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Vertical mergers in the technology, media and telecom sector – Note by the EU

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More documents related to this discussion can be found at

http://www.oecd.org/daf/competition/vertical-mergers-in-the-technology-media-and-telecom-sector.htm

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1. Introduction

1. This contribution discusses the approach of the European Commission (the "Commission") towards vertical mergers in the technology, media and telecom sector. The contribution focuses on main decisions adopted in these sectors in recent years. It discusses vertical mergers in the sense that the merging companies operate at different levels of the supply chain: the downstream company purchases the output products or services from the upstream company and uses it as an input in its own production.[1]

2. Across sectors, the vast majority of the Commission's interventions in merger cases involve horizontal theories of harm. Whereas the Commission has analysed potential vertical effects in several cases, the number of cases where it intervened because of vertical theories of harm remains low.[2] Sometimes such theories are carried as an additional theory of harm, but purely vertical effects cases remain rare. This also holds for the sectors that are the focus of this contribution.

3. This contribution first sets out the analytical framework under which the Commission investigates vertical mergers as well as the theories of harm and evidence considered in vertical mergers (section II). Then, through the study of vertical merger cases in the technology, media and telecom sector, this contribution discusses the theories of harm that arose in these cases (section III), the efficiencies that were considered (section IV) and the remedies that addressed the Commission's competitive concerns (section V). Finally, the contribution explores some future challenges of vertical media merger cases in particular (section VI).

2. The Commission's analytical framework for the assessment of vertical mergers, theories of harm and evidence

2.1. Analytical Framework

4. The "Non-horizontal merger guidelines"[3] set out the Commission's analytical framework for the assessment of non-horizontal mergers and in particular vertical mergers. The guidelines explain that vertical mergers are "*generally less likely to significantly*

[1] Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18.10.2008, paragraph 4. This article does not discusses the second type of non-horizontal mergers, namely conglomerate mergers which take place between companies that are active in closely related markets.

[2] Over the period 2015-2018, the Commission intervened in 98 merger cases – intervention cases comprise Phase I and Phase II cases with remedies, abandonments in Phase II and prohibitions. Out of these intervention cases, only nine cases raised vertical concerns (i.e. approximately 10%).

[3] Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18.10.2008, "Non-horizontal merger guidelines".

impede effective competition than horizontal mergers".[4] At the same time, they also acknowledge that, "*there are circumstances in which vertical mergers may significantly impede effective competition, in particular as a result of the creation or strengthening of a dominant position*."[5] The Commission therefore assesses each case on its merits.

5. The Non-horizontal merger guidelines reflect the Commission's approach that "*[v]ertical mergers pose no threat to effective competition unless the merged entity has a significant degree of market power.*"[6] The Non-horizontal merger guidelines establish market shares and concentration levels below which the Commission is unlikely to find concerns: where the market share post-merger of the new entity in each of the markets concerned will be below 30% and post-merger the HHI is below 2000.[7] These thresholds are only indicative and do not give rise to a legal presumption.[8]

6. Vertical mergers may give rise to a significant impediment to effective competition ("SIEC") in two main ways: non-coordinated and coordinated effects. Non-coordinated effects principally arise when vertical mergers give rise to foreclosure; and coordinated effects arise when firms that were not coordinating their behaviour are now significantly more likely to coordinate and raise prices or otherwise harm effective competition. Furthermore, the Non-horizontal merger guidelines stress that non-coordinated anti-competitive effects may arise when the merged entity, by vertically integrating, gains access to commercially sensitive information regarding the upstream or downstream activities of rivals.[9]

2.2. Theories of harm

7. When assessing the non-coordinated effects of vertical mergers, the Commission mostly considers two theories of harm, namely input foreclosure and customer foreclosure, and applies the "ability-incentive-effects" framework.[10]

[4] Non-horizontal merger guidelines, paragraph 11.

[5] Non-horizontal merger guidelines, paragraph 15.

[6] Non-horizontal merger guidelines, paragraph 23.

[7] Non-horizontal merger guidelines, paragraph 25. Accordingly, the vertical mergers in which the parties have a market share below 30% can benefit from the simplified procedure – see, Commission Notice on a simplified procedure for treatment of certain concentrations under Council Regulation (EC) No 139/2004, paragraph 5(c), ("Notice on simplified procedure").

