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More documents related to this discussion can be found at www.oecd.org/daf/competition/non-price-effects-of-mergers.htm.

Please contact Mr. Antonio Capobianco if you have any questions about this document
[E-mail: Antonio.Capobianco@oecd.org]

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1. Introduction

1. Competition between firms occurs on several dimensions. While price is the most obvious and measurable of them, other parameters may be of equal and sometimes greater importance. Through competition, consumers benefit from better, more diverse and innovative products. These non-price characteristics contribute to consumer welfare.

2. It is well-recognised that mergers may affect both price and non-price parameters of competition. As stated by Commissioner Vestager, "*Harmful mergers don't just mean consumers pay more. They can also mean people are denied real choice. They can mean that companies stop trying to innovate, and that consumers lose out on new and better products.*"¹ In some circumstances, the non-price effects of mergers can also bring efficiencies and benefit consumers.

3. The importance of non-price effects in merger reviews is likely to increase further with the growth of the digital economy. Indeed, many digital services do not have a conventional price tag attached to them which can increase after the merger, although other competition parameters may suffer. Also innovation is ever more important for stimulating economic growth. Competition authorities thus need to (continue to) deploy adequate methods for the analysis of non-price effects of mergers.

4. EU merger control rules aim at preventing any significant negative effects of mergers on all competition parameters, and thus, ultimately, on consumers, be they price or non-price related. In this paper, we describe the general framework under which the European Commission ("Commission") assesses non-price effects of mergers and mention some practical examples of such assessment in recent cases.

2. EU merger control framework fully recognizes non-price effects

5. The substantive test for assessing mergers under the EU Merger Regulation ("EUMR") is to be found in paragraphs 2 and 3 of Article 2 EUMR.² According to these provisions, the Commission has to declare a merger incompatible with the internal market if it would lead to a significant impediment to effective competition ("SIEC") whereas mergers not causing a SIEC are to be declared compatible.

6. While the EUMR does not provide further explicit guidance on what constitutes a SIEC³, it mentions the possibility for the Commission to publish guidelines in order to clarify and explain its appraisal of concentrations and provide a sound economic

¹ Speech of Commissioner Vestager "Competition in Changing Times" (16 February 2018); available at: https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/competition-changing-times-0_en.

² An additional test is to be found in Article 2(4) EUMR for the creation of a joint venture that has as its object or effect the coordination of competitive behaviour.

³ The EUMR underlines in its Recitals 24 to 26 that it aims at "effective control of all concentrations from the point of view of their effect on competition".

framework for an assessment of their compatibility with the internal market. Such guidance was published in the Guidelines on the Assessment of Horizontal Mergers (the "Horizontal Merger Guidelines") and the Guidelines on the Assessment of Non-Horizontal Mergers (the "Non-Horizontal Merger Guidelines").

7. Paragraph 24 of the Horizontal Merger Guidelines states that a merger may significantly impede effective competition by removing important competitive constraints on one or more sellers, who consequently have increased market power. In the terminology of the Horizontal Merger Guidelines the expression "increased market power" describes, among others, "the ability of one or more firms to profitably increase prices, reduce output, choice or quality of goods and services [or] diminish innovation" (see paragraph 8 of the Horizontal Merger Guidelines). Paragraph 24 of the Horizontal Merger Guidelines further clarifies that even where only increased prices are mentioned in the guidelines, this term would be "often used as shorthand for these various ways in which a merger results in competitive harm".

8. The Non-Horizontal Merger Guidelines provide for the same overall framework when assessing vertical or conglomerate mergers. First, the Non-Horizontal Merger Guidelines generally reference the guidance set out in the Horizontal Merger Guidelines. In addition, the same description of the term "increased market power" that is given in paragraph 8 of the Horizontal Merger Guidelines is repeated in paragraph 10 of the Non-Horizontal Merger Guidelines.

