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COMMUNICATION FROM THE COMMISSION

Commission Notice on the definition of the relevant market for the purposes of Union competition law

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1. INTRODUCTION

1.1. Purpose of this Notice

1. The Commission uses the concept of market definition in its enforcement of Union competition law, namely:
 - (a) the enforcement of antitrust rules under Articles 101 and 102 of the Treaty on the Functioning of the European Union ('TFEU') pursuant to Council Regulation (EC) No 1/2003¹;
 - (b) merger control pursuant to Council Regulation (EC) No 139/2004² ('the Merger Regulation');
 - (c) the enforcement of equivalent provisions set out in the Agreement on the European Economic Area³ ('the EEA Agreement').
2. The Commission generally defines the relevant market in those cases⁴ where it is important to appraise the relative competitive strength of undertakings⁵.
3. The purpose of this Notice is to provide guidance on how the Commission applies the concept of relevant market in its enforcement of Union competition law. Competition policy preserves well-functioning markets and addresses market failures, thereby contributing to the twin green and digital transitions and the resilience of the single market⁶. It aims to ensure that markets remain competitive, open and dynamic. Accordingly, competition policy can contribute to preventing excessive dependency and increasing the resilience of the Union economy by enabling strong and diversified supply chains⁷, and can complement the Union's regulatory framework on environmental sustainability by taking into account sustainability factors to the extent relevant to the competition assessment, including as part of market definition. Against that background, the updated guidance provided

¹ Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty (OJ L 1, 4.1.2003, p. 1).

² Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (OJ L 24, 29.1.2004, p. 1).

³ Throughout this Notice, references to Articles 101 and 102 TFEU and to the Merger Regulation, in particular Article 2 thereof, are to be understood as referring to the respective equivalent provisions in the EEA Agreement, see Articles 53 and 54 of and Annex XIV to the EEA Agreement.

⁴ In general, market definition plays less of a role in the Commission's enforcement practice under Article 106 and 107 TFEU. In those cases, the assessment focusses on the industry/sector concerned rather than identification of competitive constraints faced by the undertakings. Nevertheless, when considerations of market power and accordingly of the relevant market are raised in particular cases pursued under Article 106 or Article 107 TFEU, the approach outlined in this Notice may be relevant for the assessment. In view of the more limited application of market definition in these two types of assessments, this Notice will not discuss their specific aspects further.

⁵ In Union competition law, an undertaking is any entity engaged in an economic activity, namely an activity consisting in offering goods or services on a given market, regardless of its legal status and the way in which it is financed. See judgment of 23 April 1991, *Höfner and Elser v Macrotron*, C-41/90, EU:C:1991:161, paragraph 21, and judgment of 12 December 2006, *SELEX Sistemi Integrati v Commission*, T-155/04, EU:T :2006:387, paragraph 50.

⁶ See "A competition policy fit for new challenges", Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM (2021) 713, 18 November 2021, page 6.

⁷ *Ibid*, page 16.

in this Notice takes into account the significant developments of the past twenty years. These include digitalisation and new ways of offering goods and services, as well as the increasingly interconnected and globalised nature of commercial exchanges.

4. By publishing the methodology that it follows and by indicating the main criteria and evidence on which it relies when defining relevant markets, the Commission aims to increase the transparency of its policy and decision-making when applying Union competition law. The Commission also aims to reduce the burden on the resources of its own services and those of external stakeholders, making competition assessments more efficient.
5. Increasing the transparency and consequently the predictability of the Commission's assessments under Union competition law will also increase legal certainty for undertakings and their advisers. They will be able to better assess the scope of the relevant markets and the likelihood that the Commission may identify competition concerns in a particular case. They will be able to take these factors into account in their internal decision-making when contemplating, for instance, acquiring other undertakings, creating joint ventures, concluding certain agreements, or engaging in certain behaviour unilaterally. The guidance provided in this Notice will also assist undertakings in anticipating the type of information the Commission considers relevant for the purposes of market definition.

1.2. Role of market definition

6. Market definition is a tool that the Commission uses to identify and define the boundaries of competition between undertakings. The main purpose of market definition is to identify in a systematic way the effective and immediate competitive constraints faced by the undertakings involved⁸ when they offer particular products⁹ in a particular area. Market definition leads to the identification of the relevant competitors of the undertaking(s) involved when they offer those products, as well as the relevant customers. Only products that exert effective and immediate competitive constraints within the relevant timeframe form part of the same relevant market as those of the undertaking(s) involved, while other less effective, or merely potential, constraints are considered as part of the competitive assessment.
7. The same considerations apply when defining relevant markets for the purchase of particular products in a particular area ('purchasing markets')¹⁰. In that case, the

⁸ For the purposes of this Notice, an 'undertaking involved' is an undertaking whose competitive strength is being assessed. These are generally the parties to the agreement in investigations under Article 101 TFEU; the undertaking(s) being investigated in Article 102 TFEU cases; and the parties to the concentration in investigations under the Merger Regulation. It can also be the complainant in a competition case, an undertaking in an upstream or downstream market, or any other undertaking relevant to the competition case, depending on the facts of the case at hand.

⁹ For the purpose of this Notice, the term 'product' is used as shorthand to also comprise services or technologies, where appropriate. The term 'production' correspondingly also covers the provision or the supply of such services or the licensing or development of technologies.

¹⁰ See, for example, cases M.10201 *Ahold Delhaize/Deen Assets*, paragraphs 20-25; M.9847 *Aldi/FPLPH Assets*, paragraphs 19-22 and M.9409 *Aurubis/Metallo*, section 7.1. The position taken by the Commission on market definition in any of the cases quoted in this Notice does not prejudice the outcome of its market definition assessments in future cases, as explained in paragraph 14.

main purpose of market definition is to identify in a systematic way the effective and immediate competitive constraints faced by the undertaking(s) involved when they purchase those products¹¹. Accordingly, market definition leads to the identification of the relevant competitors of the undertaking(s) involved when they purchase the products, as well as the relevant suppliers. The remainder of this Notice will not discuss purchasing markets further, but the guidance set out in this Notice also applies to purchasing markets, taking into account their specificities¹² and the facts of the case at hand.

8. The Commission generally uses market definition where there is a need to assess the relative competitive strength of undertakings as part of the competitive assessment¹³ and, most notably, to assess whether an undertaking holds market power¹⁴. Market definition is thus an intermediate tool to structure and facilitate the competitive assessment in appropriate cases and is not a mandatory step in all assessments under Union competition law. When subsequently conducting the competitive assessment and analysing market power, the Commission carries out an overall assessment of all relevant constraints on the undertaking(s) involved in the relevant product and geographic markets, which may include an assessment of barriers to entry or expansion, the impact of scale economies (which may include those that may be drawn from out-of-market activities) or network effects, access to specific assets and inputs, as well as product differentiation¹⁵. That assessment may also include sufficiently foreseeable changes in such constraints when the case calls for a forward-looking assessment. As an intermediate step in the overall assessment process, it is necessary for market definition to be up-to-date at the time of the relevant conduct or concentration and based on facts, as further explained in paragraph 14.

¹¹ Whether the Commission analyses the relative competitive strength of undertaking(s) that purchase particular products in a particular area depends on the case and the possible theories of harm. Further detail on such theories of harm can be found in the Commission's guidelines on substantive assessments in competition cases – see, for example, the Commission's guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements (OJ C 259, 21.7.2023, p. 1; 'Guidelines for the assessment of horizontal cooperation agreements'), paragraphs 273-309 and the Commission's guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (OJ C 31, 5.2.2004, p. 5; 'Horizontal Merger Guidelines'), paragraphs 61-63. See, for example, case M.9409 *Aurubis/Metallo*, paragraphs 376 and 397-398.

¹² For example, in purchasing markets the substitution assessment focuses on alternatives available to suppliers, rather than on alternatives available to customers.

¹³ For the purposes of this Notice, the term 'competitive assessment' means those parts of the Commission's substantive assessment of an issue of Union competition law that do not relate to market definition. That includes in particular the assessment of the existence of a dominant position, where applicable, and the assessment of the likely effects on competition of the conduct of the undertaking(s) involved or of a concentration.

¹⁴ According to the Guidelines for the assessment of horizontal cooperation agreements, footnote 40, "[m]arket power is the ability to profitably maintain prices above competitive levels for a period of time or to profitably maintain output in terms of product quantities, product quality and variety or innovation below competitive levels for a period of time."

¹⁵ For further explanations in the Commission's guidelines on substantive assessments in competition cases, see for instance the Horizontal Merger Guidelines, sections III and IV. See also the Guidelines for the assessment of horizontal cooperation agreements, e.g. paragraph 236.

9. The Commission's use of market definition is closely related to the objectives pursued by the various Union competition law instruments:
- (a) in assessments under Article 102 TFEU, the Commission generally defines the relevant market when assessing the existence of a dominant position¹⁶;
 - (b) in assessments under the Merger Regulation, the Commission regularly defines the relevant market when assessing the effects on competition of a concentration¹⁷;
 - (c) in assessments under Article 101 TFEU, the Commission uses market definition in particular to determine whether an appreciable restriction of competition exists or to establish whether the condition in Article 101(3), point (b), TFEU for an exemption from the application of Article 101(1) TFEU is met¹⁸. In practice, the Commission tends to use market definition when assessing agreements¹⁹ that have as their effect the prevention, restriction or distortion of competition. By contrast, the Commission usually does not define the relevant market when assessing agreements that have as their object the prevention, restriction or distortion of competition, such as cartel agreements, and is under no obligation to do so²⁰.
10. Market definition makes it possible to calculate market shares, which the Commission may use, among other elements, to assess an undertaking's competitive strength for the purposes of the competitive assessment. When analysing market power, the Commission may also look at trends which are likely to continue or foreseeable developments in relation to such market shares, as well as at constraints that may not be evident from market shares alone, as further explained in paragraphs 106 and 113. The Commission may also use market shares as a first screening tool to

¹⁶ Judgment of 21 February 1973, *Europemballage and Continental Can v Commission*, C-6/72, EU:C:1973:22, paragraph 32.

