consumers with substantial welfare-enhancing effects, through the invigoration of intertype competition, namely competition between different distribution methods.² At the same time, however, the common use of digital platforms by competing undertakings increases price transparency and may facilitate direct or indirect communications intended to restrict competition, enhance monitoring in order to prevent cheating, and – in case cheating is indeed detected – restore prices at supra-competitive levels.

¹ George J Stigler, 'A Theory of Oligopoly' [1964] 72 *Journal of Political Economy* 44.

² Joseph C Palamountain, Jr, *The Politics of Distribution* (Harvard University Press 1955), pp 38-48.

5. Additionally, the implementation of certain types of vertical restraints in the e-marketplace, such as resale price maintenance ('RPM') and retail most-favoured-nation ('MFN') clauses, has raised concerns as to their potentially harmful effects. According to economic theory, these restraints may present both vertical and horizontal elements and may thus be designed as cartel facilitating mechanisms within a hub-and-spoke setting.

2. Theoretical Background

2.1. Indirect information exchanges

6. As a general proposition, information exchanges between competitors have an increased anti-competitive potential, where they are designed to enhance market transparency thus reducing strategic uncertainty as to the parties' future conduct. This is particularly the case where the information exchanged relates to the firms' sensitive commercial data, including their pricing intentions, output, sales figures, etc.³ Such information exchanges are typically treated as illegal concerted practices within the meaning of Article 101(1) of the Treaty on the Functioning of the European Union ('TFEU').⁴

7. Under certain circumstances, the cartelists may find it more effective to employ a third party with the purpose to facilitate the exchange of information. This third party (the 'hub') is typically a common trading partner, who undertakes to communicate individually with each of the spokes and then convey to the others its agreement to join the collusive scheme and/ or the sensitive information required for it to be successful. It follows that this hub-and-spoke setting is relevant both to the initiation and the implementation stages of a cartel.

8. In light of the foregoing, the competitive impact of indirect information exchanges is effectively the same as that of direct contacts between cartelists. Besides, the early case law of the Court of Justice of the European Union ('CJEU') has adopted a unified legal approach to both forms of anti-competitive communications. In *Suiker Unie*, the CJEU held that the general principle that each economic operator must determine independently its conduct on the marketplace precludes 'any direct or indirect contacts between such operators, 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'.⁵ Furthermore, according to the European Commission, even when information is disclosed 'indirectly through a common agency (for example, a trade association) or a third party

³ For an analysis of the welfare effects of information exchanges, see M Bennett and P Collins, 'The Law and Economics of Information Sharing: The Good, the Bad and the Ugly' [2010] *6European Competition Journal* 311.

⁴ See, eg, Case C-7/95P, *John Deere Ltd v Commission*, EU:C:1998:256, Case C-194/99P, *Thyssen Stahl AG v Commission*, EU:C:2003:527, Case C-8/08, *T-Mobile Netherlands BV, KPN Mobile NV, Orange Nederland NV and Vodafone Libertel NV v Raad van bestuur van de Nederlandse Mededingingsautoriteit*, EU:C:2009:343.

⁵ Joined cases 40 to 48, 50, 54 to 56, 111, 113 and 114-73, *Coöperatieve Vereniging "Suiker Unie" UA and others v Commission*, EU:C:1975:174, paras 173-174.

such as a market research organization or through the companies' suppliers or retailers such conduct may well infringe competition law'.⁶

9. As will be seen in sub-section 3.1 below, given that the transmission of (even sensitive) commercial information between vertically-related firms is not only common, but also frequently benign, the main challenge facing the enforcement agency is, first, to establish the existence of a 'rim', namely the collusive setting within which the tripartite transmission of information takes place, and, second, to attribute antitrust liability only to those parties which knowingly contributed to the attainment of the objectives of the cartel.

2.2. Vertical restraints as collusion-facilitating mechanisms

10. From a welfare perspective, vertical restraints may have benign effects and economic theory acknowledges their ability to produce substantial efficiencies. This assumption, however, does not apply universally to all forms of vertical restraints, some of which, such as RPM and retail MFN clauses, present significant horizontal elements and may thus be used to reinforce a collusive agreement between competitors.

11. Moreover, it is conceivable that the harmful effects of vertical restraints can be exacerbated in the digital environment. In particular, RPM may reduce dynamic competition by depriving cost-effective online outlets of their competitive advantage. Additionally, doubts as to the prevalence of free riding (arguably the most prominent pro-competitive justification for the imposition of price floors) in the e-marketplace increase the likelihood that the relevant clauses are employed for anti-competitive purposes.⁷

2.2.1. Resale price maintenance ('RPM')

12. A **downstream cartel** may wish to assign monitoring duties to a **common trading partner (the manufacturer or supplier)**, who is in a better position to supervise its retailers' pricing policy since it deals with each one of them individually in the ordinary course of business. In this context, any deviations from a fixed price floor are expected to be readily identifiable, and the cheating cartel member either forced to comply or terminated. The retailers may use such 'sham vertical agreements' with a 'pseudo upstream partner' in order to sustain a dealer cartel and extract profits at the expense of consumers and social welfare.⁸ This may also occur when rivals adopt cross-licensing agreements to facilitate price-competition, or when they use their relationship with a common supplier to exchange information and facilitate collusion. The suppliers do not have *a priori* an interest to cooperate, as their aim is to increase the sales of their product and therefore to limit the

⁶ Communication – Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to **horizontal co-operation** agreements, [2011] OJ C11/1.