9. The Horizontal Merger Guidelines also recognise that efficiencies – including synergies benefitting customers in other ways than lower prices – can offset competitive harm.⁴ The guidelines specifically mention "new or improved products or services resulting from efficiency gains in the sphere of R&D and innovation".⁵ This requires that such efficiencies are beneficial for consumers, merger-specific and verifiable.

10. To sum up, the legal framework for EU merger control puts non-price effects on an equal footing with price effects when assessing potential harm and benefits of a proposed transaction. In doing so, it does not only allow the Commission to assess non-price effects of mergers but obliges the Commission to do so.

3. European Commission's recent practice

3.1. Market definition based on non-price elements

11. Non-price effects can play various roles during the assessment of a merger in the practice of the Commission. Other than during the competitive assessment or as efficiencies, they can become relevant for defining the affected markets.

3.1.1. Product market

12. An obvious example of markets in which factors other than price play a critical role to define their scope is the so-called "zero price" market. A recent example of a case in which the Commission considered such a market is the acquisition of LinkedIn by

⁴ Horizontal Merger Guidelines, paragraph 80.

⁵ Horizontal Merger Guidelines, paragraph 81.

Microsoft. In *Microsoft/ LinkedIn*⁶, the Commission assessed whether professional social networks form part of the same market as social networks in general. Both kinds of social networks are usually provided free of monetary charges.⁷

13. Based on its market investigation, the Commission found that professional social networks require a number of additional functionalities that other social networks typically do not include. Such functionalities include the possibility to create and update a detailed resume and to search for job offerings.⁸ Based on these findings, the Commission concluded that professional social networks may constitute a separate product market within social networks because “they present different functionalities, features and usage cases”.⁹

14. In this example of social networks, the (base) price of using such networks is zero. However, more often, differences in non-price elements between two product markets are also reflected in price differences. Products of higher quality can be sold for a higher price. This, however, does not exclude that the main differentiating factor is differences in quality and thus in non-price elements.

15. As an example also from the area of electronic communications, in *Microsoft/Skype*¹⁰, the Commission distinguished between enterprise communications services and consumer communications services. While consumer communication services are usually offered for free, Enterprise communications services can be quite costly. However, as the decision explains, there are also significant quality differences as “Enterprises do not have the same service requirements and do not tolerate lower service quality as consumers do”.¹¹ This case is therefore an example in which the finding of a different product market can be considered to be mainly based on quality differences.¹²

16. However, price and non-price elements can also be unrelated elements in the assessment of the relevant product market definition. In *Facebook/ WhatsApp*¹³, the Commission discussed whether traditional electronic communication services like SMS

⁶ Case M.8124 Microsoft/ LinkedIn, Commission decision of 6 December 2016.

⁷ Case M.8124 Microsoft/ LinkedIn, paragraph 87.

⁸ Case M.8124 Microsoft/ LinkedIn, paragraph 101.

⁹ Case M.8124 Microsoft/ LinkedIn, paragraph 115.

¹⁰ Case M.6281 Microsoft/ Skype, Commission decision of 7 October 2011.

¹¹ Case M.6281 Microsoft/ Skype, paragraph 14.

¹² A similar assessment can be found in airline cases. There, the Commission has typically distinguished two different markets – one for time-sensitive/ premium passengers and one for non-time-sensitive/ non-premium passengers. In the case *United Air Lines/ Continental Airlines* (Case M.5889 United Air Lines/ Continental Airlines, Commission decision of 27 July 2010), the Commission stated that the distinction between “premium” and “non-premium” passengers “reflect[s] the various comfort and service levels offered on long-haul flights” (paragraph 16). In these markets the difference in price follows from the difference in the quality of the services offered. As the decision explains, “premium” customers on long-haul routes “tend to pay higher prices for this flexibility and level of comfort” (paragraph 16), such as airport lounges, in-flight service, lie-flat seats, etc.