¹⁷ Judgment of 21 February 1973, *Europemballage and Continental Can v Commission*, C-6/72, EU:C:1973:22, paragraph 32; judgment of 31 March 1998, *France and Others v Commission* ('Kali & Salz'), joined cases C-68/94 and C-30/95, EU:C:1998:148, paragraph 143; judgment of 6 June 2002, *Airtours v Commission*, T-342/99, EU:T:2002:146, paragraph 19; judgment of 7 May 2009, *NVV and Others v Commission*, T-151/05, EU:T:2009:144, paragraph 51. Where relevant, assessing the effects on competition of a concentration can include an assessment of potential efficiencies, such as those derived from cost savings due to increased scale, and in particular whether the efficiencies would benefit consumers in those relevant markets where it is otherwise likely that competition concerns would occur, Horizontal Merger Guidelines, paragraph 79; referenced in paragraphs 53 and 115 of the Non-Horizontal Merger Guidelines.

¹⁸ The Union Courts have held in this context that there is an obligation for the Commission to define the market in a decision applying Article 101 TFEU where it is impossible, without such a definition, to determine whether the behaviour at issue has as its object or effect the prevention, restriction or distortion of competition within the internal market, judgment of 6 July 2000, *Volkswagen v Commission*, T-62/98, EU:T:2000:180, paragraph 230; judgment of 8 July 2004, *Mannesmannröhren-Werke v Commission*, T-44/00, EU:T:2004:218, paragraph 132. See also paragraph 10 for further examples where market definition under Article 101 TFEU would be relevant.

¹⁹ Unless otherwise indicated, references in this Notice to agreements in the context of Article 101 TFEU include concerted practices and decisions by associations of undertakings.

²⁰ Judgment of 8 July 2004, *Mannesmannröhren-Werke v Commission*, T-44/00, EU:T:2004:218, paragraph 132; judgment of 28 June 2016, *Telefónica v Commission*, T-216/13, EU:T:2016:369, paragraph 214.

assess whether competition concerns may arise. Market share thresholds are one of the parameters used to determine the scope of the block exemption regulations applying Article 101(3) TFEU to certain categories of agreements²¹; to assess whether there may be an effect on trade under Articles 101 and 102 TFEU²², and to identify concentrations deemed from the outset not to raise competition concerns under the Merger Regulation with respect to any markets or with respect to certain markets²³.

1.3. General principles of market definition

11. The Commission applies a number of principles when it defines relevant markets for the purpose of enforcing Union competition law. Those principles are outlined in paragraphs 12 to 21.
12. First, in line with the case law of the Court of Justice and the General Court of the European Union ('the Union Courts') and the Commission's case practice, the relevant market within which the Commission appraises competition dynamics typically comprises a product and a geographic dimension²⁴.
 - (a) The relevant product market comprises all those products that customers regard as interchangeable or substitutable to the product(s) of the undertaking(s) involved, based on the products' characteristics, their prices and their intended use, taking into consideration the conditions of competition and the structure of supply and demand on the market²⁵.
 - (b) The relevant geographic market comprises the geographic area in which the undertakings involved supply or demand relevant products, in which the

²¹ The market share thresholds limit the applicability of the safe harbour provided by the block exemption to agreements between undertakings holding a share in the relevant market(s) that does not exceed the thresholds set out in the regulations. See, for example, Article 3 of Commission Regulation (EU) 2022/720 of 10 May 2022 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices, C/2022/3015 (OJ L 134, 11.5.2022, p. 4), Article 6 of Commission Regulation (EU) 2023/1066 of 1 June 2023 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to certain categories of research and development agreements (OJ L 143, 2.6.2023, p. 9), Article 3 of Commission Regulation (EU) 2023/1067 of 1 June 2023 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to certain categories of specialisation agreements (OJ L 143, 2.6.2023, p. 20).

²² Commission Notice: Guidelines on the effect on trade concept contained in Articles 81 and 82 of the Treaty ('Guidelines on the effect on trade') (OJ C 101, 27.4.2004, p. 81), section 2.4. The Commission may use market shares to assess whether there may be an effect on trade, but that assessment does not necessarily require that relevant markets be defined and market shares calculated (see paragraph 48 of the Guidelines on the effect on trade), and the Commission is under no obligation to do so.

²³ See in this regard the definition of 'affected markets' and of markets 'in which the notified concentration may have a significant impact' in paragraph 25(g) and Section 6.3 of Annex I to Commission Implementing Regulation (EU) 2023/914 of 20 April 2023 implementing the Merger Regulation ('the Merger Implementing Regulation') (OJ L 119, 5.5.2023, p. 22), and the Commission Notice on a simplified treatment for certain concentrations under the Merger Regulation (OJ C 160, 5.5.2023, p. 1), paragraphs 5 and 8.

²⁴ Judgment of 14 February 1978, *United Brands v Commission*, C-27/76, EU:C:1978:22, paragraphs 10 and 11.

²⁵ Judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, EU:C:2020:52, paragraph 129; and judgment of 13 February 1979, *Hoffmann-La Roche v Commission*, C-85/76, EU:C:1979:36, paragraph 51. See also paragraph 25(b) of Annex I to the Merger Implementing Regulation.

conditions of competition are sufficiently homogeneous for the effects of the conduct or concentration under investigation to be able to be assessed, and which can be distinguished from other geographic areas, in particular because conditions of competition are appreciably different in those areas²⁶.

13. In certain cases, temporal considerations may also be relevant when defining the relevant market, for example where factors such as seasonality or peak/off-peak time considerations substantially affect customer preferences or the structure of supply²⁷.
14. Second, market definition is based on the facts of the case²⁸. Relevant markets within the meaning of Union competition law differ from sector to sector, at different levels of the supply chain and sometimes across geographic areas. Where past Commission decisions concerning a specific market exist, the Commission may start its analysis from such prior decisions and verify whether the definition of the relevant market used in those past decisions may be applied to the case at hand. However, the Commission is not bound to apply the definition of a relevant market from its past decisions in future cases²⁹ and will always be attentive to possible changes driven by broader trends such as digitalisation, shifts in value chains or in sourcing by customers, or developments in the degree of globalisation of commercial exchanges.
15. Third, when defining the relevant market, the Commission takes into account the various parameters of competition that customers consider relevant in the area and period assessed. Those parameters may include the product's price, but also its degree of innovation and its quality in various aspects – such as its sustainability, resource efficiency, durability, the value and variety of uses offered by the product, the possibility to integrate the product with other products, the image conveyed or the security and privacy protection afforded, as well as its availability, including in terms of lead-time, resilience of supply chains, reliability of supply and transport costs. The relative importance of these parameters for customers may change over time.

²⁶ Judgment of 30 September 2003, *Cableuropa and Others v Commission*, T-346/02 and T-347/02, EU:T:2003:256, paragraph 115; judgment of 7 May 2009, *NVV and Others v Commission*, T-151/05, EU:T:2009:144, paragraph 52; and judgment of 14 February 1978, *United Brands v Commission*, C-27/76, EU:C:1978:22, paragraph 11. See also Article 9(7) of the Merger Regulation and paragraph 25(c) of Annex I to the Merger Implementing Regulation.

²⁷ Temporal considerations were relevant for market definition, for example, in case M.5467 *RWE/Essent*, paragraph 32, where the Commission distinguished between peak and off-peak hours for the generation and wholesale supply of electricity, and in case M.8869 *Ryanair/Laudamotion*, paragraphs 96 and 97, where it distinguished between the summer and winter season in air passenger transport.

²⁸ EFTA Court judgment of 5 May 2022, *Telenor and Telenor Norge v EFTA Surveillance Authority*, E-12/20, paragraph 173: “market definition must be made on a case-by-case basis”.

²⁹ The General Court clarified in this respect in its judgment of 7 May 2009, *NVV and Others v Commission*, T-151/05, EU:T:2009:144, paragraph 136: “In particular, the applicants cannot have entertained such a legitimate expectation on the ground that the Commission had defined markets in a particular way in a previous decision, since the Commission – and, a fortiori, the Court – is not bound by the findings made in such a decision”; see also judgment of 14 December 2005, *General Electric v Commission*, T-210/01, EU:T:2005:456, paragraph 120; judgment of 18 May 2022, *Wieland-Werke v Commission*, T-251/19, EU:T:2022:296, paragraph 79; judgment of 13 May 2015, *Niki Luftfahrt v Commission*, T-162/10, EU:T:2015:283, paragraph 144; judgment of 25 March 2015, *Slovenská pošta v Commission*, T-556/08, EU:T:2015:189, paragraph 197; judgment of 23 May 2019, *KPN v Commission*, T-370/17, EU:T:2019:354, paragraph 79. See also EFTA Court Judgment of 5 May 2022, *Telenor and Telenor Norge v EFTA Surveillance Authority*, E-12/20, paragraph 97.