⁷ See, e.g., M Lao, 'Resale Price Maintenance: The Internet Phenomenon and Free Rider Issues' [2010] 55 *Antitrust Bulletin* 473; Note, 'Leegin's Unexplored "Change in Circumstance": The Internet and Resale Price Maintenance' [2007-2008] 121 *Harvard Law Review* 1600; P Jones Harbour and LA Price, 'RPM and the Rule of Reason: Ready or Not, Here We Come?' [2010] 55 *Antitrust Bulletin* 225; GT Gundlach, JP Cannon and KC Manning, 'Free Riding and Resale Price Maintenance: Insights from Marketing Research and Practice' [2010] 55 *Antitrust Bulletin* 381; RD Blair and JS Haynes, 'The Plight of Online Retailers in the Aftermath of *Leegin*: An Economic Analysis' [2010] 55 *Antitrust Bulletin* 245.

⁸ P Rey, 'Vertical Restraints – An Economic Perspective' (October 13, 2012), available at www.fne.gob.cl/wp-content/uploads/2013/11/Patrick-Rey.-Vertical-Restraints.pdf, 19–20.

distribution margin, unless the dealers are able, through their collective market power or because of a situation of economic dependence, to coerce them to cooperate. However, there can be no coercion if the supplier(s) has market power or if it is possible to use alternative distribution channels. A distinct possibility would be for the dealers to induce the suppliers to enforce the dealer cartel by agreeing to share the expected monopolistic return with them. It is difficult, however, to imagine circumstances in which the dealers will act in concert, if there is a fairly important number of them on the market, as this will increase the difficulty to police the eventual dealer cartel arrangement. The implementation of RPM as a mechanism designed to facilitate downstream collusion is the most prominent objection to the practice and has been endorsed by courts, enforcement agencies and lawmakers since as early as the 1911 US Supreme Court's *Dr. Miles* decision⁹.

13. Similarly, the collective enforcement of RPM by competing manufacturers may facilitate **collusion in the upstream market**.¹⁰ Vertical restraints may facilitate collusion among suppliers, either by 'fostering coordination', for instance by identifying a desirable price or market share targets and more generally by simplifying the price structure, or by helping firms to 'sustain collusion' by making the market more transparent and therefore easing the detection of price deviations.¹¹ For instance, a RPM clause may enhance the stability of a cartel by eliminating retail price variation.¹² In the absence of RPM, retail prices would have been driven by wholesale prices, but also by local shocks on retailing costs or demand conditions, thus making it difficult for suppliers to perfectly infer the underlying wholesale prices and thus detect cheating from another supplier. Consequently, RPM may contribute to sustain the stability of the suppliers' cartel. Price rigidity at the retail level may serve as a reasonably accurate indication of adherence to or departure from the rules of the supplier cartel: unlike wholesale contracts, the terms of which are not necessarily observable, retail prices are generally public and standardised, and can be readily visible through advertising.¹³ If a supplier wishes to expand its market share by charging a lower wholesale price in breach of the cartel arrangement, any such rebates would normally be expected to be passed on to consumers in the form of lower retail prices. Collectively enforced RPM serves as a disincentive for a supplier cartel member to cheat, as any secret price cuts will only result in higher profit margins for retailers. Furthermore, Jullien and Rey demonstrate that price floors facilitate collusion in the upstream market by making retail prices less responsive to local shocks on demand or costs, thus enhancing the

⁹ See *Dr. Miles Medical Co v John D Park & Sons Co*, 220 US 373, 408 ('the complainant can fare no better with its plan of identical contracts than could the dealers themselves if they formed a combination and endeavored to establish the same restrictions, and thus to achieve the same result, by agreement with each other').

¹⁰ See, I.Lianos, V. Korah, P. Siciliani, *Competition Law: Analysis, Cases and Materials* (OUP, 2019), Chapter 10.

¹¹ P Rey and F Caballero-Sanz, The Policy Implications of the Economic Analysis of Vertical Restraints, European Commission Economic Papers No.119 (1996) 17; F Mathewson and R Winter, 'The Law and Economics of Resale Price Maintenance' [1998] 13 *Review of Industrial Organization* 57; B Jullien and P Rey, 'Resale Price Maintenance and Collusion' [2007] 38 *Rand Journal of Economics* 983; P Rey, Vertical restraints – an economic perspective (October 13, 2012), available at www.fne.gob.cl/wp-content/uploads/2013/11/Patrick-Rey.-Vertical-Restraints.pdf, 20

¹² F Mathewson and R Winter, 'The Law and Economics of Resale Price Maintenance' [1998] 13 *Review of Industrial Organization* 57.

¹³ SI Ornstein, 'Resale Price Maintenance and Cartels' [1985] 30 *Antitrust Bulletin* 401, 453.

detectability of possible deviations.¹⁴ Finally, economic theory suggests that, even in the absence of an explicit price fixing agreement between competing suppliers, RPM may encourage tacit coordination, thus softening competition in the upstream market.¹⁵ It is noteworthy, however, that empirical studies on vertical restraints suggest that the use of RPM as a collusive device is fairly uncommon as only 13.1% of all cases involved a horizontal price fixing allegation.¹⁶

2.2.2. Minimum advertised prices ('MAP')

14. As an alternative to RPM, some suppliers may instead opt for the imposition of minimum advertised prices ('MAP'), whereby their dealers undertake to refrain from advertising the contract goods below a specified minimum price, while ostensibly retaining their freedom to determine the actual retail price. In this sense, unlike RPM, MAP schemes do not fall within the broad category of vertical price restraints, but are instead better described as a form of vertical information restraint¹⁷. Having said that, MAP may in practice be indistinguishable from outright price floors where there is limited scope for consumers to negotiate price discounts with the retailer, as is frequently the case in the digital environment. For this reason, MAP has been identified as a form of 'RPM facilitating conduct'.¹⁸