¹³ Case M.7217 Facebook/ WhatsApp, Commission decision of 3 October 2014.

or emails should be considered as part of the same market as consumer communication apps. The Commission took note of the fact that consumer communication apps provide additional functionalities to their users¹⁴ and that the overall experience of the user is richer.¹⁵ While consumer communications apps would be mainly offered free of charge, SMS are usually charged separately.¹⁶ Although the Commission left the precise market definition open¹⁷, in this case price and non-price factors can be considered as separate elements in the Commission's assessment.

3.1.2. Geographic market

17. Non-price factors also play a role in the definition of geographic markets. The purpose of the geographic market definition is to establish geographic boundaries of the area from which customers could source effective alternatives when faced with a price increase or other degradation of commercial conditions.

18. In Commission's merger proceedings, the parties often argue that the relevant geographic markets are wide, even global. The Commission carefully investigates such claims which however are not always borne out. The Commission sometimes discovers that the main obstacle for customers to source supplies from certain geographies are not so much related to prices and transport costs but rather stem from non-price considerations. For example, in the past the Commission found that suppliers from certain geographies were not considered to be effective alternatives by customers, for instance, due to the inadequate quality, know-how or reputation. Such non-price factors were the basis for finding narrower markets in a number of recent cases, for example, in the steel (*Outokumpu/ Inoxum*¹⁸), chemical (*Huntsman/ Rockwood*¹⁹, *RHI/ Magnesita*²⁰) and paper (*Munksjö/ Ahlstrom*²¹) industries.

3.2. Competitive assessment of non-price effects

19. The Commission routinely considers non-price effects in its competitive assessment of mergers, where relevant. The Commission conducts the assessment of such on a case-by-case basis. There is no automatic precedence of certain types of non-price effects over the others – the Commission looks at which parameters of competition are important and valued by customers in a specific market and industry.

¹⁴ Case M.7217 Facebook/ WhatsApp, paragraph 29.

¹⁵ Case M.7217 Facebook/ WhatsApp, paragraph 30.

¹⁶ Case M.7217 Facebook/ WhatsApp, paragraph 31. Even in case SMS would be offered as a bundle by the telecom operator, charges still usually apply for sending pictures (MMS) or messages to other countries.

¹⁷ Case M.7217 Facebook/ WhatsApp, paragraph 33.

¹⁸ Case M.6471 Outokumpu/ Inoxum, Commission decision of 07 November 2012.

¹⁹ Case M.7061 Huntsman/ Rockwood, Commission decision of 10 September 2014.

²⁰ Case M.8286 RHI/ Magnesita, Commission decision of 28 June 2017.

²¹ Case M.6576 Munksjö/ Ahlstrom, Commission decision of 24 May 2013.

20. In recent cases, the Commission assessed the impact of mergers in particular on innovation and quality. Moreover, a topical issue has been the relevance of data protection and privacy in digital mergers.

3.2.1. *Effects on innovation*

21. The Commission assessed innovation effects in a number of recent mergers. In those cases, innovation was one of the key parameters of competition and risked to be negatively affected by the increased market power of the merged entity. The main concern was the potential discontinuation, delay or re-orientation of ongoing and overlapping lines of research or early pipeline projects of one merging party since they could cannibalise the profits from existing and future products of the other party, and more generally a significant reduction of the parties' innovation efforts post-merger.

22. In innovation cases, the potential output of the relevant research/discovery activities is typically still several years away from commercialisation. Such activities do not always target specific existing product markets but may take place upstream in wider innovation areas. The overlaps in the innovation activities of the merging parties may differ from their overlaps in product markets. Also, the parties' importance as innovators may be different from their position in product markets. Hence, in recent cases the Commission identified innovation areas or spaces in which innovation competition took place by looking at how market players directed their research efforts (for example, targeting a particular group of diseases in pharmaceutical cases or a crop/pest combination in agrochemical cases). This was necessary to determine the scope and significance of innovation competition between the parties and the constraint imposed by other innovation competitors.