16. Fourth, market definition, where required, is only one step in the Commission's assessment under Union competition law. The Commission only decides whether there are competition concerns after having carried out a competitive assessment³⁰. Market definition is therefore an intermediate step in the assessment and does not prejudice the outcome of the Commission's assessment under Union competition law.
17. Fifth, market definition allows for a distinction between competitive constraints from within and from outside the market, by including only the effective and immediate competitive constraints in the relevant market. However, the Commission takes into account all competitive constraints (whether effective and immediate or not) in the competitive assessment, bearing in mind that out-of-market constraints are more remote constraints on the undertaking(s) involved. For more details on the relationship with the competitive assessment, see also paragraph 8 above.
18. Sixth, the markets defined are often the same across cases and assessments when the same economic activity in terms of products and geography is concerned³¹. Nevertheless, as market definition seeks to identify the effective and immediate competitive constraints that are relevant for the competitive assessment of a specific conduct or concentration, the outcome of market definition can differ depending on:
 - (a) *the undertaking(s) involved*. As the activities of the undertaking(s) involved determine the starting point for the substitution analysis, markets may be defined differently depending on the undertaking(s) involved. This can arise, for example, when the competitive constraints that the undertakings impose on each other are asymmetric, that is to say a certain undertaking may constrain another undertaking, while the same does not apply vice versa³². In that case,

³⁰ See footnote 13.

³¹ For instance, in the air transport sector, the relevant product market for passenger air transport services has been defined on the basis of the point of origin/point of destination (O&D) pair approach. This approach has been used across cases over time. See, for example, merger cases M.3280 *Air France/KLM*, paragraphs 9 and 16; M.3770 *Lufthansa/Swiss*, paragraphs 12 et seq.; M.6447 *IAG/bmi*, paragraph 31; M.7333 *Alitalia/Etihad*, paragraph 63; M.7541 *IAG/Aer Lingus*, paragraph 14; antitrust cases AT.36201 *PO/Lufthansa+SAS+United* (Art 85); AT.39596 *British Airways/American Airlines/Iberia*; and judgment of 11 April 1989, *Ahmed Saeed Flugreisen and Others v Zentrale zur Bekämpfung unlauteren Wettbewerbs*, C-66/86, EU:C:1989:140, paragraph 40; judgment of 19 May 1994, *Air France v Commission*, T-2/93, EU:T:1994:55, paragraph 84; judgment of 4 July 2006, *easyJet v Commission*, T-177/04, EU:T:2006:187, paragraph 56. Another example is online advertising services, where the relevant product market has been defined across cases as a market for the provision of online advertising space, separate from offline advertising space, and the relevant geographic market has been defined across cases as national or as corresponding to linguistic borders within the European Economic Area (EEA) – see, for example, cases M.4731 *Google/DoubleClick*, paragraphs 56 and 83-84; M.5727 *Microsoft/Yahoo! Search Business*, paragraphs 61 and 91-93; M.7217 *Facebook/Whatsapp*, paragraphs 79 and 81-83.

³² See, for example, cases M.6497 *Hutchison 3G Austria/Orange Austria* and M.8808 *T-Mobile Austria/UPC Austria*. In the former case, the Commission started from a candidate market consisting of mobile data services and found that there was limited substitutability of mobile data services by fixed internet access services, paragraph 57. In the latter case, the Commission assessed whether mobile internet access services could be used to access the internet at home in the same way as fixed connections are used and concluded that the relevant product market included both fixed and mobile technologies, as far as residential customers were concerned, paragraph 39. See also judgment of 30 January 2007, *France Télécom v Commission*, T-340/03, EU:T:2007:22, paragraphs 88-89; judgment of 1 July 2010, *AstraZeneca v Commission*, T-321/05, EU:T:2010:266, paragraph 97, and

taking the products of different undertakings as a starting point for the substitution analysis – for example because the parties to the concentration are different or because a different undertaking’s behaviour is under investigation – may lead to different results in terms of market definition.

- (b) *the time period considered.* The Commission takes into account the competitive conditions prevailing at the time of the conduct or concentration that is being assessed (which may include sufficiently foreseeable developments when the case calls for a forward-looking assessment, as set out in paragraph 21). Accordingly, market definition results may vary over time if competition dynamics change. This may be the case, for example, when competitive conditions in distinct geographic areas converge over time and become sufficiently homogeneous, so that areas that were initially part of distinct geographic markets are later included in the same geographic market³³, or when predicted market developments materialise that were previously considered remote or uncertain.
- (c) *the competitive concerns under consideration.* The relevant effective and immediate competitive constraints in a specific case may depend on the competitive concerns under consideration. For example, those constraints may depend on whether the concern being explored is that the merger would lead to increases in prices of existing products, or that the same merger would reduce investments in product development³⁴. Furthermore, the usual approach to market definition might need to be adapted where existing market power is liable to distort the analysis (for instance in relation to a theory of harm under Article 102 TFEU)³⁵.

judgment of the EFTA Court of 5 May 2022, *Telenor and Telenor Norge v EFTA Surveillance Authority*, E-12/20, paragraph 117.

³³ See, for example, case M.2033 *Metso/Svedala* of 2001, paragraph 114, where the Commission defined the geographic market for crushers, a piece of mining equipment, as EEA-wide. In the subsequent case M.9585 *Outotec/Metso (Minerals Business)* of 2020, paragraphs 258-261, the Commission concluded that the relevant geographic market for the supply of mining equipment, that is to say, grinding, flotation, filtration, iron ore pelletizing equipment, was global in scope. Similarly, in case M.580 *ABB/Daimler-Benz* of 1995, paragraphs 22-41, the Commission concluded that there were national or regional specifications in the market for rail technology, which acted as barriers to entry for exports outside the home region, and that customers preferred suppliers established in the same region or in the same Member State. However, later, in case M.5754 *Alstom Holdings/Areva T&D* of 2010, paragraph 35, the Commission concluded that the relevant market was at least EEA-wide.

³⁴ In case M.7932 *Dow/DuPont*, the Commission first defined national markets for formulated crop protection products to assess product and price competition, paragraphs 319 and 332. In that assessment, the Commission relied on market shares computed at the level of crop/pest combinations at the national level, but also used market shares for crop/pest combination groupings at the EEA level as being informative of the strength of market players at the level of their portfolio of active ingredients, as well as global market shares of R&D suppliers, as being informative of the relative strength of suppliers bringing new active ingredients to the market, paragraph 362. Second, the Commission analysed innovation competition in the whole industry and in innovation spaces consisting of groupings of crop/pest combinations at the global or at least EEA-wide level to assess how agrochemical companies compete to discover and develop new active ingredients, paragraphs 352 and 361.

³⁵ See footnote 55, which explains the underlying reasoning in the context of the “cellophane fallacy” in more detail.

19. Seventh, the concept of ‘relevant market’ in Union competition law is different from the use of the term ‘market’ in other contexts, in particular in business contexts. Undertakings often use the term ‘market’ to refer to the area or place where they sell their products, or to refer broadly to the industry or sector to which they belong. For instance, undertakings may say that they are active in a global market where they consider that they compete globally for revenues against undertakings from all continents. However, that does not mean that the products of all globally active undertakings are substitutable for customers in the EEA, or that customers face sufficiently homogeneous conditions of competition globally, which are the relevant criteria for the Commission’s market definition under Union competition law, as further explained in Section 2. Broader dynamics outside the scope of defined relevant markets for competition law purposes, such as differentiated economies of scale enjoyed by different undertakings from their global activities on multiple product or geographic markets are not relevant for the intermediate step whereby markets are defined for competition law purposes, but they can be relevant for the competitive assessment and, if so, will be duly taken into account in that context. Moreover, the concept or the definition of a ‘market’ used in fields of law other than competition law, for example in the area of electronic communications³⁶, is not decisive for the purposes of Union competition law.
20. Eighth, the Commission is not obliged to reach a definitive conclusion on the precise scope of the market where the outcome of the Commission’s assessment would not change under various plausible market definitions. The Commission may leave the market definition open³⁷ both in cases where competition concerns arise regardless of the market definition applied³⁸ and in cases where no competition concerns arise

³⁶ See in particular Commission Recommendation (EU) 2020/2245 of 18 December 2020 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council establishing the European Electronic Communications Code (notified under document C/2020/8750) (OJ L 439, 29.12.2020, p. 23).

³⁷ In the context of differentiated product markets, the definition of an overall relevant market does not exclude the possibility of identifying different competitive dynamics in some market segments while keeping the precise segment delineation open. In particular, the competition analysis of a concentration may lead to a finding that the concentration does not impede competition equally on all parts of the relevant market, without that affecting or calling into question the definition of that market – see judgment of 18 May 2022, *Wieland-Werke v Commission*, T-251/19, EU:T:2022:296, paragraphs 40-41, 64 et seq.

³⁸ See, for example, case M.10078 *Cargotec/Konecranes*, paragraphs 126 and 376, where, regarding straddle and shuttle carriers, the Commission left open the definition of both the relevant product market (which could either be defined overall or segmented between straddle and shuttle carriers) and the relevant geographic market (EEA-wide or global in scope), as the transaction raised concerns under all of those plausible market definitions.

In addition, in assessments under the Merger Regulation, the Commission may leave the market definition open in cases where, following an initial investigation, serious doubts arise in only one of several plausible relevant markets but the undertakings involved offer commitments suitable to render the concentration compatible with the internal market. See, for example, case M.8785 *The Walt Disney Company/Twenty-First Century Fox*, paragraph 85.

In commitments decisions pursuant to Article 9 of Regulation (EC) No 1/2003, the Commission may also leave the market definition open where, following an initial investigation, the undertakings involved offer commitments that are sufficient to address the initial concerns. See, for example,

regardless of the market definition applied³⁹. When it leaves the market definition open, the Commission usually carries out the competitive assessment for all plausible alternative market definitions, though the depth of its competitive analysis may vary between the alternative markets assessed⁴⁰.