[8] These thresholds are different from the thresholds applied by the Commission in horizontal mergers. In horizontal cases, where the market share of the undertakings concerned does not exceed 25%, this is an indication that the concentrations may be presumed to be compatible with the common market – see, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, ("Horizontal merger guidelines").

[9] Non-horizontal merger guidelines, paragraph 78.

[10] The Commission also assesses non-coordinated effects when the merged entity gains access to commercially sensitive information. For instance, by becoming the supplier of a downstream competitor, a company may obtain critical information, which allows it to price less aggressively in the downstream market to the detriment of consumers. It may also put competitors at a competitive

8. With regard to the ***ability*** of the merged entity to engage in input foreclosure, the merged entity must have a significant degree of market power in the relevant upstream market. Among other things, the Commission assesses:

- the merged entity's position in the upstream market;
- the credible alternatives to the merged entity's input;
- the price of the input relative to the price of the downstream product;
- irrespective of its cost, the importance of the input for the manufacturing or sale of the downstream product;
- the merged entity's customers' supply contracts (e.g. long-term contracts guaranteeing supplies; exclusive contract limiting the ability of downstream rivals to access the input);
- the ease with which customers can replace the merged entity as their supplier;
- the counter-strategies that the downstream rivals could deploy to access the input.

9. With regard to the ***incentive*** of the merged entity to engage in input foreclosure, the Commission assesses the profitability of the foreclosure strategy, based – among other things – on:

- the level of profits the merged entity obtains upstream and downstream;
- the downstream demand that is likely to be diverted from rivals; and
- the extent to which the merged entity would benefit from higher prices downstream.

10. With regard to the effects of the input foreclosure strategy on competition, the Commission's assessment revolves around the possibility that the input foreclosure strategy raises the costs of downstream rivals thereby leading to an upward pressure on their sales prices or raises the barriers to potential entrants. Elements that are relevant in this respect include:

- the proportion of rivals who are likely to be unaffected by such strategy;
- the presence of buyer power;
- the likelihood of upstream entry; and
- the presence of efficiencies.

11. For assessing customer foreclosure, the Commission applies a similar ability-incentive-effects framework as for input foreclosure, but with a focus on the merged entity's position on the downstream market instead of the upstream market.

12. For the assessment of coordinated effects in vertical mergers, the Non-horizontal merger guidelines follow the analytical framework established by the Horizontal merger guidelines.[11]

disadvantage, thereby dissuading them to enter or expand in the market. Non-horizontal merger guidelines, paragraph 78.

[11] "*As set out in Section IV of the Notice on Horizontal Mergers, a merger may change the nature of competition in such a way that firms that previously were not coordinating their behaviour, are*

2.3. Evidence

13. The Commission's findings in its decisions rely on all of the qualitative and quantitative evidence on the case file, in particular the notification received from the merging parties, feedback from third parties provided in meetings, during conference calls or in reply to the Commission's market investigation questionnaires, the assessment of internal documents from the merging parties and economic evidence. These different pieces of evidence are complementary and together inform the overall assessment of the merger.

14. Internal documents have proven to be a particularly important source of qualitative evidence and have contributed in recent cases both to the finding of competition concerns and to their dismissal. They are of particular value for the investigation because they provide information established independently of the merger control procedure and are likely to reflect the views of the company that produced them. In vertical mergers, internal documents can help to get a better understanding of the rationale of the transaction and the competitive constraints faced by each of the merging parties at their level of the distribution chain. They can also serve to explain the general working and evolution of competition in the relevant markets, for instance what are the main parameters of competition or what new trends are expected over the next years.

15. Economic evidence in the assessment of vertical mergers is generally used by the Commission to assess the incentives of the merged entity to engage in a foreclosure strategy and the likely impact on the relevant market. "Vertical arithmetic"- comparing the costs and benefits of foreclosure - has been applied to assess the profitability of engaging in a total foreclosure strategy, whereas a bargaining model has been applied to quantify the effects of partial foreclosure.[12]

3. Recent case experience in the technology, media and telecom sector

16. In recent years, the Commission has assessed a number of vertical mergers in the media sector (3.1). In the telecom sector, the Commission has been mainly faced with horizontal and conglomerate mergers (3.2). Although several mergers in the IT sector involved conglomerate relationships, some cases assessed by the Commission also encompassed vertical links between the merging companies (3.3).