23. The Commission considers that the general framework of the assessment set out in its Horizontal Merger Guidelines is also suitable for the innovation analysis. Adverse innovation effects are particularly likely in transactions combining close and important innovators (or involving a maverick innovator) in concentrated industries with high barriers to entry and well-paced innovation processes. The precise tools for assessing each of the relevant elements in innovation cases may however differ from price competition cases – for example, to determine closeness and competitive importance of the merging parties as innovators and the level of concentration in R&D the Commission may use *inter alia* a patent analysis.

24. As regards the Commission's practice, one of the most common types of cases where innovation effects have been identified is pharmaceutical and medical device mergers. Medical firms typically work on pipeline projects, some still at early stages, which follow well-defined research and testing phases. The Commission tries to ensure that such projects are not disrupted due to decreased incentives of the parties post-merger.

25. In *J&J/ Actelion*²², each of the parties was developing a promising drug with a similar new mode of action to treat insomnia. Both projects were still at an early stage of research (the so-called Phase II, when clinical studies are initiated to explore therapeutic efficacy on a small group of patients). However, the market investigation showed that both projects were close in their expected efficacy and safety profiles. The Commission's concern was that the merged entity was unlikely to have the same incentives to continue

²² Case M.8401 J&J/ Actelion, Commission decision of 9 June 2017.

both of them as each of the parties had pre-merger. Also, there were a very limited number of credible competitors working on the same type of new drugs.

26. In *Novartis / GlaxoSmithKline's oncology business*²³ the Commission identified the risk that Novartis would likely have stopped developing its two innovative drugs that showed significant promise for the treatment of skin and ovarian cancer (for which late-stage Phase III clinical trials were being conducted) and that were also tested for treating several other cancer types (for which early-stage Phase I and Phase II clinical trials were ongoing). This was because Novartis would acquire drugs with the same mechanism of action from GSK, which would have resulted in duplicate clinical programs and heightened risk of cannibalisation.

27. The Commission also identified innovation concerns in other industries. In the financial sector, the Commission prohibited the merger between Deutsche Börse and NYSE in 2012 (*Deutsche Börse/ NYSE Euronext*²⁴) in part because the merger, which would have created a quasi-monopoly in some areas, was likely to limit the introduction of new products and reduce innovation in technology, process and market design in relation to several types of European financial derivatives. On appeal the EU General Court confirmed the Commission's analysis with regard to innovation, in particular agreeing that the close competition between the parties was an important driver of innovation, bringing new and improved offerings to customers.

28. In the gas turbine sector, the *General Electric/ Alstom*²⁵ transaction brought together two major players in the market for 50 Hertz heavy duty gas turbines. Only four full technology competitors existed in that market which was characterised by high barriers to entry. Alstom was an important innovator in that market, often being considered as best-in-class in terms of technology, efficiency and flexibility. It was also a strong innovation competitor when measured in terms of R&D investments, headcount and capabilities. Specific evidence showed that GE was likely to eliminate most of Alstom's R&D capabilities related to heavy duty gas turbines. All in all, the Commission found that the merger would eliminate an important independent innovator²⁶ from the market, thus reducing innovation pressure also on the remaining players.

29. Most recently, the Commission conducted an extensive innovation analysis in agrochemical mergers, *Dow/ DuPont*²⁷ and *Bayer/ Monsanto*²⁸. In the agrochemical industry, innovation is a key parameter of competition, helping market players to protect their existing sales, capture additional market share, or even create entirely new markets. Innovation is also key for farmers and consumers, resulting in more effective and potentially safer pesticide products and higher-yield inputs, such as traited seeds.

²³ Case M.7275 Novartis/ GlaxoSmithKline's oncology business, Commission decision of 28 January 2015.

²⁴ Case M.6166 Deutsche Börse/ NYSE Euronext, Commission decision 1 February 2012.