15. As with RPM, MAP schemes give rise to ambivalent economic effects. As far as its pro-competitive rationale is concerned, MAP may also be employed by a manufacturer in an attempt to address possible free riding concerns, facilitate new entry or protect brand image.¹⁹

16. However, MAP clauses also restrict intrabrand competition to the extent that they reduce retailers' incentive to sell at cut prices, particularly in circumstances where an online retailer cannot engage in customer negotiations as readily as offline retailers.²⁰ At the same time, MAP may be designed to enhance an upstream cartel's stability and in fact appears to be a more effective collusion facilitating device than RPM, while at the same time

¹⁴ See B Jullien and P Rey, 'Resale Price Maintenance and Collusion' [2007] 38 *Rand Journal of Economics* 983.

¹⁵ See, eg, G Shaffer. 'Slotting Allowances and Resale Price Maintenance: A Comparison of Facilitating Practices' [1991] 22 *Rand Journal of Economics* 120, and P Rey and T Vergé, 'Resale Price Maintenance and Interlocking Relationships' [2010] 58 *Journal of Industrial Economics* 928.

¹⁶ P M Ippolito, 'Resale price maintenance: Empirical evidence from litigation' (1991) 34 *J. L. & Econ.* 263, 281.

¹⁷ J Asker and H Bar-Isaak, 'Vertical Information Restraints: Pro- and Anti-Competitive Impacts of Minimum Advertised Price Restrictions' (NBER Working Paper No w22771, October 2016), p 1, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2861703.

¹⁸ International Competition Network, 'Online Vertical Restraints Special Project Report' (International Competition Network Annual Meeting 2015), pp. 81-91.

¹⁹ *Ibid*, p 81.

²⁰ OECD, *Vertical Restraints for On-line Sales*, DAF/COMP(2013)13.

allowing the cartel to extract higher profits.²¹ Exclusion at the supplier level may arise if the conduct guarantees a retail margin that makes a retailer less willing to stock a rival supplier's product. Foreclosure of downstream distribution channels in this manner may reduce interbrand competition between suppliers. Exclusion at the retail level may also occur if a supplier is induced to adopt an indirect price maintenance scheme that reduces discounting retailers' ability to compete. Offline retailers may have an incentive to try to induce suppliers to implement MAP policies, refuse to supply or otherwise discriminate against discounting online retailers.²²

2.2.3. Retail most-favoured-nation ('MFN') clauses

17. In the digital era, a large proportion of online retail trade is performed through online platforms, namely two-sided markets which facilitate commercial interactions between suppliers and final consumers, in exchange for an access fee or a commission payable by the former. By means of retail MFN clauses (also referred to as 'across platform parity agreements' – APPAs, since they mainly cover goods traded through online retail platforms) a seller agrees with an online platform to offer its goods at prices not higher than those charged on other platforms.

18. Retail MFNs may be either 'narrow' or 'broad'. Narrow MFN clauses require that the seller does not offer a lower retail price on its own website, without affecting the prices charged on competing platforms for the same product. By contrast, a seller bound by a broad MFN clause is restricted in its ability to charge lower prices not only on its website, but through any other retail channel. A further distinction is drawn between 'contemporaneous' and 'retroactive' MFNs. A contemporaneous MFN clause guarantees that the beneficiary will be offered the best terms available to its competitors at the time of the transaction, while retroactive MFNs bind a seller having already offered discounted prices, to match these better terms in favour of the beneficiaries in the future.

19. Despite their potential welfare-enhancing effects,²³ retail MFN clauses may also have significant anti-competitive impact. In particular, wide MFNs may produce horizontal effects and thus be abused as part of a hub-and-spoke arrangement. More specifically, where competing online platforms have entered into cartel agreements fixing the level of the fees or commission paid by the sellers, retail MFNs may reduce a cartel's incentive to cheat by charging a lower fee: any cost savings resulting from the fee reduction will be passed on by the sellers in the form of lower retail prices not only through the platform that granted the discount, but also through all of its competitors.²⁴ Furthermore, it has also been argued that retail MFNs may facilitate collusion between sellers, by restricting their ability to price-discriminate across platforms, which in turn simplifies the process of monitoring

²¹ J Asker and H Bar-Isaak, 'Vertical Information Restraints: Pro- and Anti-Competitive Impacts of Minimum Advertised Price Restrictions' (NBER Working Paper No w22771, October 2016), p 1, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2861703.

²² OECD, *Vertical Restraints for On-line Sales*, DAF/COMP(2013)13.

²³ For an overview of the pro-competitive effects of MFNs, see FE González-Díaz and M Bennett, 'The Law and Economics of Most-Favoured Nation Clauses' [2015] 1(3) *Competition Law & Policy Debate* 26, 34-36.