3.1. Media

17. In its recent decisions, the Commission has summarized the traditional TV value chain as follows: (i) the creation and supply of audio-visual content, (ii) the packaging of content by broadcasters in TV channels, which are then licensed out at the wholesale level to distributors, and, (iii) the retail supply of TV services to end customers.

now significantly more likely to coordinate and raise prices or otherwise harm effective competition.", Non-horizontal merger guidelines, paragraph 79.

[12] See for instance, paragraph 337 with regard to the vertical arithmetic framework and paragraphs 396 onwards and Annex A with regard to the bargaining framework in case M.7194 – *Liberty Global / Corelio / W&W / De Vijver Media.*

18. Mergers between operators at different levels of the value chain have entailed a detailed vertical assessment by the Commission. Vertical concerns (input and customer foreclosure) have been assessed with regard to (i) the vertical integration of content (*Fox / Sky*, *Comcast / Sky*), and (ii) the vertical integration of TV channels (*Liberty Global / Corelio / W&W / De Vijver Media*, *Fox / Sky*, *Comcast / Sky*).[13]

19. The concern raised by input foreclosure strategies is that the distributor who acquires a content provider or a TV broadcaster will keep the content or channel exclusively for itself or offer it at higher prices or otherwise worse sales conditions than pre-merger. Competing distributors will not get access to the content/channel or at least not under similar prices and conditions as pre-merger and, if that content/channel is really important, the competitors' ability and/or incentive to compete may be reduced. With regard to customer foreclosure, the concern is that an important TV distributor, e.g. a dominant cable company, would no longer carry the TV channels that compete with its own TV channels or carry them on less favourable terms than pre-merger. As a result, competing TV broadcasters will not get access to a sufficient customer base under similar prices and conditions as pre-merger and their ability and/or incentive to compete may be reduced.

3.1.1. Liberty Global / Corelio / W&W / De Vijver Media ("DVM")

20. The transaction involved the acquisition by Liberty Global of a 50% stake in DVM. The acquisition would give Liberty Global joint control over DVM, together with the other shareholders of DVM, namely Corelio and W&W. DVM is a TV broadcaster. It produces TV content and operates two channels in Belgium: Vier and Vijf. Liberty Global in Belgium controls Telenet, a distributor of retail TV services (as well as of fixed internet and telephony services, and mobile telephony services) via its cable network in Flanders and parts of Brussels. The transaction was conditionally cleared after a Phase II market investigation.

21. In this case, the Commission investigated two vertical theories of harm related to the TV sector. According to the ***input foreclosure*** concern, Liberty Global could foreclose TV distributors that compete with Telenet downstream by withholding the channels Vier and Vijf from them (total input foreclosure) or by extracting higher license fees for these channels (partial input foreclosure). Following its in-depth investigation, the Commission found these channels were an important input for TV distributors, as a detailed analysis of viewer behaviour showed that these channels were particularly valued by customers. If these channels were not made available to competitors of Liberty Global, those competitors' ability or incentive to compete would be reduced and Liberty Global's dominant position in the cable market would be strengthened.

22. An economic assessment was undertaken by the Commission to assess the total and partial input foreclosure concerns. A vertical arithmetic analysis was undertaken in order to assess whether the merged entity would have an incentive to pursue a total input foreclosure against its downstream competitors. An economic bargaining framework was used for the partial input foreclosure assessment. Such a framework was also used by the Federal Communications Commission in its 2011 investigation of the Comcast / NBCU merger. While simple and relatively abstract, the Commission considered that the bargaining framework captures the most important factors on how the vertical merger will

[13] Commission decision of 24 February 2015, in case M.7194 - Liberty Global / Corelio / W&W / De Vijver Media, Commission decision of 7 April 2017, in case M.8354 – Fox/Sky; Commission decision of 7 April 2017 in case M.8861 Comcast/Sky.

likely affect the bargaining outcome between the combined entity and its downstream rivals. The Commission also used that bargaining framework to predict the size of the expected increase in the licence fee that downstream competitor Belgacom would pay to DVM.