²⁵ Case M.7278 General Electric /Alstom, Commission decision of 08 September 2015.

²⁶ In line with paragraphs 37 and 38 of the Horizontal Merger Guidelines.

²⁷ Case M.7932 Dow/ DuPont, Commission decision of 27 March 2017.

²⁸ Case M.8084 Bayer/ Monsanto, Commission decision of 21 March 2018.

30. In both of those cases, the Commission conducted a detailed investigation and assessment, finding in particular that:

- The respective merging parties were important innovation competitors. This conclusion was based on a number of past and forward-looking indicators, such as the parties' specialisation and assets, targets in terms of R&D efforts (input) and new products (output), track record of bringing new products to the market, and strength of their patent portfolios including high-quality patents.
- The parties were also found to be close competitors, pursuing parallel R&D efforts in several common innovation spaces.
- Following the merger, it was likely that the specific overlapping R&D lines of research and early pipeline projects of one of the parties would be cancelled, slowed down or re-oriented due to the increased risk of cannibalisation. Specific direct documentary evidence confirmed this likelihood. Moreover, the merger was likely to impede the very initiation of the development of future new products.
- The relevant innovation spaces were already very concentrated with high barriers to entry. The remaining competitors were unlikely to offset the significant reduction of innovation competition, given their limited number and profile of their innovation capabilities and efforts.

31. On this basis, the Commission concluded each of the transactions would significantly impede effective competition in innovation. In *Dow/ DuPont*²⁹ the innovation concerns related to several innovation spaces in herbicides, insecticides and fungicides, while in *Bayer/ Monsanto*³⁰ innovation competition was found to be at risk in three areas: traits of broad acre seeds, non-selective herbicides, and herbicide tolerant systems consisting of a herbicide tolerant trait and the corresponding herbicide. On the other hand, in *Bayer/ Monsanto*³¹, following a similarly detailed analysis, the Commission dismissed innovation concerns in a number of other innovation spaces, where the innovation potential of remaining competitors was found to be sufficient or the merging parties were not competing closely with each other.

32. Innovation concerns can arise also in non-horizontal cases. For example, *ASL/ Arianespace*³² involved a vertical integration between ASL, a 50/50 joint venture of Airbus and Safran, and launch services provider Arianespace. One of the parents of ASL, Airbus, is a leading satellite manufacturer. The Commission was concerned that potential flows of sensitive information between Arianespace as a launch services provider and Airbus as a satellite manufacturer could harm innovation competition. This related in particular to (i) flows of information from Arianespace to Airbus about other satellite manufacturers (e.g. about rivals' satellites design features, capabilities, etc.) and (ii) flows of information from Airbus to Arianespace about other launch service providers (e.g. technical capabilities of the rivals' launchers). These potential flows of information would

²⁹ Case M.7932 Dow/DuPont.

³⁰ Case M.8084 Bayer/Monsanto.

³¹ Case M.8084 Bayer/Monsanto.

³² Case M.7724 ASL/ Arianespace, Commission decision of 20 July 2016.

assist Airbus or Arianespace in copying rivals' solutions and thus suppress innovation in the markets for satellites and launch services.

3.2.2. *Effects on quality*

33. In the competitive assessment, quality can play an important role. In particular if differences in quality have not led to the finding of different product markets (see Section 3.1.1 above), quality differences within the same market can be informative as to whether the merging parties are close competitors. This is important because products of close competitors have a higher degree of substitutability and the merging firms are therefore more likely to raise prices significantly after the rivalry between them is lost.³³

34. Taking for example the case *Ryanair/ Aer Lingus*³⁴, where the Commission found that for the merger between the two airlines Ryanair and Aer Lingus the approach in other airline mergers to distinguish between "full service" and "low-frills" airlines is not relevant. The Commission concluded that it "is not appropriate to define separate markets according to [...] or the level of service offered" but stated that instead "these differences between carriers are relevant when assessing the competitive impact of the proposed transaction".³⁵

35. In the competitive assessment, the Commission then assessed whether Ryanair and Aer Lingus are close competitors. The decision explains that both companies "operate a single ticket class with no or little on-board frills or services" and that therefore, the business models of both companies are similar and in "stark contrast to traditional 'full service' airlines such as British Airways or Lufthansa".³⁶ Overall, these similarities in the quality of the services offered, among others, led the Commission to conclude that Ryanair and Aer Lingus are close competitors.