²⁴ Office of Fair Trading, 'Can "Fair" Prices Be Unfair? A Review of Price Relationship Agreements' (Lear, September 2012), paras 6.62-6.63, available at <https://www.learlab.com/publication/1145/>.

compliance.²⁵ They help protecting intermediaries from direct selling by manufacturers or rival platforms, thus potentially leading to higher prices for consumers, if the competitive pressure is higher downstream than upstream.²⁶ This, in turn may, however, raise, under certain circumstances market-entry incentives.²⁷ They act to soften competition between retailers and online platforms increasing the fees/commissions paid by the suppliers, these costs being ultimately passed on to consumers who finish by paying higher prices. They may be used as a means to achieve downstream collusion, as they reduce the incentives of retailers to deviate from a collusion on commissions/platform fees and they eliminate price competition at the retail level, as they remove any incentive for the retailer to undercut its rivals. But they can also facilitate collusion between suppliers upstream, as the reduction of price deviations across platforms make it easier to detect deviations from the collusive price. Finally, where only some platform providers use the agency model, a MFN leads to retail prices that resemble the outcome under industry-wide (collective) RPM.²⁸ The extent of retail competition on parameters not covered by MFNs, such as customer service and other quality-based competition, should also be relevant in the assessment of this impact.²⁹ The existence of cumulative effects, with a widespread use of MFN clauses in an industry, covering a substantial part of a market also raises important concerns.³⁰

20. A wide retail MFN clause could also be imposed by incumbent platforms as a barrier to new entry: any attempts by a new platform to attract retailers by charging a lower access fee will not confer on it any competitive advantage, as retailers bound by retail MFNs will have to match any resulting lower final prices across all incumbent platforms.³¹ Naturally, the effect of wide-MFN is that the supplier needs to control the retail price of its product everywhere it is sold.³² From this perspective, wide-MFNs have been compared to RPM clauses, in view of the horizontal element of RPM, whereby each upstream firm sets identical retail prices across all of its downstream retailers.³³ Those adhering to the RPM

²⁵ Ibid, paras 6.64-6.65.

²⁶ Ø Foros, Øystein, H J Kind and G Shaffer, 'Turning the Page on Business Formats for Digital Platforms: Does Apple's Agency Model Soften Competition?' (August 29, 2013) CESifo Working Paper Series No. 4362.

²⁷ J P Johnson, 'The Agency Model and MFN Clauses' (January 10, 2014). Available at SSRN: ssrn.com/abstract=2217849.

²⁸ Ø Foros, Øystein, H J Kind and G Shaffer, 'Turning the Page on Business Formats for Digital Platforms: Does Apple's Agency Model Soften Competition?' (August 29, 2013) CESifo Working Paper Series No. 4362.

²⁹ OXERA, *Most-favoured-nation clauses: falling out of favour?* (November 2014).

³⁰ S Salop and F Scott Morton, 'Developing an administrable MFN enforcement policy' [2013] 27 *Antitrust* 15.

³¹ A Ezrachi, 'The Competitive Effects of Parity Clauses on Online Commerce' [2015] 11 *European Competition Journal* 488, 498-499. A Boik and KS Corts, 'The effects of platform MFNs on competition and entry' (2013), available at editorialexpress.com/cgi-bin/conference/download.cgi?db_name=RES2015&paper_id=41

³² A Fletcher and M Hviid, 'Retail Price MFNs: Are they RPM 'at its worst?', (April 7, 2014), available at competitionpolicy.ac.uk/documents/8158338/8199490/CCP+Working+Paper+14-5.pdf/0ec21eee-12ca-4bc8-b3ea-d5076ab264af, 6.

³³ Ibid, 16-17.

analogy conclude that retail price wide-MFN should not be treated less harshly than RPM, which implies that in the EU these should be considered as a by object restriction of competition and possibly a hardcore restriction under the Block Exemption Regulation.³⁴ Some argue that the harm arising from retail wide-MFN can go beyond the harm that arises from traditional RPM, as the on-line retailer is controlling the minimum price that is being set in the market and can manipulate that price by increasing its commission, which is not possible under classic RPM.³⁵ Others observe that MFNs are unlikely to harm competition where the level of concentration in both markets is low and the parties to an MFN lack market power.³⁶

2.3. Common pricing algorithms and digital cartel facilitators

21. In the digital environment, a hub-and-spoke scheme may alternatively be formed through the use of a common pricing algorithm. In this context, each spoke separately enters into a vertical agreement with an independent service provider, whereby the latter undertakes to develop and implement a pricing software which can be used to determine the profit-maximising price.

22. While the use of a pricing algorithm by a single undertaking is not necessarily problematic, the parallel use of the same algorithm by a number of competitors may create conditions of tacit collusion and lead to an industry-wide increase in prices. Where the competitors knowingly enter into this cluster of vertical agreements with the purpose of stabilising the collusive equilibrium, this conduct is practically comparable to a typical hub-and-spoke cartel or could constitute a cartel facilitator.³⁷ In this context, the common algorithm will serve as a monitoring mechanism, detecting possible deviations and immediately restoring prices at the agreed upon levels.

3. Policy implications

23. In light of the foregoing, one may take a broad perspective on hub-and-spoke conspiracies. The concept would include collusive schemes implemented through indirect contacts between competitors. This category covers cases of information exchanges via a common trading partner, as well as other forms of cartel facilitation through an intermediary such as the use of common pricing algorithms. One may also include in the broader concept certain cases in which the collective enforcement of vertical restraints may give rise to horizontal effects.

24. In the HCC's view, each of these two categories may present the enforcement agency with different analytical challenges. When dealing with cases of indirect contacts

³⁴ Ibid, 32

³⁵ OECD, *Vertical Restraints for Online Sales*, DAF/COMP(2013)13.

³⁶ S Salop and F Scott Morton, 'Developing an administrable MFN enforcement policy' [2013] 27 *Antitrust*, 15; G Gürkaynak, A Güner, S Diniz and J Filson, 'Most-favored-nation clauses in commercial contracts: legal and economic analysis and proposal for a guideline' [2015] *European Journal of Law & Economics* 1.