23. According to the ***customer foreclosure*** concern, Liberty Global could partially foreclose TV channels competing with Vier and Vijf from Telenet's (dominant) TV platform. Telenet was found to be the dominant distributor of TV services in the region where it was active. The Phase II market investigation revealed that Liberty Global would not entirely stop carrying competing channels, but disadvantage them in other ways. For example, Liberty Global could start paying lower license fees or move the channels to the back of the channel list. As a result of the quality degradation strategies, TV broadcasters will lose revenues which may in turn reduce their return on investment into content and may thereby lower their incentive to continue investing in attractive content in the future.

24. As explained in further details in section 5 below, the concerns were removed by commitments submitted by Liberty Global.

3.1.2. Fox / Sky

25. The transaction consisted of the proposed acquisition of Sky, the leading pay TV operator in Austria, Germany, Ireland, Italy and the United Kingdom, by Twenty-First Century Fox ("21CF"), a diversified global media company and one of the six major Hollywood film studios (20th Century Fox), as well as a TV channel operator (Fox, National Geographic). Post-transaction Sky's pre-existing vertical integration would be increased by adding 21CF's channels to Sky's existing portfolio.

26. The Commission investigated and dismissed possible ***input foreclosure*** strategies with respect to the supply of TV content and TV channels. The Commission considered that it was unlikely that the merged entity could foreclose downstream rivals (TV broadcasters or providers of retail TV services). First, the merged entity had modest market shares. Second, many alternatives to the content of 21CF will continue to exist post-transaction. Finally, 21CF was already licencing its entire output of new films (as well as various library films and TV series) to Sky on an exclusive basis; there was thus no change brought by the merger.

27. The Commission also investigated and dismissed possible ***customer foreclosure*** concerns. The Commission considered it unlikely that the merged entity could cease purchasing TV content and channels from upstream rivals or limit/degrade access to Sky's downstream retail distribution platform, because (i) it would reduce the quality of Sky's offering and (ii) the competitors of Fox' channels (e.g. the Discovery channel, a competitor of Fox' National Geographic Channel) had long-term contracts in place and national regulation was also in place to protect them.

3.1.3. Comcast / Sky

28. The Commission also investigated Comcast's proposed acquisition of Sky and cleared the transaction unconditionally after a Phase I market investigation. Comcast, owner of Universal Pictures, one of the six major Hollywood film studios, and a TV broadcaster, and Sky competed with each other only to a limited extent in Austria, Germany, Ireland, Italy, the UK and Spain, mainly in the acquisition of TV content and in the wholesale supply of basic pay TV channels. The Commission investigated ***input and customer foreclosure*** concerns. The Commission found that pay TV distributors will

continue to have access to content from Comcast's competitors and multiple alternative channels with comparable programming and audiences in the relevant Member States. The Commission also found that it was unlikely that the merged entity would have the incentive to cease purchasing content from Comcast's competitors or limit/degrade access to Sky's downstream retail distribution platform, as it would reduce the quality of Sky's product offering.

3.2. Telecom

29. Europe has been experiencing a wave of consolidation in the telecommunications sector over the past years. However, the cases reviewed by the Commission have generally been horizontal mergers between mobile network operators in the same country[14] or convergent mergers combining fixed network operators and mobile network operators.[15] The Commission assessed some limited vertical relationships between the merging parties in these cases[16], but no vertical concerns were found.

3.3. Technology

30. With respect to the IT sector, in recent years, the Commission assessed vertical integrations in *Intel / Altera*, *Avago / Broadcom* – cleared in Phase I without remedies –in *Microsoft / LinkedIn* and *Broadcom / Brocade* – cleared in Phase I with remedies and in *Apple / Shazam* – cleared in Phase II without remedies.[17]

3.3.1. Intel / Altera

31. The transaction involved the acquisition of Altera by Intel, both US suppliers of electronic components. In addition to the investigation of the conglomerate links, the Commission investigated the market for contract manufacturing services in which Intel

[14] For instance, Commission decision of 12 December 2012, in case M.6497 – *Hutchison 3G Austria / Orange Austria*; Commission decision of 28 May 2014, in case M.6992 – *Hutchison 3G UK / Telefónica Ireland*; Commission decision of 2 July 2014, in case M.7018 – *Telefónica Deutschland / E-Plus*; Commission decision of 11 September 2015, in case M.7419 – *TeliaSonera / Telenor / JV*; Commission decision of 1 September 2016, in case M.7758 – *Hutchison 3G Italy / WIND / JV*, and Commission decision of 11 May 2016, in case M.7612 – *Hutchison 3G UK / Telefónica UK*.