21. Ninth, the Commission may take into account expected transitions in the structure of a market when the case calls for a forward-looking assessment. Structural market transitions differ from considerations relating to market entry by potential competitors ('potential competition')⁴¹ in that they affect the general dynamics of supply and demand in a market and therefore the general reactions to changes in relative supply conditions. Such structural market transitions should be distinguished from changes that only affect individual undertakings or customers offering or demanding products in the relevant markets. Structural market transitions can affect the definition of the relevant product market, for example where there is sufficient probability that new types of products are about to emerge on the market⁴², or the definition of the relevant geographic market, for example where there are impending technological changes or impending changes in the regulatory framework⁴³. The Commission takes expected short-term or medium-term structural market transitions into account where they would lead to effective changes in the general dynamics of supply and demand within the period that is relevant for the Commission's

case AT.37966 *Distrigaz*, paragraph 11, and case AT.40153 *E-book MFNs and related matters* (Amazon), paragraph 48.

³⁹ See, for example, judgment of 26 October 2017, *KPN v Commission*, T-394/15, EU:T:2017:756, paragraph 60; and judgment of 8 July 2003, *Verband der freien Rohrwerke and Others v Commission*, T-374/00, EU:T:2003:188, paragraphs 107 and 110. See also, for example, case M.9695 *LVMH/Tiffany*, paragraphs 25, 31, 46, 52, 57, 58 and 72, where the Commission left open the precise product and geographic market definition with respect to various categories of luxury goods, as no competition concerns arose regardless of the exact scope of the relevant product and geographic market.

⁴⁰ For instance, the Commission may focus its competitive assessment in concentrations involving horizontal overlaps on those relevant markets where the overlaps between the undertakings involved are the most substantial and where there are fewer effective and immediate competitive constraints from within the market. The Commission may then conclude that, if the overlaps do not raise competition concerns on those relevant markets, the overlaps do not raise competition concerns on the alternative relevant markets either. See, for example, case M.10339 *KKR/Landal*, paragraphs 23ff, in which the Commission's assessment focussed on the narrowest alternative product market, defined as holiday parks, where the overlaps between the Parties' activities were most substantial.

⁴¹ See paragraph 23.

⁴² For example, in the context of assessing medicinal products, the relevant product market may be widened to include pipeline products that are currently undergoing clinical trials, as further explained in paragraph 91; or it may be narrowed to only a specific molecule in light of impending entry by a generic version of an originator product, see judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, EU:C:2020:52, paragraph 131.

⁴³ See, for example, case M.2478 *IBM/Italia/Business Solutions/JV*, paragraph 25, where the Commission noted that it had considered in the past that IT services were provided at national level, such as in case M.2195 *Cap Gemini/Vodafone*. However, it observed that IT services showed a trend towards internationalisation of demand and supply, motivated in part by the use of the internet enabling operation on a remote basis. This trend towards internationalisation was confirmed in the later case M.6237 *Computer Sciences Corporation/iSOFT Group*, paragraphs 17 and 18, where the Commission noted that major providers of IT services operated on a global basis and customers frequently issued global/EEA-wide calls for tender. In these cases the geographic market definition was left open.

assessment⁴⁴. For the Commission to be able to do so, there must be reliable evidence⁴⁵ that there is sufficient likelihood that the projected structural changes will take place. Such evidence needs to go beyond mere assumptions that observed trends will continue or that certain undertakings will change their behaviour.

2. GENERAL METHODOLOGY

22. As explained in Section 1.2, the main purpose of market definition is to provide, in an intermediate step, a framework to structure and facilitate the competitive assessment, by identifying in a systematic way the effective and immediate competitive constraints faced by the undertaking(s) involved when they offer particular products to customers in a particular area.
23. Undertakings are subject to three main sources of competitive constraints, namely demand substitution, supply substitution and potential competition:
- (a) Demand substitution constitutes the most effective and immediate disciplinary force on the suppliers of a given product⁴⁶. An undertaking's influence over prevailing conditions of sale – such as prices, the level of innovation or the quality offered – depends on the extent to which its customers can easily switch to available products that the customers consider as substitutes⁴⁷. Demand substitution is therefore the main consideration when defining the relevant product market.
 - (b) Supply substitution can also be relevant for the definition of the relevant market in some cases, namely when it is as effective and immediate as demand substitution and when it leads to similar competitive conditions across the products concerned. In the Commission's experience, supply substitution is only relevant for market definition in specific cases.
 - (c) Potential competition, by contrast, comprises more remote and contingent competitive constraints that do not meet the criteria of effectiveness and

⁴⁴ See judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, EU:C:2020:52, paragraphs 134-135, where the Court found that the market may be narrowed down to only a specific molecule in light of impending entry by a generic version of an originator product because the “manufacturers of generic medicines [were] in a position to enter the market immediately or within a short period, particularly where those parties [had] formed a prior effective strategy for market entry, [had] taken the steps necessary to achieve it, such as, for example, the lodging of [a marketing authorisation] application or the obtaining of such [a marketing authorisation], or [had] concluded supply contracts with third-party distributors” and where there was “evidence of the perception, by the manufacturer of originator medicines, of the immediacy of the threat of market entry by the manufacturers of generic medicines”.

⁴⁵ See Section 3.4 for further detail on how the Commission gathers and evaluates evidence for the purposes of market definition.

⁴⁶ Judgment of 4 July 2006, *easyJet v Commission*, T-177/04, EU:T:2006:187, paragraph 99.

⁴⁷ In certain markets, demand may not be driven – or not solely driven – by the ultimate consumer of a product, but may be shaped by other stakeholders, whose interests are not necessarily aligned with those of the ultimate consumer. For example, in pharmaceutical markets, patients are the final consumers of medicines; doctors choose the prescription medicine or may advise patients on which over-the-counter medicine to use, and insurance schemes typically cover all or part of the cost for the administered medicine. The Commission takes such particularities into account when defining the relevant market.

immediacy of substitution⁴⁸. Therefore, potential competition is not relevant for the definition of the relevant market and it is not appropriate to include in the relevant product market current sales by a potential competitor of products that are not substitutable with the product(s) of the undertaking(s) involved from the perspective of the customers⁴⁹, or to expand the geographic market to include the areas where the potential competitor is already active with its products⁵⁰. The existence of potential competition requires an analysis of additional factors, including the likelihood, timeframe and magnitude of any market entry. The assessment of the impact of potential competition requires analysing how this affects or could affect the behaviour of the undertaking(s) involved. This is analysed in the competitive assessment.

24. The assessment of demand and supply substitution helps identify the products in the relevant market, and hence the suppliers active in the market. Identifying the customers that are likely to face similar effects of the conduct or concentration in question can also be an important element for the definition of the relevant market, to provide a useful framework for the competitive assessment. To do that, the Commission focuses on the degree to which customers face similar or differing conditions of competition. Such assessment is often relevant for the definition of the relevant product and geographic market when suppliers negotiate with individual customers or when they can discriminate between customers or customer groups⁵¹.

2.1. General methodology for defining product markets

2.1.1. Demand substitution

25. As set out in paragraph 23, the main approach used by the Commission to define the relevant product market is that of assessing the substitutability of products from the perspective of the customer (demand substitution). Situations of sufficiently strong demand substitution arise when customers would switch easily from the products of the undertaking(s) involved to readily available alternative products. The Commission includes those products in the same relevant product market as they constitute effective and immediate competitive constraints.
26. The Commission determines the range of products that customers of the undertaking(s) involved regard as effective and immediate substitutes, as well as the degree of substitutability with the products of the undertaking(s) involved by

⁴⁸ The General Court has explained: “*Although potential competition and supply-side substitution are conceptually different issues, [...], those issues overlap in part, as the distinction lies primarily in whether the restriction of competition is immediate or not.*”, judgment of 30 September 2003, *Atlantic Container Line and Others v Commission*, joined cases T-191/98, T-212/98 to T-214/98, EU:T:2003:245, paragraph 834.

⁴⁹ See, for example, case M.7555 *Staples/Office Depot*, paragraphs 372-374, where the Commission assessed whether Amazon was a potential entrant in the B2B contract channel for office supplies and did not include the sales by Amazon in other product markets, such as the retail channel for office supplies, in the market share calculations.

⁵⁰ See, for example, case M.8677 *Siemens/Alstom*, paragraphs 485-533, where the Commission assessed the constraint from potential entry into the EEA by Asian suppliers of high speed and very high speed trains as part of the competitive assessment and did not include the Asian suppliers’ sales of high speed and very high speed trains outside the relevant geographic market in the market share calculations.

⁵¹ See 4.2 for further detail on how the Commission approaches market definition in the presence of discrimination between customers or customer groups.

examining a variety of evidence. Such evidence includes, depending on the requirements and particularities of each case, indicators for the reasons why customers would or would not substitute one product with another, such as customer preferences relating to product characteristics, prices, functionalities, intended use, barriers to switching and switching costs. It also includes direct indicators of substitution, such as evidence of past or hypothetical substitution. Further details on the evidence that the Commission relies on when assessing demand substitution are set out in Section 3.2.

27. The main question to be answered when examining that evidence is to what extent and to what readily available substitute products (if any) the customers of the undertaking(s) involved would switch in response to a deterioration in the conditions of supply of the products of the undertaking(s) involved relative to other products⁵². For operational and practical purposes, this assessment usually focuses on reactions to price increases, but it can also consider changes in other competitive parameters, such as in the quality of the product or its level of innovation, as set out in paragraph 15.
28. Conceptually, this approach means that, starting from a candidate market which initially contains the product(s) or types of products of the undertaking(s) involved that is/are the focus of the competitive assessment, readily available substitute products (if any) are added to the candidate market until the products identified constitute a relevant product market.
29. The theoretical criterion often used to determine whether the candidate market constitutes a relevant product market is whether a hypothetical monopolist in the candidate market could exercise market power. This question can be assessed by asking whether a hypothetical monopolist in the candidate market would find it profitable to implement a small but significant non-transitory increase in price (the ‘SSNIP test’)⁵³.
30. When undertakings compete on parameters other than price, such as quality or the level of innovation, the application of the SSNIP test is difficult, in particular in the context of zero monetary price products⁵⁴ and highly innovative industries. Further

⁵² For cases concerning purchasing markets, the starting point to analyse switching reactions would be the supplier, and the test serves to identify the alternative distribution channels or outlets for the supplier’s products.