³⁷ For a discussion of the elements of a hub and spoke conspiracy claim see, O. Odudu, 'Indirect Information Exchange: the Constituent Elements of Hub and Spoke collusion' [2011] 7 *European Competition Journal* 205.

between competitors, the main challenge facing the agency is the attribution of liability for participation in the collusive scheme. By contrast, where the conduct under scrutiny involves the enforcement of vertical restraints, the focus should be on the assessment of the welfare effects created by the restraint at issue.

3.1. Attribution of liability

25. In order for a breach of Article 1(1) of Law 3959/2011 (the equivalent of Article 101(1) TFEU) to be established, the HCC must show the existence of an agreement or concerted practice which has as its object or effect the prevention, restriction or distortion of competition within the Greek territory. Antitrust liability may therefore be imputed only to undertakings found to be parties to such an anti-competitive ‘agreement or concerted practice’.

26. In *VM Remonts*, the only relevant case to have reached the EU Courts, the CJEU held that an undertaking will be held liable for the conduct of an independent service provider who acts as the hub in a collusive arrangement between the former’s competitors, only if one of three conditions is met: (i) the service provider was in fact acting under the alleged spoke’s direction or control; or (ii) the undertaking concerned was aware of the anti-competitive objectives pursued by the parties involved and intended to contribute to them by its own conduct; or (iii) that undertaking could reasonably have foreseen the anti-competitive acts of its competitors and the service provider and was prepared to accept the risk which they entailed³⁸. It follows that, in the absence of (evidence of) direct communications between competitors, where the common trading partner acts as the vehicle for the transmission of sensitive commercial information between the spokes, the only criterion for the attribution of antitrust liability is the undertaking’s subjective intent with regard to the collusive arrangement.

27. This effectively means that the enforcement agency is required to rely on this mental element in order to establish the existence of the ‘rim’, namely the horizontal aspect of the collusive arrangement. This is hardly an easy task: in the course of the day-to-day commercial transactions between trading partners, the communication of sensitive commercial information, such as future pricing intentions, is to be expected – or even presumed. As Advocate General Szpunar noted in his Opinion in the *Eturas* case, ‘[s]uch indirect exchange calls for an additional consideration as to the state of mind of the parties involved, since disclosure of sensitive market information between a distributor and its supplier may be considered as a legitimate commercial practice’³⁹.

28. In the *Heat Stabilisers* cartel, the Commission had found AC-Treuhand, a consultancy firm based in Switzerland and offering business management and administrations services, liable, under Article 101(1) TFEU, for a cartel consisting in fixing prices, allocation of markets, customers and exchange of commercially sensitive information between undertakings active in the heat stabilisers sector. Although AC-Treuhand did not trade on the relevant markets or on related markets, the Commission found that it played an essential role in the infringement, by organizing meetings for the cartel participants which it attended and in which it actively participated, collecting and

³⁸ Case C-542/14, *SIA ‘VM Remonts’ (formerly SIA ‘DIV un KO’) and Others v Konkurencespadome*, EU:C:2016:578.

³⁹ Opinion of AG Szpunar, Case C-74/14, “*Eturas*” *UAB and Others v Lietuvos Respublikos konkurencijostaryba*, EU:C:2015:493, para 65.

supplying to the participants data on sales on the relevant markets, offering to act as moderator in case of tensions between the cartel participants and encouraging the parties to find compromises.⁴⁰

29. The requirement for the undertaking's state of mind to be established is also applicable in cases where the alleged hub is a common provider of a pricing algorithm. Since the appointment of the common service provider is the result of a number of vertical agreements, each of which, taken individually, cannot be presumed to produce anti-competitive effects or to form part of a broader cartel arrangement, the enforcement agency may have to rely on intent evidence in order to substantiate the existence of the rim, on the one hand, and attribute liability, on the other.^{41,42}

30. The recent *Eturas* case hints to the possibility that the subjective element of concerted practice (the fact that the intermediary knowingly contributed to the cartel) may be satisfied with various, even less common, ways of reciprocal contact.⁴³ This may be indirect, through a third party, or through even an IT platform and algorithmic pricing. Following the judgment of the CJEU, the Supreme Administrative Court of Lithuania has considered whether each travel agency involved had knowledge about the discount restriction imposed in the E-TURAS system and whether it had objected to the restriction or not or withdrawn from the concerted action by systematically giving additional discounts. The Lithuanian court distinguished between various categories of travel agencies: (i) those that knew about the imposed restriction and did not oppose it; (ii) those that knew about it and opposed the imposed restriction; and (iii) those for which the Lithuanian Competition Council had failed to gather sufficient evidence for asserting that they knew about the restriction imposed in the E-TURAS system. The court lifted the fines imposed on the travel agencies of the second and third group, while travel agencies that knew about the restriction and did not oppose it were found to have taken part in a restriction of competition.⁴⁴

31. A final point to be made is that, as of yet, the attribution of liability has not presented the HCC with analytical challenges in the context of the assessment of vertical restraints. RPM is consistently treated as a restriction of competition by object under Article 1(1) of Law 3959/2011 and as a hardcore restraint under Article 1(3) of Law 3959/2011 (the equivalent of Article 101(3) TFEU). As per the HCC's common practice, in cases where the vertical element of the RPM scheme at issue prevails – eg where the price floors are imposed by the supplier in the context of a franchise network – the agency typically

⁴⁰ Case COMP/38589 – *Heat stabilisers* [2009].

⁴¹ See A Ezrachi and ME Stucke, 'Artificial Intelligence and Collusion: When Computers Inhibit Competition' [2017] *University of Illinois Law Review* 1775, 1782-1783, 1787-1789.