[15] For instance, Commission decision of 14 February 2016, in case M.7637 – *Liberty Global / BASE Belgium*, Commission decision of 3 August 2016, in case M.7978 – *Liberty Global / Vodafone / Dutch JV* and Commission decision of 8 October 2018, in case M.8842 – *Tele2 / Com Hem Holding*.

[16] Mobile operators are active on the markets for (i) wholesale access and call origination on mobile networks; (ii) wholesale mobile call termination services; and (iii) wholesale international roaming services, whereas fixed network operators are active on the markets for wholesale fixed call termination services. Those services are vertically linked to (i) retail supply of mobile telecommunications services and (ii) retail supply of fixed telephony services.

[17] Commission decision of 14 October 2015, in case M.7688 – *Intel / Altera*; Commission decision of 29 February 2016, in case M.7861 – *Dell / EMC*; Commission decision of 23 November 2015, in case M.7686 – *Avago / Broadcom*; Commission decision of 6 December 2016, in case M.8124 – *Microsoft / LinkedIn*; Commission decision of 12 May 2017, in case M.8314 – *Broadcom / Brocade*, Commission decision of 6 September 2018 in case M.8788 – *Apple / Shazam*.

offered contract manufacturing services (upstream) to other suppliers of semiconductors that do not own manufacturing facilities and competed with Altera (downstream).

32. Concerns of ***input foreclosure*** were dismissed. The Commission found that it was unlikely that Intel would terminate agreements for contract manufacturing of semiconductors with companies competing with Altera on downstream markets for different Programmable Logic Devices ("PLDs"), i.e. components for reconfigurable digital circuits. This was because Intel needed certain manufacturing volumes to optimise its operations and benefited from economies of scale. Moreover, impacts on competition would be unlikely because of the existence of alternative manufacturers.

33. ***Customer foreclosure*** concerns were also dismissed. The Commission considered it unlikely that Intel would reduce Altera's purchases from other contract manufacturing companies upstream, since this would incur costs and require investments. Moreover, impacts on competition would be unlikely because of Altera's limited market share and the existence of alternative customers.

3.3.2. Avago / Broadcom

34. The transaction involved Avago Technologies, active in semiconductor devices for use in wireless and wireline communications, storage and industrial applications, which acquired sole control of Broadcom, a provider of semiconductor solutions for wireless and wireline communications.

35. The merger created a vertical link, as Avago licensed IP for Serializer/Deserializers ("SerDes") – which are blocks used in high-speed communications to compensate for limited input or output – to Integrated Circuit ("IC") vendors that use it to produce wireline communication Application Specific Standard Products ("ASSPs") – which are "off-the-shelf" or "merchant" ICs, which can be purchased in identical form by a number of different customers – in in competition with Broadcom. The Commission found that the merged entity would have had the ability and incentive to engage in input foreclosure strategies, which would likely have had an impact on effective competition. First, the Commission considered that Avago could have restricted access to SerDes IP upstream to foreclose downstream competitors of Broadcom, as SerDes is a highly advanced technology, critical to the final product and has a lock-in effect. Avago is the well-reputed market leader and its SerDes IP is considered must-have. Second, it would have an incentive to foreclose competitors because the revenues threatened by downstream competitors are much larger than revenues from upstream SerDes licencing. Since the market is concentrated and Broadcom is strong downstream, the Commission found that foreclosure would likely impact effective competition.

36. Already during the Commission's assessment of the case, Avago entered into commercial agreements with other manufacturers to ensure that these manufacturers will continue to have access to the necessary IP on reasonable terms. The Commission considered that the terms and length of the agreements would allow the licensee to compete effectively. Thanks to this up-front solution, the Commission cleared the transaction unconditionally.