⁵³ The SSNIP considered is normally a price increase in the range of 5 % to 10 % implemented on one or more products in the candidate market, including at least one product of the undertaking(s) involved. However, the magnitude of the price increase and how it is applied may depend on the particular case at hand. For example, when the undertakings involved provide relatively little value added to the supply chain (because raw materials or purchased components represent a high percentage of the total price), the question of whether a hypothetical monopolist could exercise market power may be better assessed relative to its effect on this value added. Therefore, in such cases, the Commission may apply the SSNIP to the value added rather than to the sales price. The Commission applied this concept and focussed on the value added (or the “regional premia”) in case M.6541 *Glencore/Xstrata*, paragraphs 135-140 and 144, when assessing evidence on imports, and the evolution of prices and margins of zinc across regions.

⁵⁴ In case AT.40099 *Google Android*, paragraphs 284-305, the Commission assessed whether manufacturers, users and application developers would switch away from Android app stores to app stores for other licensable smart mobile operating systems in the event of a small but significant non-

difficulties arise depending on the theory of harm applied in the investigation. When the assessment focuses on the change in market power of the undertaking(s) involved, such as for the analysis of whether a horizontal merger would lead to non-coordinated effects, the SSNIP test can generally be applied at the prevailing market price. However, this may not be the case where the focus is on the assessment of the existing market power of the undertaking(s) involved, such as when defining markets for the purpose of assessing the existence of dominance under Article 102 TFEU⁵⁵. Moreover, practical constraints can make it difficult to apply the SSNIP test empirically when defining the relevant product market in real-life cases. For example, it may not be possible to gather reliable information on the amount of losses a hypothetical monopolist would incur when implementing a SSNIP.

31. Therefore, while the Commission may rely on the principles of the SSNIP test in its assessment of the relevant market, there is no obligation on the Commission to apply the SSNIP test empirically, and other types of evidence are equally valid to inform the market definition, as further described in Section 3⁵⁶. In fact, in most cases the

transitory decrease of quality ('SSNDQ') of the former. In general, an SSNDQ is applied as a conceptual framework for a qualitative assessment of demand substitution. The Commission does not usually assess whether such an SSNDQ would be profitable for a hypothetical monopolist. Moreover, a quantitative application of the SSNDQ test is subject to several difficulties, including in relation to the quantification of quality. In its judgment of 14 September 2022, *Google and Alphabet v Commission*, T-604/18, EU:T:2022:541, paragraphs 177 and 180, the General Court confirmed that "*the SSNDQ test [...] did constitute relevant evidence for the purpose of defining the relevant market*" while at the same time stating that "*defining a precise quantitative standard of degradation of quality of the target product cannot be a prerequisite for the application of the SSNDQ test. [...] All that matters is that the quality degradation remains small, albeit significant and non-transitory.*"

55. In general, when the candidate market (essentially) consists of the product(s) of a single undertaking, the SSNIP test applied at the prevailing market price will always suggest that the relevant market must be wider than the candidate market, because a profit-maximising undertaking, by definition, will not find it profitable to raise price above its prevailing (profit-maximising) price.

This can give rise to the so-called "cellophane fallacy", named after the US Supreme Court's market definition involving cellophane and other wrapping products (*United States v. E. I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956)). It entails wrongly concluding, on the basis of a SSNIP test applied at the prevailing price, that the relevant market must be wider than the product(s) of a dominant undertaking (see the explanations of this concept in case AT.39523 *Slovak Telekom*, paragraphs 158 to 171). The cellophane fallacy can also arise when prices are set at supra-competitive levels because of joint profit maximisation by a group of undertakings.

Therefore, when market definition is performed in the context of a case that requires an assessment of the degree of existing market power, such as in the context of an assessment of dominance in an Article 102 TFEU case, the fact that the prevailing price may already be at a supra-competitive level needs to be taken into account. In such cases, the Commission may apply the SSNIP test starting from a counterfactual price that would prevail under (more) effective competition; or it may rely on other evidence to define the relevant market.

By contrast, in the context of cases where the focus is on assessing a change in market power, in particular the change in market power resulting from the elimination of competition between the parties to a concentration involving horizontal overlaps, the candidate market includes at least the relevant products or types of products of the merging parties and the SSNIP test can typically be applied at the prevailing price. Therefore, market definition may not always lead to the same results in cases involving the assessment of a change in market power as in cases involving the assessment of existing market power.

56. In its judgment of 11 January 2017, *Topps Europe v Commission*, T-699/14, EU:T:2017:2, paragraph 82, the General Court stated: "*The Commission did not [...] commit a manifest error of assessment in basing its conclusions on the relevant market on its assessment of the evidence gathered*

SSNIP test serves only as a conceptual framework for the interpretation of available evidence.

2.1.2. *Supply substitution*

32. The substitutability of products from the perspective of suppliers (supply substitution) can be relevant for market definition where suppliers use the same assets and processes to produce related products that are not substitutes for customers, and where this leads to similar conditions of competition across the range of such related products. In such cases, it may be appropriate to include such related products in the relevant product market, provided the constraining effect of supply substitution across the range of products is equivalent to that of demand substitution in terms of effectiveness and immediacy.
33. The necessary conditions for the market to be broadened based on supply substitution are that most, if not all, suppliers are able to switch production between products in the range of related products⁵⁷; that suppliers incur only insignificant additional sunk costs or risks when they switch production; that suppliers have the incentive to and would do so when relative prices or demand conditions change; and that they can offer all products in the range effectively in the short term⁵⁸.
34. Situations of sufficiently strong supply substitution may typically arise when undertakings market a range of qualities or grades of a particular product. For example, in a case relating to the production of stainless steel⁵⁹, the Commission found that, from a demand point of view, customers could not use different grades of stainless steel or families of grades for the same purpose. However, it was possible for manufacturers to switch from the production of one grade to another in the short term and using the same equipment, with limited additional costs. In the absence of particular difficulties in distribution, stainless steel manufacturers were therefore able to compete for orders of the various grades. The Commission therefore included the various grades of stainless steel in the same relevant market.
35. Supply substitution can also be relevant for market definition when customers purchase bespoke products, for example, when customers issue calls for tenders for construction projects or the procurement of trains or gas turbines. In such cases, there may be no or limited demand substitution between the bespoke products for different customers. From the perspective of demand substitution, each such bespoke product

without having recourse to an SSNIP test". Similarly, with respect to geographic market definition, in its judgment of 5 October 2020, *HeidelbergCement and Schwenk Zement v Commission*, T-380/17, EU:T:2020:471, paragraph 331, the General Court noted that: "*As the Commission rightly notes in paragraph 143 of the defence, the 'SSNIP test' is not the only method available to it when defining the relevant geographic markets.*" See also the judgment of the General Court of 22 June 2022, *thyssenkrupp v Commission*, T-584/19, EU:T:2022:386, paragraphs 76 and 155, as well as the EFTA Court judgment of 5 May 2022, *Telenor and Telenor Norge v EFTA Surveillance Authority*, E-12/20, paragraph 95.

⁵⁷ EFTA Court judgment of 5 May 2022 *Telenor and Telenor Norge v EFTA Surveillance Authority*, E-12/20, paragraph 160.

⁵⁸ That is the producer must be able to market the product to the customer in a timeframe that is not significantly longer than the timeframe the customer needs for switching to other substitutable product(s) in the candidate market. Such assessment is specific to the products assessed.

⁵⁹ See case M.6471 *Outokumpu/INOXUM*, paragraphs 120 and 121.

could then constitute its own relevant market. However, when the competitive constraint on the undertaking(s) involved in such cases results from the ability of other suppliers to produce the specific bespoke product, competitive conditions may nevertheless be similar across different customers. Therefore, when the same suppliers can and generally do respond with offers that meet the specifications of different customers, for example in different calls for tenders, the different bespoke products can be included in the same relevant product market.

36. Where only some of the suppliers have the ability and incentive to switch production and offer the products effectively in the short term and would do so, it is not appropriate to include the product range in the same relevant market⁶⁰. When carrying out the competitive assessment, the Commission nevertheless takes into account the competitive constraint exercised by those suppliers that meet the conditions, including whether they are likely to expand their sales of the relevant products in the future when the case calls for a forward-looking assessment. An example of this approach is the Commission's assessment of the market for metallic coated steel⁶¹. The Commission concluded that the conditions for supply substitution regarding tinplate and electrolytically coated chromium steel were not met in that case because only one competing supplier was able to produce those products on the same production line and because producing both products on 'swing lines' capable of switching did not play a material role in the market. However, the Commission took into account the constraint exerted by the supplier that was able to produce tinplate and electrolytically coated chromium steel on 'swing lines' in its competitive assessment.
37. Similarly, where supply substitution would entail the need to significantly adjust existing tangible and intangible assets outside the regular course of business; to incur more than insignificant additional investments, sunk costs or risks; to take strategic decisions of a lasting nature, or to incur time delays, the Commission does not widen the relevant market based on supply substitution. The Commission may not widen the relevant market based on supply substitution even if producers are already involved in production across the range of related products. For example, although certain producers of cheese may be able to produce several types of cheese, there may be significant costs and lead times involved before a producer of one type of cheese can switch production and start selling a different type of cheese⁶². In such cases, the Commission examines the effects of such switching in the competitive assessment as a constraint exerted by potential competition.