⁴² See, eg, A Ezrachi and ME Stucke, 'Sustainable and Unchallenged Algorithmic Tacit Collusion' (Oxford Legal Studies Research Paper No 16/2019), pp 29-30, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3282235&download=yes, where the authors present the real-life example of the use of a common provider of dynamic pricing services by a network of petrol stations in Denmark. Although the effect of the scheme was to soften competition, the authors distinguish this scenario from a typical hub-and-spoke structure designed to facilitate a cartel agreement (and refer to it as 'incidental' hub-and-spoke).

⁴³ Case C-74/14, *Eturas UAB et al v. Lietuvos Respublikos konkurencijos taryba*, ECLI:EU:C:2016:42.

⁴⁴ Supreme Administrative Court of Lithuania in the *Eturas* case (Case No A-97-858/2016).

refrains from sanctioning the downstream firms. By contrast, as will be seen in section IV below, in the *RPM in the distribution of dairy products* case,⁴⁵ HCC imposed fines on both the suppliers (milk producers) and the retailers (supermarket chains) for illegal vertical price fixing. In this case, the HCC took into consideration the fact that the supermarket chains involved in the infringement collectively held significant bargaining power vis-à-vis their suppliers, as well as evidence that the former benefitted from the policy of price floors and lacked the incentive to deviate.

3.2. The horizontal effects of vertical restraints

32. The analysis in section 2 summarised the theories of harm associated with three types of vertical restraints which are prevalent in the e-marketplace. As the competitive impact of vertical restraints is ambivalent, the enforcement agency may have to engage in a careful assessment of a restraint's net welfare effects in order to avoid the occurrence of false positive errors. Although vertical price restraints are presumed unlawful, it is still open to the parties concerned to put forward an efficiency defense under Article 1(3) of Law 3959/2011. It is argued here that, in this context, the substantive analysis conducted by the agency should focus primarily on whether the prevailing element of the RPM scheme at issue is horizontal or vertical. It is submitted that RPM and MAP should be subjected to a unified framework of substantive analysis, due to their comparable welfare effects.

33. As a starting point, it should be noted that the exclusion of a price-cutting retailer is in principle as consistent with the pro-competitive justifications for as with the cartel objection to RPM/ MAP and does not lead to unambiguous conclusions, in and of itself, as to the welfare effects of the RPM/ MAP scheme under scrutiny. That is to say, there can be no presumption as to whether the terminated dealer is a no-frills outlet taking a free ride on its more diligent rivals' promotional efforts (or quality certification) or a maverick firm not adhering to the rules of a downstream cartel.

34. In order for a safer conclusion to be drawn, it is submitted that the enforcement agency should examine further parameters which are relevant to the assessment, namely: (i) the nature of the products or services at issue; (ii) the source of the restraint; and (iii) if it is established that the source of the restraint is in the upstream market, whether the restraint has been imposed individually by a supplier or is being collectively enforced by a number of competing suppliers.

1. If the nature of the products or services concerned is such that warrants the provision of special pre-sales services or the protection of brand image by means of quality certification, it is likely that RPM/ MAP has been imposed as remedy to a market failure, in which case a possible efficiency defense under Article 1(3) of Law 3959/2011 should be carefully examined. By contrast, if the restraint covers mostly generic, undifferentiated commodities, then the assumption that it has been employed as a collusion facilitating mechanism appears to be more plausible.
2. Where the supplier imposes RPM/ MAP with the purpose of inducing its dealers to provide product-specific services, it is conceivable that the restraint may produce welfare-enhancing effects by leading to output increases. However, if the restraint has been imposed at the behest of a number of retailers with significant bargaining

⁴⁵ Decision No 373/V/2007 of the HCC Plenary Session.

power, then its effect would be indistinguishable from that of a retailer cartel, regardless of whether an explicit collusive agreement has actually been reached.⁴⁶

3. Finally, assuming that the restraint has been imposed at the supplier's own initiative, then it should be further examined whether said supplier has been acting individually or in concert with some or all of its rivals. While the imposition of an RPM/ MAP scheme by an individual supplier is more likely to be defensible on efficiency grounds (particularly if the supplier does not enjoy significant market power), the collective enforcement of such restraints by a number of upstream firms is rather associated with collusive outcomes.

35. Finally, as far as the substantive assessment of retail MFN clauses is concerned, it has been argued that their welfare effects depend upon 'its scope, application, the level of competition at different levels of the distribution chain, and the market environment'.⁴⁷ In this context, the enforcement agency should take into account certain factors which increase the likelihood that the retail MFNs under scrutiny lead to a reduction in consumer welfare. Such factors include: the collective adoption of retail MFNs through horizontal agreement, the presence of significant market power on either side of the market, the proportion of the relevant market covered by retail MFNs, the reinforcement of the relevant clauses with penalties for non-compliance, possible retroactive effect of the MFNs, etc.⁴⁸

3.2.1. Distinguishing between vertical practices facilitating a cartel and 'pure' hub and spoke conspiracies

36. Vertical restraints may produce horizontal effects, upstream or downstream, which could take either the form of horizontal collusive effects or the exercise of unilateral market power (by a powerful retailer or supplier). This horizontal effect has been noted as being equivalent to that often resulting from a minimum resale price maintenance agreement, which is addressed as a vertical collusive practice and treated quite harshly in EU competition law.⁴⁹ Other vertical practices that may also produce horizontal effects, include parity/MFN (most-favoured-nation or -customer) clauses, single branding clauses etc. These are often included in vertical agreements (i.e. between suppliers and retailers) and thus satisfying the collusion element of Article 101 TFEU. The horizontal effects of the practice are then examined under the restriction of competition element of Article 101(1) TFEU. Alternatively, in oligopolistic markets, these vertical arrangements having a horizontal effect may be considered as facilitating practice for the constitution or maintenance of a cartel. This relates to both the collusion and the restriction of competition elements.