3.3.3. Microsoft / LinkedIn

37. The Commission's investigation mainly related to the effects of the combination of LinkedIn's activities in Professional Social Networking ("PSN") and sales intelligence solutions based on the data collected via the PSN on the one hand, and Microsoft's activities

in Operating Systems ("OS") and productivity software (branded "Office") for PCs, and Customer Relationship Management ("CRM") software solutions, on the other end. The Commission assessed whether LinkedIn data was set to become an important input for the provision of advanced functionalities for CRM software solutions offered by Microsoft and its competitors. The Commission analysed whether post-Transaction the merged entity would have the ability and incentive to reduce competition by restricting access to LinkedIn full data for the provision of advanced functionalities in CRM software solutions through so-called Machine Learning ("ML"). The Commission concluded that reducing access to LinkedIn full data would not negatively affect the overall availability of data for ML in CRM software solutions, notably since LinkedIn data did not appear to be essential as other data sources would remain available post-merger.[18]

3.3.4. Broadcom / Brocade

38. The transaction involved the acquisition by semiconductor manufacturer Broadcom of networking products supplier Brocade. The transaction gave rise to vertical relationships between Broadcom's Application Specific Integrated Circuits ("ASICs") (upstream) which can be used as an input for Brocade's Fibre Channel Storage Area Network ("FC SAN") switches (downstream); and between Broadcom's ASICs and ASSPs (upstream) which can be used as inputs for Brocade's Internet Protocol ("IP")/Ethernet switches and routers (downstream).

39. The Commission dismissed the input foreclosure concerns, because it was unlikely that Broadcom could foreclose access to ASICs for FC SAN switches to competing downstream FC SAN switch suppliers by refusing to supply ASICs or by charging excessive prices for its ASICs. The Commission also dismissed the customer foreclosure concerns, because it considered unlikely that Brocade could foreclose suppliers of chips input, including FC ASICs, wireless communication ASICs and ASSPs, by favouring Broadcom.

40. The Commission however found concerns in relation to the leaking/misusing of commercially sensitive information of downstream competitors. Broadcom supplied Cisco with a semiconductor input for Cisco's FC SAN switches, which competed with Brocade's FC SAN switches downstream. The merged entity could leak Cisco's IP to Brocade through Broadcom and thereby favour its own downstream products (Brocade's FC SAN switches). Since the concern of leakage related to a vertical relationship, the decision treated this concern as a vertical concern. Broadcom committed to protect competitors' commercially sensitive information in order to solve the Commission's concerns (see section 5).

[18] Conversely, the Commission concluded that Microsoft could leverage its strong position in OS for PCs and productivity software to strengthen LinkedIn and foreclose competing professional social networks by either preinstalling or integrating LinkedIn on Microsoft's Windows OS for PCs or productivity software. Microsoft submitted remedies of a behavioural nature to address the Commission's concerns. First, in order to remove the pre-installation concern, Microsoft committed to allow PC manufacturers (and end-consumers) to uninstall a possible LinkedIn app or icon on Windows OS. Second, to remove the integration concern, Microsoft committed to enable competing PSNs to integrate with Microsoft products on a non-discriminatory basis. Both commitments had a duration of five years.

3.3.5. Apple / Shazam

41. The transaction involved the acquisition of Shazam, the leading provider of music recognition services through its "Shazam" mobile application ("app"), by Apple, which, among others, sells and delivers digital content online and offers a music and video streaming service through the "Apple Music"' app. One issue raised in this case was whether, through the acquisition of control over the Shazam app and Shazam's database, Apple could gain access to certain data on its competitors, and in particular on Spotify, in the markets for digital music streaming apps. In particular, by owing Shazam, Apple could acquire access on customer lists of Apple Music's competitors, as the Shazam app "screens" its user's mobile phone and identifies which other apps are installed on it, in particular digital music streaming apps.

42. The Commission considered that through the vertical acquisition, Apple would gain access to commercially sensitive information on customers of Apple's competing music services through Shazam (i.e. customer lists). Such data could have been used to performed conducts aimed at making customer switch to Apple Music. However, the Commission considered that it was unclear whether the merged entity would either have the ability to use the commercially sensitive information to put competitors at a competitive disadvantage, in particular because of legal and contractual constraints limiting Apple's possible future use of the commercially sensitive information; or the incentive because of Apple's overall stand and its strategy as regards Shazam app. In any event, the Commission found that any conduct aimed at making competitors' customers switch using that data would not have a negative impact on effective competition in the market for digital music streaming apps in the EEA. This was in particular because of the market was still expanding and competition was to attract new users to the market, rather than switchers.