⁶⁰ Judgment of 28 April 2010, *Amann & Söhne and Cousin Filterie v Commission*, T-446/05, EU:T:2010:165, paragraph 79; and EFTA Court judgment of 5 May 2022, *Telenor and Telenor Norge v EFTA Surveillance Authority*, E-12/20, paragraph 160. See also, for example, case M.5046 *Friesland Foods/Campina*, paragraph 159.

⁶¹ See case M.8713 *Tata Steel/ThyssenKrupp/JV*, paragraphs 276-278 and 1287-1293 for the assessment of tinplate steel.

⁶² See, for example, case M.9413 *Lactalis/Nuova Castelli*, paragraphs 47 and 48, where the market investigation indicated that suppliers producing mozzarella could not start producing ricotta without incurring significant costs and within a short period of time and, similarly, producers of ricotta could not start producing and selling mascarpone without significant costs and delay.

2.2. General methodology for defining geographic markets

38. Geographic markets can range from local to global, depending on the facts of the case. As set out in paragraph 12(b), the approach the Commission uses to define the relevant geographic market is that of assessing conditions of competition. A common starting point is to identify the areas where the relevant conduct or concentration is likely to have effects, by identifying the location of the undertaking(s) involved and of their customers. The Commission then analyses whether the conditions of competition in a certain area are sufficiently homogeneous⁶³ for the effects of the conduct or concentration to be able to be assessed and whether that area can be distinguished from other areas because the conditions of competition are appreciably different in those areas.
39. The Commission carries out its assessment of the conditions of competition by examining a variety of evidence. Such evidence includes, depending on the requirements and particularities of each case: the presence of the same or different suppliers across geographic areas; similarities or differences in their market shares and prices; similarities or differences in customer preferences and purchasing behaviour; barriers and costs associated with supplying customers in a different area; distance-related factors affecting costs, quantities available or reliability of supply, and trade flows and patterns of shipments. Further details on the evidence the Commission relies on when assessing geographic markets are set out in Section 3.3.
40. The Commission usually also analyses demand substitution between suppliers located in different geographic locations or areas. This is particularly important in cases where the location of the customer as such does not matter for the conditions at which products are offered, that is to say where suppliers do not negotiate with individual customers or do not discriminate by customer location or by geographic area. In that case, the relevant geographic market is usually defined based on supplier location⁶⁴ and the Commission may put particular emphasis on establishing which suppliers in which areas are close substitutes to the undertaking(s) involved, in line with the methodology set out in Section 2.1.1. An example is the Commission's

⁶³ The Union Courts' case law has consistently referred to "sufficiently homogeneous" – as opposed to identical – conditions of competition as being the criterion for defining a relevant geographic market. See judgment of 14 February 1978, *United Brands v Commission*, C-27/76, EU:C:1978:22, paragraphs 11 and 44; judgment of 8 July 2003, *Verband der freien Rohrwerke and Others v Commission*, T-374/00, EU:T:2003:188, paragraph 141; judgment of 30 September 2003, *Cableuropa and Others v Commission*, T-346/02 and T-347/02 (joined cases), EU:T:2003:256, paragraph 115; judgment of 7 May 2009, *NVV and Others v Commission*, T-151/05, EU:T:2009:144, paragraph 52; judgment of 5 October 2020, *HeidelbergCement and Schwenk Zement v Commission*, T-380/17, EU:T:2020:471, paragraph 294.

⁶⁴ The relevant geographic market would then be defined as the area where those suppliers are located that supply products that are substitutable for the customers. See, for example, case M.1628 *TotalFina/Elf*, paragraphs 222ff, where the Commission defined the relevant market as the market for into-plane supply of jet fuel at specific airports, and paragraph 228 in particular, which refers to barriers to switching to alternative suppliers at another airport. See also, for example, case M.9014 *PKN Orlen/Grupa Lotos*, paragraphs 1045-1052. Likewise, in cases concerning retail distribution of daily consumer goods, the Commission has defined the relevant geographic market as a local area defined by a maximum driving time for customers based on considerations of demand substitution, see, for example, case M.8468 *Norgesgruppen/Axfood/Eurocash*, paragraphs 24ff, and included in that relevant market all retail outlets located in that area.

definition of the relevant markets for passenger air transport services under the airport-by-airport approach in past cases in the air transport sector. The Commission's analysis focused on establishing whether some of the relevant airports were substitutable with other airports from the point of view of passengers⁶⁵.

41. In cases where suppliers negotiate with individual customers or can discriminate by customer location or geographic area, the Commission will usually define the relevant geographic market based on customer location⁶⁶. Demand substitution between different geographic areas – such as switching to additional imports – can also be relevant in those cases. When customers in two areas consider mostly the same suppliers as alternatives and can readily switch purchase volumes between them, this may indicate, together with other factors, that conditions of competition between the two areas are sufficiently homogeneous and that the effects of the conduct or concentration would be sufficiently similar for the two areas to form part of the same relevant geographic market. Conversely, when customers in two areas regard different suppliers as alternatives, or when the volumes that can be and are switched is limited, for instance because of customer preferences or because of limits in the import volumes available, this indicates that conditions of competition in the two areas are not sufficiently homogeneous⁶⁷.
42. As a result, the mere existence of imports or the possibility of switching to imports in a given geographic area does not necessarily lead to a widening of the geographic market to include the area from which the goods were or could be exported. Customers located in the area from which the goods were or could be exported may face different conditions of competition compared to customers located in the area where imports are delivered. In those circumstances, if geographic markets were defined widely to include the areas of export and delivery of imported goods, this could erroneously include in the relevant market areas where customers are likely to be affected differently by the relevant conduct or concentration. This would hamper rather than facilitate the competitive assessment.
43. Therefore, in cases where there are significant imports, but trade between certain geographic areas or other supply and demand considerations are insufficient to lead to sufficiently homogeneous conditions of competition, the Commission does not extend the relevant geographic market to include the area from which the goods were

⁶⁵ See, for example, cases M.8633 *Lufthansa/Certain Air Berlin Assets*, paragraphs 59ff; M.8672 *Easyjet/Certain Air Berlin Assets*, paragraphs 53ff; and M.8869 *Ryanair/Laudamotion*, paragraphs 223ff. The market definition considered whether one or more airports should be included in the relevant market. The relevant market was therefore defined around the location of the suppliers rather than around the location of customers.

⁶⁶ This approach often applies to cases involving industrial products. See, for example, the approach in various cases involving steel products, such as case M.6471 *Outokumpu/Inoxum*, paragraphs 244-260, M.8444 *ArcelorMittal/Ilva*, or M.8713 *Tata Steel/ThyssenKrupp/JV*.

⁶⁷ See, for example, case M.7278 *General Electric/Alstom (Thermal Power – Renewable Power & Grid Business)*, paragraphs 162-191, where the Commission defined the market for 50 Hz heavy duty gas turbines as global excluding China and Iran because there were barriers for some global suppliers to supply customers in those two areas. See, also case AT.40099 *Google Android*, paragraphs 406-410, where the Commission defined the market for licensing of smart mobile operating systems and Android app stores as global excluding China because the undertaking's activities in China were limited by regulation.

exported. However, as part of the competitive assessment and when geographic markets are defined based on customer location, the Commission calculates market shares based on all sales to customers in the relevant geographic market, including sales from both local suppliers and importers. The Commission also fully takes into account the competitive constraint from imports in the relevant market in other ways in the competitive assessment, for instance by examining whether imports are likely to expand in the future when the case requires a forward-looking assessment⁶⁸.

44. An example of how the Commission considers trade flows when defining the relevant geographic market and carrying out its competitive assessment is the Commission's assessment of the market for finished flat carbon steel products⁶⁹. The Commission concluded that the relevant geographic markets for several types of finished flat carbon steel products were not wider than the EEA because market structures differed between world regions; sourcing occurred to a very large extent at the regional level, and the pricing of the products differed significantly between world regions. Nevertheless, the competitive constraint from imports was assessed in detail as part of the competitive assessment.

3. PROCESS OF DEFINING MARKETS

3.1. General approach to market definition in practice

45. In practice, the Commission is usually in a position to preliminarily identify the most plausible relevant product and geographic markets within which a particular conduct or concentration should be assessed. This can be based on readily available information, the relevant markets defined in past Commission decisions in the same or similar industries, or information submitted by the undertaking(s) involved. There will often be a limited number of such plausible alternative relevant markets. The Commission then adjusts its initial working hypotheses about the relevant product and geographic markets in the light of the evidence gathered during its investigation, if necessary. In many cases, a cursory examination of the plausible alternative market definitions is sufficient to structure and facilitate the competitive assessment in the Commission's decision, without the need to carry out a detailed analysis to conclude on the definition of each relevant market. In its decisions, the Commission may set out and consider alternative market definitions, beginning with potential wider or narrower markets, depending on the specificities of the case.

⁶⁸ See, for example, case M.9592 *Freudenberg/L&B*, see paragraphs 50-53, the Commission concluded that the markets for non-woven and other fabrics were at least EEA-wide and cleared the concentration because Asian rivals would continue to exert a sufficient competitive constraint on the undertakings involved, see paragraphs 98-137 for non-woven primary carpet backings for construction applications and paragraphs 152-180 for non-woven primary carpet backings for automotive applications.