36. Similarly, in telecom mergers, closeness of competition can be considered under the aspect of network quality. In *Telefónica Deutschland/ E-Plus*³⁷, the Commission argued that the merging parties are particularly close competitors because their networks are "perceived of being of lower quality than the networks of Deutsche Telekom and Vodafone" [i.e., the only other two operators of an own mobile network in Germany] and concludes that the parties are "close competitors for mobile products that offer a network quality below the level achieved by the networks of Deutsche Telekom and Vodafone".³⁸ The Commission found that because of the perceived lower network quality, Telefónica and E-Plus would compete for the same subset of customers that do not place as high a value on network quality.³⁹

³³ See Horizontal Merger Guidelines, paragraph 28.

³⁴ Case M.4439 Ryanair/ Aer Lingus, Commission decision of 27 June 2007.

³⁵ Case M.4439 Ryanair/ Aer Lingus, paragraph 51.

³⁶ Case M.4439 Ryanair/ Aer Lingus, paragraph 367.

³⁷ Case M.7018 Telefónica Deutschland/ E-Plus, Commission decision of 2 July 2014.

³⁸ Case M.7018 Telefónica Deutschland/ E-Plus, paragraph 292.

³⁹ Case M.7018 Telefónica Deutschland/ E-Plus, paragraph 293.

37. In *Syniverse/ Mach*⁴⁰, the Commission looked into data clearing services. These services are used to bill mobile telecommunication customers for their calls, SMS or data transmission while roaming. Quality was considered the most important criterion when choosing a data clearing provider according to the Commission's market investigation. Reliability was considered the second most important factor.⁴¹ The merging parties have been considered as the only two competitors in the market segment requiring high quality and are therefore seen as exercising a particularly strong competitive force against each other.⁴²

38. In vertical mergers, input foreclosure can result in reduced quality of products offered by competitors of the merging parties in particular in cases in which the merging parties might totally foreclosure their competitors. For example, in *Liberty Global/ Corelio/ W&W/ De Vijver Media*⁴³, the Commission assessed the effect if the merged entity were not to license two channels to competing TV distributors. The Commission found that "[i]n the case of total foreclosure, [...], foreclosed rivals would have to offer an inferior product"⁴⁴ which would make competition by those rivals less effective.⁴⁵

3.2.3. Effects on data protection and privacy

39. With the growth of the digital economy, the Commission examines an increasing number of transactions involving digital markets. Those markets have several distinct features. In addition to their fast-moving nature, multi-sidedness, and susceptibility to network effects, digital markets often rely on data as a core input for their operation. Many digital services are provided free of charge and are monetised through other means (for example via targeted advertising) based on data collected from users. A merger may potentially affect the scope and depth of such data collection.

40. The issues of data protection and privacy are not, as such, a matter for EU competition law.⁴⁶ They are specifically addressed by EU data protection law, in particular by the revised EU General Data Protection Regulation which came into force on 25 May 2018. Competition law and data protection law have different objectives, rules and procedures. Irrespective of the outcome of the Commission's merger proceedings, the parties remain subject to EU data protection obligations.

41. That said, data protection and privacy may be relevant in the Commission's merger analysis when they relate to the competitive process. For example, privacy may be

⁴⁰ Case M.6690 *Syniverse/ Mach*, Commission decision of 29 May.2013.

⁴¹ Case M.6690 *Syniverse/ Mach*, paragraph 234.