4. Efficiencies

43. When assessing efficiencies in the context of non-horizontal mergers, the Commission applies the principles set out in section VII of the Horizontal merger guidelines.[19] In order for the Commission to take into account any potential efficiency as a factor offsetting competitive harm, they have to fulfil three cumulative criteria: the efficiencies should benefit consumers, be merger-specific and verifiable.[20] The burden of proof for claimed efficiencies lies with the parties to the merger.[21]

44. Vertical mergers involve companies operating at different levels of the supply chain which pre-merger set their prices and margins in order to maximize their profit at their own level of the value chain. Post-merger, the merged entity would set its prices and margins so as to maximize its profit over the entire value chain. This effect is referred to as "elimination of double marginalization". In recent cases, merging parties have brought forward such efficiency claims.

[19] Non-horizontal merger guidelines, paragraph 53 and Horizontal merger guidelines, paragraphs 76-88.

[20] Horizontal merger guidelines, paragraph 78.

[21] Horizontal merger guidelines, paragraph 87.

45. For example, in *Orange/Jazztel*,[22] Orange claimed that the merger would eliminate the double margins Jazztel had to pay for the access to Orange's mobile services. The case was largely a horizontal merger combining the third and fourth provider of fixed telecommunications services in Spain. The efficiency claim related to a separate vertical relationship between Orange and Jazztel in the area of mobile telecommunication services. The Commission accepted Orange's efficiency claim regarding the elimination of double marginalisation. Prior to the merger, Jazztel bore the cost of wholesale access to Orange's mobile infrastructure in order to provide mobile communication services to its retail customers. The transaction reduces Jazztel's variable costs in the provision of mobile services, as it eliminates the wholesale margin[23] that Jazztel was paying to Orange for wholesale access to its mobile network.

46. These cost savings were considered to be: (i) verifiable due to the availability of data to calculate costs, prices and margins; (ii) merger-specific, since there are no realistic alternatives or less anti-competitive ways to achieve a similar result; and (iii) they are likely to benefit consumers since these are variable cost savings and as such are likely to be passed on, to a certain extent, to end customers.

47. The Commission thus acknowledged that the transaction may have a positive impact, reducing Jazztel's costs for providing mobile services to end customers. However, the Commission also established that the accepted efficiencies only marginally offset the estimated anti-competitive effects of the merger stemming from the horizontal overlap between Orange and Jazztel in the market for fixed telecommunications in Spain.

5. Remedies and ex-post assessment

48. The Commission's approach to remedies is set out in the "Remedies notice".[24] The Commission has a clear preference for structural remedies, that is, remedies that truly change the structure of the market, normally through the divestiture of a business. There is a clear logic to this: a merger results in a lasting structural change in the market, so the remedy also should have a lasting effect. A great benefit is that there is no need for long-term monitoring.

49. This preference for structural remedies is clearly reflected in the Commission's statistics. Over 70% of the cases that were cleared by the Commission with remedies over the period 2011-2018 involved a divestiture. The Remedies notice does not automatically rule out that other types of commitments may also be capable of preventing the significant impediment of effective competition. Which type of remedy is suitable to eliminate the competition concerns identified has to be examined on a case-by-case basis.

50. Divestiture commitments are the best way to eliminate competition concerns resulting from the direct loss of competition between companies in horizontal overlaps, and may also be the best means of resolving problems resulting from vertical or conglomerate concerns. However, other remedies, such as granting access to key infrastructure or inputs

[22] Commission decision of 19 May 2015, in case M.7421 – *Orange / Jazztel.*

[23] The wholesale margin is the difference between Orange's costs to provide network services and the charged average wholesale price.

[24] Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004, OJ C 267, 22.10.2008.

on non-discriminatory terms, may be suitable to resolve competition concerns if those remedies are equivalent to divestitures in their effects. In any event, behavioural remedies can only exceptionally be accepted if their workability is fully ensured by effective implementation and monitoring.