⁴⁶ See generally WS Comanor, 'The Two Economics of Vertical Restraints' [1992] 21 *Sw U L Rev* 1265.

⁴⁷ A Ezrachi, 'The Competitive Effects of Parity Clauses on Online Commerce' [2015] 11 *European Competition Journal* 488, 496.

⁴⁸ For a comprehensive list of the factors which exacerbate the competition concerns raised by MFNs, see SC Salop and F Scott Morton, 'Developing an Administrable MFN Enforcement Policy' [2012-2013] 27 *Antitrust* 15, 18-19.

⁴⁹ Nicolas Sahuguet & Alexis Walckiers, 'Hub-and-Spoke Conspiracies: the Vertical Expression of a Horizontal Desire?' [2014] 5 *Journal of European Competition Law & Practice* 711-716.

37. Hub and Spoke conspiracies differ from vertical practices producing horizontal effects in the fact that the hub (e.g. a supplier) *voluntarily* participates in the conspiracy in order to improve the profits of the retailers downstream, by making their collusive scheme more stable and sharing with them any additional profits extracted from final consumers.⁵⁰ A vertical agreement may normally be inferred from the coercion of one party by another.⁵¹ In case the supplier voluntarily participates to the conspiracy in order to share the additional profits made by the retailers downstream, this conduct will make sense if the market position of the retailers is stronger than that of the supplier, which may indicate that the trilateral scheme was initiated by the dealers.⁵² If the vertical restraint was adopted under dealer pressure, it will certainly reduce consumer welfare as it will increase the distribution mark up and will lead to higher prices for consumers, without this increase being justified by the provision of better distribution services. Hence, from a welfare perspective it may make sense to address this type of agreements as horizontal cartels and thus find the existence of a horizontal indirect collusion between the retailers.

38. However, one needs to be cautious about the alleged specificities of hub and spoke practices. First, under current law, there cannot be any prior analysis of the market position of the parties at the level of examining the existence of an agreement or concerted practice, making it difficult to explore the bargaining position of the supplier vis-à-vis the retailers and to determine the origin of the alleged restriction of competition. Second, one cannot presume the ‘voluntary’ participation of the supplier to the collusive scheme, just from the fact that it makes sense from an economics’ perspective for the supplier to participate to such a scheme and share the additional profits brought by the dealer cartel which he helped making stable. The presumption of innocence and EU fundamental rights jurisprudence may raise obstacles to the development of inferences as to the participation of a supplier to a collusive scheme between retailers, simply because of some possible theorems developed by economic theory, without at least some evidence of intent to contribute to this collusive scheme. The case law on hub and spoke practices reflects this cautious approach that aims to balance the need for effectiveness in competition law enforcement against cartels and the requirements of the presumption of innocence.

39. Since the *Wood Pulp* case, it has become more difficult to attack tacit collusion with Article 101 TFEU, even indirectly through facilitating practices, although the Court’s approach towards some type of facilitating practices of collusion, such as information exchange between competitors or Resale Price Maintenance clauses between suppliers and distributors, is rather strict, these practices being found anticompetitive by object. One should distinguish nevertheless between the cases where facilitating practices are assessed

⁵⁰ N Sahuguet & A Walckiers, ‘Hub-and-Spoke Conspiracies: the Vertical Expression of a Horizontal Desire?’ [2014] 5 *Journal of European Competition Law & Practice* 711-716, 715; Nicolas Sahuguet & Alexis Walckiers, ‘Selling to a Cartel of Retailers: A Model of Hub-and-Spoke Collusion’, (2013) CEPR Discussion Paper Series 9385. For a criticism, see Patrick JG Van Cayseele, ‘Hub-and-spoke Collusion: Some Nagging Questions Raised by Economists’, (2014) 5 *Journal of European Competition Law & Practice* 164-168.

⁵¹ For a discussion see, I. Lianos, ‘Collusion in Vertical Relations under Article 81 EC’ [2008] 45 *Common Market Law Review* 1027.

⁵² Market position is not similar to the concept of market power and may refer to a situation where the dealers dispose of superior bargaining power, i.e. a situation where an important part of the supplier’s turnover is realized with the particular dealer(s).

as a restriction of competition, and the cases where facilitating practices are considered as evidence of collusion. The point is clearly made by Kaplow:

'Facilitating practices may be relevant under competition law in two ways. First, their use provides a basis for inferring the existence of oligopolistic coordination. This inference is sensible when there exists no other plausible explanation for the practice. In contrast, practices that may facilitate oligopolistic interdependence but would likely be employed regardless are not directly probative.

Second, facilitating practices may themselves be made a basis for liability'.⁵³

40. While EU competition law seems to have restricted, since the *Wood Pulp* case, the first route, it seems more open to take the second route, at least with regard to some types of practices, such as RPM, that may be considered as by object restrictive of competition. The case law on hub-and-spoke conspiracies sits in the intersection of these two approaches in dealing with facilitating practices, to the extent that it refers to the need to build a case of indirect collusion between competitors, with the purpose of finding the existence of a restriction of competition assumed by the fact that the hub knowingly participates to the scheme or can reasonably be expected to be aware of it.

4. The HCC's enforcement actions

41. To date, the HCC has not dealt with cartel arrangements implemented through information exchanges via a common trading partner: all cartel cases investigated by the agency have been based on evidence of direct communications between competitors.