⁴² Case M.6690 *Syniverse/ Mach*, paragraph 256.

⁴³ Case M.7194 *Liberty Global/ Corelio/ W&W/ De Vijver Media*, Commission decision of 24 February 2015.

⁴⁴ Case M.7194 *Liberty Global/ Corelio/ W&W/ De Vijver Media*, paragraph 440.

⁴⁵ Case M.7194 *Liberty Global/ Corelio/ W&W/ De Vijver Media*, paragraph 441.

⁴⁶ See the judgment of 23 November 2006 in case C-238/05, *Asnef-Equifax*, where the European Court of Justice held that "*since... any possible issues relating to the sensitivity of personal data are not, as such, a matter for competition law, they may be resolved on the basis of the relevant provisions governing data protection*" (emphasis added).

an important element of quality of a product/service or data may be a necessary input for other products/services. In such circumstances, as with other non-price factors, the Commission will take data-related issues into account in its merger assessment.

42. For example, in *Facebook/ WhatsApp*⁴⁷, the Commission considered privacy as an element of quality of mobile communications apps, noting that it is valued by an increasing number of users. The greater privacy protection of WhatsApp was one of the elements for concluding that the parties were not close competitors; also the importance of privacy was a factor in finding that Facebook was unlikely to retract WhatsApp's plans to add end-to-end encryption and introduce targeted advertising on WhatsApp.

43. Similarly, when reviewing *Microsoft/ LinkedIn*⁴⁸ in 2016, the Commission found that privacy was an important parameter of competition among professional social networks, in particular in certain EU Member States, such as Germany. The transaction would indirectly impair privacy since, through promoting LinkedIn on its operating system, Microsoft would foreclose and marginalise competing professional social networks, some of which offered greater privacy protection. Microsoft offered remedies allaying the foreclosure concerns and thus precluding adverse effects on privacy. In the same case, the Commission also looked at data as an asset and input when assessing horizontal non-coordinated concerns due to the combination of the parties' large datasets (in the market for online advertising) and vertical concerns due to Microsoft potentially denying access for competitors to the full LinkedIn dataset preventing the improvement of competitors' services (in the market for customer relationship managements software). However, these theories of harm were not confirmed by the investigation.

4. Non-price efficiencies

44. In addition to negative non-price effects, the Commission recognises that mergers may also result in non-price benefits to consumers, such as bringing new and improved products. Such positive effects are typically assessed by the Commission in the context of efficiency claims. The Commission does not prioritise between price and non-price efficiencies, and each of them can be material. To be accepted, the claimed efficiencies have to benefit consumers, be merger specific and be verifiable. It is the parties' burden to show that these three conditions are met since most of the information allowing the Commission to assess the likelihood of the claimed efficiencies materialising is in the parties' possession.

45. There may be challenges in precise quantification of non-price efficiencies, such as quality improvements or introduction of new products. The parties should do their best to be as precise as possible in estimating the claimed efficiencies to enable the Commission to properly evaluate them. Nevertheless, the Horizontal Merger Guidelines leave some room for meeting the verifiability condition even if the precise quantification of efficiency is not reasonably possible due to the lack of data. In such circumstances, it is still necessary to be able "to foresee a clearly identifiable positive impact on consumers, not a marginal one".⁴⁹ The more convincing the parties' evidence is (including

⁴⁷ Case M.7217 Facebook/ WhatsApp.

⁴⁸ Case M.8124 Microsoft/ LinkedIn.

⁴⁹ Horizontal Merger Guidelines, paragraph 86.

qualitative), the greater the likelihood that the efficiency claims will be taken into account by the Commission. In recent cases the Commission did not face the issue of having to weigh price effects of a merger, on the one hand, and non-price efficiencies, on the other hand.