⁶⁹ See case M.8444 *ArcelorMittal/Ilva*, section 7.2.4, paragraphs 320-326, for the geographic market definition and sections 9.4.5.2-9.4.5.9, paragraphs 637-750, for the competitive assessment concerning the constraints exerted by imports. In the competitive assessment, the Commission carried out a detailed analysis of the competitive constraints imposed by imports, finding, among others, that significant import volumes were not as such an indicator of sufficient price pressure, that imports were a less reliable source of supply for EEA customers compared to domestic products and that empirical evidence indicated that import reactions to price increases were likely to be insufficient to defeat price increases.

46. The following Sections 3.2 and 3.3 describe various factors that may be relevant to define the relevant product and geographic markets. Section 3.4 describes how the Commission gathers and evaluates evidence of these different factors. This does not imply that in each individual case the Commission needs to obtain evidence on and assess all of the factors mentioned. In practice, evidence relating to a subset of these factors is often sufficient to enable the Commission to reach a conclusion on the relevant market.

3.2. Evidence used to define product markets

47. In line with the principles set out in Section 2, when defining the relevant product market the Commission primarily focuses on evidence relating to demand substitution, but it may also take into account evidence relating to supply substitution if the relevant conditions set out in Section 2.1.2 are met. The categories of evidence outlined in Sections 3.2.1 and 3.2.2 may be relevant for the assessment of demand- and supply substitution for the purposes of defining the relevant product market.

3.2.1. Evidence relevant for demand substitution

3.2.1.1. Product characteristics, prices, intended use and general customer preferences

48. Evidence on factors such as product characteristics (also including product quality or level of innovation), prices, functionalities and intended use, which is often readily available, is generally useful to identify the range of possible substitutes that are available to the customers of the undertaking(s) involved.
49. However, an assessment of whether products are similar along observable characteristics, whether their prices and price patterns are comparable⁷⁰ or whether the products serve the same intended use⁷¹ may be insufficient to determine whether two products are demand substitutes. Conversely, differences in product characteristics, prices and intended use may not always, in themselves, be sufficient to determine that two products belong to different product markets⁷². This is because such considerations may not accurately reflect how customers value the different product attributes and how customers would react to changes in relative supply conditions, such as a price increase.
50. The Commission therefore assesses the underlying reasons why customers would or would not substitute one product for another in order to identify the parameters that

⁷⁰ As regards evidence on the evolution of prices over time, many different factors unrelated to demand substitution can cause price co-movements. On the other hand, the absence of price co-movement or the existence of diverging prices typically indicates that products are unlikely to be demand substitutes. Therefore, analyses of price co-movements, including quantitative techniques such as price correlation or stationarity analyses, are in principle more informative when they indicate that two products are not in the same market.

⁷¹ For instance, the Commission has in the past defined separate markets for certain foodstuffs despite them having the same intended use for human nutrition. See, for example, case M.7220 *Chiquita Brands International/Fyffes*, paragraphs 29-34, where the Commission defined bananas as a distinct product market from other fresh fruit.

⁷² See, for example, case AT.38477 *British Airways/SN Brussels*, paragraphs 18-21 and 23, where despite the differences between rail transport and air services for the route between Brussels and London in terms of product characteristics, the evidence available indicated that intermodal competition existed between them, which led the Commission to conclude that the relevant market was broader than the direct air services and included rail transport.

are most relevant for the choices of customers. A variety of parameters can drive customers' choices in addition to the product's price, such as its level of innovation or its quality in various aspects, as set out in paragraph 15. For example, customers may take into account whether a product is manufactured using more or less sustainable technology⁷³. Differences between distribution channels, including online and offline channels⁷⁴, or the regulatory framework⁷⁵ may also be relevant. Furthermore, customer choices may be subject to behavioural biases, such as a tendency to choose the default option provided. Identifying those parameters that are most relevant for customer choice allows the Commission to compare the products along those parameters, which is informative for assessing the degree of substitutability between them.

3.2.1.2. Evidence of past substitution

51. In certain cases, there may be evidence of substitution between different products following past structural changes, events or shocks in the market. Such evidence can be particularly informative for demand substitution, in particular when the substitution is caused by an exogenous⁷⁶ shift in relative supply conditions of the products of the undertaking(s) involved, such as an unexpected cost shock, or by another similar event. Launches of new products can also provide useful information, when it is possible to analyse precisely which products have lost sales to the new product⁷⁷. Similarly, changes in quantities in reaction to a supplier's exit from the market, or resulting from (temporary) unavailability of certain products (for example due to production outages or supply-chain disruptions), may be informative for substitution patterns⁷⁸. However, reactions to a significant change, such as the complete unavailability of a product or the introduction of a new product, may not

⁷³ See, for example, case M.10702 *KPS Capital Partners/Real Alloy Europe*, paragraphs 59-61, where the Commission assessed the market for salt slag recycling by considering the technology used for production, namely zero-waste and non-zero-waste recycling technology. See also case M.10658 *Norsk Hydro/Alumetal*, paragraphs 132-137, where the Commission assessed whether low-carbon advanced aluminium foundry alloys constitute a product market distinct from the rest of advanced aluminium foundry alloys, and ultimately left the product market definition open in that respect.

⁷⁴ To establish whether online and offline sales channels belong to the same product market (or not), the Commission may assess whether customers consider that these channels have different characteristics such as in terms of price levels, customer service quality, delivery times and logistics costs, opening times, need to experience the product before purchase, and differences in product ranges offered between the two channels. See, for example, case M.8394 *Essilor/Luxottica*, paragraphs 83-89 and 139, where the Commission assessed whether the market for optical retail should be segmented between online and offline channels.

⁷⁵ For example, regulation may require that pharmacists, when dispensing medicines, automatically substitute the originator version of the medicine with a cheaper generic version, under certain conditions.

⁷⁶ An exogenous shift or shock in supply conditions is one that is caused by unexpected events that have no direct effect on demand.

⁷⁷ See, for example, case M.5335 *Lufthansa/SN Airholding*, paragraphs 96, 100 and 101, where the Commission assessed whether the airport of Antwerp was a substitute to the airport of Brussels. In that context, the Commission considered the entry of VLM Airlines on the Antwerp - Manchester route, in competition with SN's flights on the Brussels - Manchester route.

⁷⁸ See, for example, case M.6576 *Munksjö/Ahlstrom*, paragraph 189, where, when assessing the relevant product market for pre-impregnated paper, the Commission took into account that a competitor had stopped producing pre-impregnated paper and assessed the identity of the competitors which won its customers.

always indicate how customers would react to more limited changes in relative supply conditions.

52. In some cases, undertakings may also collect relevant information on demand substitutes during the ordinary course of business. For example, an undertaking may have data on the customers that it has won and lost and the identity of the competitors which lost/won those customers. By contrast, evidence of customers shifting away from a product as a result of factors unrelated to changes in relative supply conditions, such as a change in preferences or consumption patterns over time, are less informative for demand substitution⁷⁹.
53. Where there is sufficient data on past substitution, it may be possible to derive quantitative measures on the substitutability of different products. For example, it may be possible to derive diversion ratios between candidate substitute products. Diversion ratios estimate the share of sales volumes lost by the product of interest that is diverted to each candidate substitute product in response to changes in relative supply conditions. In addition, it may be possible to estimate own-price elasticities and cross-price elasticities⁸⁰ for the demand of a product using econometric techniques^{81 82}. In order to be reliable, such quantitative evidence must be sufficiently robust.

3.2.1.3. Evidence of hypothetical substitution

54. The Commission may also rely on information about how customers are likely to react to hypothetical changes in relative supply conditions (“hypothetical substitution”). Reasoned answers of customers and competitors regarding such hypothetical substitution can be informative for identifying substitute products. In some cases, evidence of hypothetical substitution may also be available from surveys of a representative sample of customers. Evidence of hypothetical substitution may constitute the only available direct (quantitative) evidence of demand substitution and may be informative for the assessment. Nevertheless, evidence of hypothetical substitution may be less reliable than evidence of actual substitution, for example because hypothetical demand substitution has no actual consequences for customers

⁷⁹ See, for example, case M.6576 *Munksjö/Ahlstrom*, paragraph 248, where the Commission found that an observed shift away from standard décor paper towards pre-impregnated paper in the furniture industry had been largely driven by strategic investment decisions of a large customer further down the value chain and therefore had not been determined or accentuated by short-term changes in relative prices for pre-impregnated paper.

⁸⁰ Own-price elasticity of demand for product A is a measure of the responsiveness of demand for A (that is to say, the expected percentage change in the quantity demanded) to a one percent change in the price of product A. Cross-price elasticity between products A and B is the responsiveness of demand for product A to a one percent change in the price of product B.

⁸¹ See, for example, case M.5658 *Unilever/Sara Lee*, where the Commission used econometric estimates of demand elasticities derived from scanner data to perform a SSNIP test to determine whether male and non-male deodorants are in the same relevant product market.

The Commission may use evidence of past substitution not only to define markets but also to carry out its competitive assessment, in particular to determine whether the undertaking(s) involved compete closely with each other or for the quantitative assessment of likely effects. See, for example, case M.8792 *T-Mobile NL/Tele2 NL*, paragraphs 704-720 and 798-823.

⁸² Evidence on diversion ratios or (cross-price) elasticities of demand can be relevant for identifying substitutes to be considered for inclusion in the candidate market and for the application of the SSNIP test.

or because of other behavioural biases. In particular, views of market participants relating to the likelihood or magnitude of hypothetical switching to an alternative product may not be sufficiently reliable, complete or accurate to allow the Commission to estimate elasticities of demand. However, this is a case-by-case assessment and depends on the strength of the evidence available.

55. In rapidly evolving industries, especially those characterised by fast technological progress (e.g. in the digital sector), the introduction of new or newly developed products or processes, as well as technological or regulatory changes may lead to structural market transitions, which affect existing competitive dynamics and the general reactions to relative supply conditions. In such cases, the Commission may take into account the expected changes in substitution possibilities resulting from the change in competitive dynamics, subject to the conditions set out in paragraph 21.