42. However, on two occasions the HCC took action against types of anti-competitive conduct which presented elements of hub-and-spoke collusion enforced through vertical restraints. In both cases, the agency issued infringement decisions concerning the collective enforcement of RPM schemes.

43. In the 2007 *RPM in the distribution of dairy products* case,⁵⁴ the HCC imposed fines on four producers of dairy products and six supermarket chains for engaging in the collective enforcement of RPM clauses, effectively fixing the retail markup on the contract goods distributed by the latter. The HCC found that the main impetus for the imposition of price floors came from the downstream market, as the supermarket chains possessed substantial bargaining power vis-à-vis their suppliers. Based on circumstantial evidence, the agency established that the retailers had consistently been taking advantage of their buyer power in order to extract from their suppliers greater discounts on wholesale prices as well as more favorable credit terms, while further circumstantial evidence showed that the supermarket chains did not see retail price competition favourably.

44. In the *Cosmetics* case (2017),⁵⁵ the HCC imposed fines on six wholesalers of luxury cosmetics for engaging in the collective enforcement of RPM through the fixing of a uniform discount rate of 50% on the retail price during winter sales. One of the undertakings concerned, NOTOS, was vertically integrated and was active in both the wholesale market (having the exclusive distribution of certain luxury cosmetics brands in

⁵³ L Kaplow, *Competition Policy and Price Fixing* (Harvard University press, 2013), 276.

⁵⁴ Decision No 373/V/2007 of the HCC Plenary Session.

⁵⁵ Decision No 646/V/2017 of the HCC Plenary Session

Greece) and the retail market (through a network of retail outlets selling all brands). In this ex officio case, crucial for the formation of this disguised hub-and-spoke cartel – since it was not examined as such – was the fact that one of the colluding undertakings served also as the common trading partner, through its activities in the downstream market. In addition, it was established that the enhanced bargaining power of the common trading partner vis-à-vis its suppliers, given the oligopolistic nature of the market at the retail level, facilitated the formation of a horizontal cartel in the upstream market which also benefited the hub in the downstream market, through the imposition of RPM across retailers. A crucial document for the proof of the infringement was a letter sent by the Commercial Director of NOTOS to its suppliers asking them to inform him on the level of discounts that they wanted him to set to his customers during the upcoming winter sales. The wholesale branch of NOTOS was also in contact with other retail chains, sending, on a regular basis, retail price lists, while it was also proved that the wholesalers themselves were also sending price lists to the retailers.

45. However, during the winter sales, NOTOS decided to increase the discount rate to 60% only for the products that it traded as wholesaler and retain the discount rate of 50% for the products of the competing wholesalers, with the purpose to increase sales of its own brands. Following this initiative, the other wholesalers sent letters to NOTOS, complaining about this conduct. This communication was perceived by the HCC as circumstantial evidence demonstrating the existence of a horizontal agreement for uniform discounts, to which NOTOS did not conform.

46. Finally, in 2015, the HCC scrutinised the MFN clauses contained in the agreements between two leading online travel agencies ('OTAs'), Booking.com and Expedia, with their hotel business partners in Greece. This initiative was spurred by similar inquiries conducted by other European NCAs and was undertaken in coordination with the European Commission. Eventually, the HCC decided to not to proceed with a formal investigation after it was satisfied that the OTAs amended their parity clauses to address any competition concerns raised.⁵⁶

47. It is also worth noting that, more recently, the HCC has received a number of complaints alleging restrictions on online retailers' ability to determine their own prices, and has already acted upon two of them, launching investigations in the markets for durable goods and luxury goods distributed through a selective distribution system.

48. Although both cases are yet to be decided, there are strong indications that in both cases price floors were imposed at the behest of brick-and-mortar retailers who saw their sales being compromised by their cost-effective online rivals' competitive pricing policies. Furthermore, in the context of one of the aforementioned investigations, the HCC collected evidence showing that some of the suppliers concerned had put in practice a monitoring mechanism, whereby employees were assigned to visit the two main Greek price comparison websites on a daily basis and report possible deviations from the imposed retail prices. Although not particularly impressive in its sophistication, this monitoring mechanism is nonetheless indicative of the comparatively low costs associated with policing adherence to a collusive scheme in the digital environment.

⁵⁶ See HCC Press Release of 22 September 2012, 'HCC decides not to proceed with a formal investigation into BOOKING & EXPEDIA's cooperation agreements with hotel businesses in Greece'.

49. In the other case, the brick-and-mortar distributors sought to restrict intrabrand competition among them and multi-channel distributors and/ or pure-play online outlets, by communicating to the supplier their dissatisfaction with excessive discounts in the online channel. The initiation of the case was based on a letter sent by the supplier to all its distributors suggesting the joint design of tailor-made promotion schemes, aimed at preventing online outlets from undercutting their brick-and-mortar rivals. Evidence collected during dawn raids established that RPM clauses were included in the contractual agreements between the supplier and its distributors.

5. Conclusion

50. Despite the HCC's limited experience in dealing with hub-and-spoke arrangements in traditional brick-and-mortar trade, it appears that the agency's enforcement activities are likely to gather pace with the purpose of tackling collusive conduct in the e-marketplace. As was demonstrated in the preceding analysis, there are indications that the digital environment may exacerbate the harmful effects of certain forms of vertical restraints, in particular by reinforcing their horizontal element. The HCC is currently acting on two relevant allegations. On the contrary, cases involving the indirect exchange of sensitive commercial information or the common use of pricing algorithms are yet to be investigated.