46. The Commission examined the claims regarding non-price efficiencies in a number of recent merger investigations.

47. In several mobile telecom mergers, the parties argued that their transaction would result in quality improvements. Such improvements were claimed to arise, for example, from the combination of the parties' complementary assets (such as spectrum holdings or networks) enabling faster and greater roll-out of the newest-generation mobile network, better quality, higher data speeds, etc. However, so far the Commission has not accepted the majority of the claimed efficiencies since, following a careful examination, they were not found to meet one or more of the three cumulative criteria. For example, in the Austrian, Irish, German, UK and Italian mobile mergers,⁵⁰ the Commission concluded *inter alia* that some of the claimed quality efficiencies were not merger-specific since, in those cases, network sharing could be a less anti-competitive alternative to the proposed merger that was realistic and attainable and could yield similar benefits.

48. In the recent mergers involving innovation issues, the parties have not made substantiated efficiency submissions. While the Commission does not dispute that in some circumstances mergers may enhance innovation, for example by allowing the parties to share knowledge more effectively and internalising knowledge spill-overs, such assessment should be case-specific. In *Dow/ DuPont*⁵¹ and *Bayer/ Monsanto*⁵², the Commission observed that in the relevant innovation spaces the protection against imitation was strong already pre-merger, thanks to effective IP rights and product life-cycle management techniques. Hence, under these circumstances, it was less likely that the merger would increase the incentives to innovate by internalising significant involuntary knowledge spill-overs.

49. In the IT industry, in its review of *Microsoft/ Yahoo Search Business*⁵³ in 2010, which combined two important online search engines, the Commission considered Microsoft's arguments that the transaction would enable Microsoft to acquire additional scale and thus provide greater value to both users of search engines and online advertisers. According to Microsoft, on the one hand, increased traffic volumes would make more experiments possible, leading to improved search results and, on the other hand, a higher degree of user engagement would have a positive effect on advertisers' return on investment.

50. Overall, the Commission's market investigation confirmed that scale was an important factor in order to be an effective competitor in this sector. The market investi-

⁵⁰ Cases M.6497 Hutchison 3G Austria/Orange Austria, Commission decision of 12 December 2012 ; M. 6992 Hutchison 3G UK/Telefónica Ireland, Commission decision of 28 May 2014 ; M.7018 Telefónica Deutschland/E-Plus, Commission decision of 02 July 2014 ; M.7612 Hutchison 3G UK/Telefónica UK, Commission decision of 11 May 2016.

⁵¹ Case M.7932 Dow/DuPont.

⁵² Case M.8084 Bayer/Monsanto.

⁵³ Case M.5727 Microsoft/ Yahoo! Search Business, Commission decision of 18 February 2010.

gation further confirmed that the proposed transaction was perceived as having pro-competitive effects, as it would have created a stronger competitor to Google. However, ultimately, the Commission did not adopt a final position on the potential beneficial non-price effects of the transaction, as its unconditional clearance was based on other elements.

51. Finally, *TomTom/TeleAtlas*⁵⁴ involved the vertical integration between a navigation systems provider and a digital maps developer. The parties claimed that innovation efficiencies were the main deal rationale: information obtained from TomTom's users could be used to improve quality and timing of TeleAtlas' maps. While the Commission did not reach a definitive conclusion on this point as the parties' quantifications were not convincing, it did acknowledge that the innovation efficiencies were at least partly merger-specific and brought consumer benefits.

5. Conclusion

52. The assessment of non-price effects of mergers is not a mere add-on but, where relevant, is at the core of all aspects of merger review, be it for the purposes of defining the affected markets, the competitive assessment on such markets or the importance of potential efficiencies. The examples provided in this paper show that non-price effects are relevant not only in the new, digital economy but also in traditional sectors like agrochemicals. The Commission continues refining its assessment of such effects and is keen to ensure that consumers are not denied non-price benefits of competition.

⁵⁴ Case M.4854 TomTom/ Tele Atlas, Commission decision of 14 May 2008.