51. In *Liberty Global / Corelio / W&W / De Vijver Media*, in order to address the identified competition concerns related to total and partial input foreclosure with regard to the basic Pay TV channels Vier and Vijf, the notifying parties offered access commitments through which the merged entity must licence, for a duration of seven years, its channels and ancillary rights to retail TV distributors in Belgium on fair, reasonable and non-discriminatory ("FRAND") terms. In case of disputes over the access conditions, the retail TV distributors could submit the dispute to fast-track arbitration. During the investigation, Liberty Global also amended its carriage agreements with broadcasters that competed with DVM, extending the term of the agreement and including new provisions aiming at giving additional protection against customer foreclosure. For instance, the new carriage agreement fixed the licence fees to be paid by the merged entity, included provisions to not disadvantage the TV broadcaster and one clause that the Commission considered was exacerbating its input and customer foreclosure concerns was removed from the new carriage agreement. One broadcaster did not sign the amendment and, for that broadcaster, Liberty Global committed to keep the offer to amend the agreement open for a period of six months. A monitoring trustee was appointed to ensure compliance with the commitments.

52. The commitments accepted in *Broadcom / Brocade* included a protection of third party commercially sensitive information to address the Commission's vertical concerns in relation to the leaking or misuse of commercially sensitive information of downstream competitors. The appointment of a monitoring trustee was considered necessary to ensure the effective implementation and enforcement of these commitments. The monitoring trustee held extensive powers to verify that the firewalls and relevant measures to protect commercially sensitive information were implemented, including having full access to the merged entity's documents, personnel and facilities. The commitments also provided for a fast-track dispute resolution procedure.

6. Challenges

53. The Commission has mainly dealt with "pure" vertical mergers in the media sector. Facing the emergence of disintermediated players, such as Netflix or Amazon Prime Video, also called "over-the-top" ("OTT") players, traditional players, namely content owners, TV broadcasters and TV distributors may try to integrate vertically, in order to acquire control of the audio-visual value chain. Such vertical media mergers pose particular challenges for the Commission's competitive assessment given the current undergoing major developments affecting the competitive conditions in the sector. In this competitive landscape, technological advances, ownership and processing of data emerge as key competitive features, as suppliers focus on improved consumer experience, cross-market bundles, personalised content and better monetization through targeted advertising.

54. The increasing importance of the competitive constraint exercised by OTTs on traditional players is becoming an ever more significant issue to address, for both the market definition and the competitive assessment. With regard to the market definition, the Commission faces the challenge to fit the new business model of the OTT players to an established traditional framework of the audio-visual value chain. With regard to the

competitive assessment, the Commission faces the challenge to assess the extent to which these OTT players currently exercise or will exercise in the near future a competitive constraint on the traditional players. If it seem quite clear today that OTT players exercise a competitive constraint in the wholesale supply of film and series premium pay TV channels, will they one day (and if so, when) exercise a similar competitive constraint in the wholesale supply of sport pay TV channels?

55. The opening of the Phase II market investigation in the proposed transaction between Telia Company and Bonner Broadcasting illustrates the challenges that the Commission is currently facing in assessing vertical mergers in the media sector.[25] The proposed transaction consist of the acquisition by the retail TV distributor, Telia Company, of the TV broadcaster, Bonnier Broadcasting, thus constituting a vertical integration in the audio-visual value chain. During its initial market investigation, the Commission found that Bonnier Broadcasting was the owner of very important TV channels for TV distributors to have in the packages they offer to consumers, namely the free-to-air and basic pay TV channels and premium pay TV sports channels. The Commission's Phase II market investigation will focus on three main areas of investigation. First, the Commission will further investigate whether Telia Company's competitors in TV distribution in Finland and Sweden could be shut out from accessing Bonnier Broadcasting's important TV channels, regardless of the distribution platform of TV channels, i.e., satellite, terrestrial networks or over the Internet. Second, the Commission will look at whether the merged entity could deny access to TV advertising space on its free-to-air and basic pay TV channels to Telia Company's competitors in the markets for retail mobile telecommunication, fixed internet and TV services. Finally, the Commission will further assess whether the merged entity could deny access to its streaming application to customers using competing mobile and fixed internet providers.

[25] Commission decision of 10 May 2019, in case M.9064 – Telia Company / Bonnier Broadcasting.