3.2.1.4. Evidence of competitive constraints based on industry views

56. Undertakings typically monitor competition in the ordinary course of business. There may also be industry associations or experts monitoring competition. While such industry views on market boundaries do not necessarily correspond to the concept of the relevant market within the meaning of Union competition law, information on which undertakings regard each other as (close) competitors, as well as the views of other market participants and industry experts on competitive constraints, can provide useful information for assessing demand substitution. This applies in particular where the underlying reasons given in support of the conclusion that certain undertakings are (close) competitors correspond to the Commission's market definition framework, that is to say that the undertakings' products are regarded by customers as substitutes.

3.2.1.5. Barriers and costs associated with switching demand to potential substitutes

57. There are various potential barriers to substitution and switching costs. Those barriers and costs may have a wide range of origins, such as contractual obligations, costs of searching for alternative products, uncertainty about the quality and reputation of alternative products, the costs of learning to use other products or of adapting own production processes, brand recognition, regulatory barriers or other forms of state intervention, the existence of network effects⁸³, the costs of data portability, the degree of interoperability⁸⁴ with other products, or other dependencies in relation to data, product integration or complementarities of usage.
58. Barriers to switching may also arise where it is not possible for customers to switch between different sales channels. For example, the competitive constraints in the supply of car components for the original equipment market may differ from those in the supply of such components for spare parts, with customers for spare parts not being able to obtain the components at the conditions offered to original equipment manufacturers. This may lead to the definition of two distinct relevant product markets.

⁸³ Network effects are present when the value of product A fluctuates (either directly or inversely) with the variation of the number of customers of that product.

⁸⁴ This would be the case, for instance, where a sub-set of products does not function in conjunction with another product, such that switching entails an additional cost for customers.

3.2.1.6. Implementations of the SSNIP test

59. In some cases, it may also be possible to determine the boundaries of the relevant market by assessing quantitatively whether a SSNIP would be profitable for a hypothetical monopolist⁸⁵. An example of an implementation of the SSNIP test is a ‘critical loss analysis’⁸⁶. Critical loss analysis normally involves determining the maximum loss of sales volume that can be incurred for a SSNIP to be profitable for a hypothetical monopolist. This ‘critical loss’ is then compared to an estimate of the likely actual loss of sales volume resulting from the SSNIP. If the critical loss is greater than the likely actual loss, a SSNIP would be profitable, which indicates that the products in the candidate market form a relevant product market. In the opposite scenario, the candidate market may have to be widened. The specifics of the analysis to be carried out depend on the particular circumstances of each case. When assessing critical loss analysis, the Commission also takes into account that a high observed percentage profit margin not only implies a low critical loss, but may also indicate that the actual elasticity of demand – and hence the actual loss – is likely to be low, and vice versa⁸⁷.

3.2.2. Evidence relevant for supply substitution

3.2.2.1. Evidence of past substitution

60. When assessing supply substitution, the Commission may consider evidence from undertakings about the existence of overcapacity and their ability and incentive to redeploy production and supply in the short term. Evidence of past redeployment of production or supply to the products in question in response to exogenous changes in supply or demand conditions is particularly relevant (for example switching production between different qualities or grades in the ordinary course of business). By contrast, in the absence of evidence of past supply substitution, the Commission may consider it less likely that the effect of such substitution would be equivalent to that of demand substitution in terms of effectiveness and immediacy.

3.2.2.2. Barriers and costs associated with switching supply

61. The Commission considers several barriers and costs when assessing the possibility of widening the market based on supply substitution. For example, it considers whether, to switch their production or supply, undertakings need to incur specific capital investments or specific investments in production processes, learning and human capital, establishment of brand or name recognition, access to data, retooling costs or other investments. Information on the existence of legal or administrative obstacles, such as the necessity of holding a particular licence, or obstacles of a

⁸⁵ The Commission applied the SSNIP test, for example, in case M.5658 *Unilever/Sara Lee*, paragraphs 92-94 and section 5.3 of the Technical Annex.

⁸⁶ See, for example, case M.9076 *Novelis/Aleris*, Annex I, Section 2.1.2. The Commission also applied a critical loss analysis in case M.4734 *Ineos/Kerling*, paragraphs 95-105, but ultimately found that the results were inconclusive.

⁸⁷ When observed percentage profit margins are high, losing volume results in a relatively high loss in profit on the volumes lost. This implies a low ‘critical loss’ in volume to make a price increase by the hypothetical monopolist unprofitable. On the other hand, high observed profit margins can imply that the likely actual loss is also relatively low, because otherwise undertakings would not have raised prices to the observed level and would find it profitable to lower prices.

strategic nature that may affect the switch of production or supply, such as contractual ties or exclusivity agreements, can also be relevant. The Commission also analyses the incentives of undertakings to switch their production or supply, including whether such a switch would lead to a loss in sales of other products, and their willingness to switch. As explained in paragraph 37, when any such barriers or costs are not insignificant, the Commission takes into account the competitive constraints (if any) exercised by such undertakings as part of the competitive assessment rather than by expanding the relevant market.

3.3. Evidence used to define geographic markets

62. The Commission is usually able to take a preliminary view on whether the candidate geographic market is local, national, regional, EEA-wide⁸⁸, wider than the EEA or global, based on preliminary information on the purchasing behaviour and preferences of customers of the relevant products. The Commission then investigates whether the conditions of competition throughout the candidate market are sufficiently homogeneous for the effects of the conduct or concentration to be able to be assessed and whether the candidate market can be distinguished from other areas because the conditions of competition are appreciably different in those areas.

3.3.1. Categories of evidence relevant for defining the relevant geographic market

63. The categories of evidence outlined in this Section may be relevant for defining the relevant geographic market.

3.3.1.1. Identity of available suppliers, market shares and prices

64. When customers in different geographic areas have access to the same actual and potential suppliers and when those suppliers have similar market shares in the different areas, this is usually a first indication that conditions of competition are sufficiently homogeneous to include those areas in the same relevant geographic market. Conversely, when the market shares of those suppliers vary substantially across different geographic areas, this usually indicates that conditions of competition in those areas are not sufficiently homogeneous.
65. A preliminary analysis of pricing and price differences can also provide useful evidence. Homogeneous conditions of competition across different areas can generally be expected to lead to similar price levels for the same products. Such similarity may also be the result of functioning arbitrage between different areas, that is to say the process by which higher prices in one area may lead arbitrageurs to buy in the low-priced area and resell in the high priced area until prices have converged sufficiently to make such arbitrage unprofitable. The Commission can also assess whether suppliers offer customers different conditions of supply based on the customer's location, as that can have an effect on whether the market can be defined around the locations of the suppliers⁸⁹.

⁸⁸ For practical purposes, as a working assumption, the Commission typically assesses markets at EEA-wide level where there are strong indications that markets are wider than national and narrower than global.

⁸⁹ See paragraph 40 and footnotes 65 and 66. See also paragraph 73.

66. However, analyses of market shares and prices may not be decisive, in themselves, for geographic market definition⁹⁰. The Commission therefore usually explores the reasons behind any particular configuration of market shares or prices, and also assesses other indicators.

3.3.1.2. Customer preferences and purchasing behaviour

67. Differences in culture, language, lifestyle, demographics or socio-economic background can lead to local, national or regional preferences for specific products or brands⁹¹. This can affect the competitive positions of different undertakings in different areas. Differences in customer preferences across different areas are likely to result in differences in purchasing behaviour and hence have a strong potential to limit the geographic scope of the market.
68. In particular, when the set of products that customers regard as substitutes to the products of the undertaking(s) involved differs between geographic areas, this is generally a strong indication that conditions of competition are not sufficiently homogeneous for those areas to belong to the same geographic market.
69. An examination of customers' current geographic pattern of purchases can provide useful indicators on similarities or differences in customer preferences and conditions of competition. For example, when customers across the EEA have access to the same suppliers on similar terms, regardless of the customers' location, for instance if they purchase from undertakings located anywhere in the EEA on similar terms, or they procure their supplies through tendering procedures in which the same set of undertakings are invited and submit bids, the geographic market is likely to be EEA-wide⁹² if other factors do not contradict such finding. Similarly, when customers around the world have access to the same suppliers on similar terms

⁹⁰ Similarly, quantitative techniques for assessing price co-movements, such as price correlation or stationarity analyses are normally not decisive, in themselves, for geographic market definition. As set out in footnote 70, many different factors other than functioning arbitrage can cause co-movements of price. Such price co-movements might therefore wrongly suggest that two areas belong to the same relevant geographic market, although conditions of competition in the areas are not sufficiently homogenous. On the other hand, the absence of price co-movement typically indicates that conditions of competition are not sufficiently homogeneous. Therefore, price co-movement analysis is in principle more informative if it indicates that different areas are not in the same market.

⁹¹ See, for example, case AT.39740 *Google search (Shopping)*, paragraphs 253-254, where the Commission defined the market for general search as national because of language preferences, despite those services being accessible by users anywhere in the world. See also, for example, case M.7220 *Chiquita/Fyffes*, paragraphs 119-131, where the Commission, although recognising that the supply of bananas was mostly coming from outside the EEA, defined the market at the national level based on national preferences. This also illustrates that the presence of a single supplier or of the same suppliers in the EEA or worldwide may be consistent with geographic markets defined at national level.

⁹² Examples exist in relation to markets for the production and supply of basic metal products, such as aluminium or steel. See, for example, case M.9076 *Novelis/Aleris*, where the Commission's investigation confirmed that customers had a common preference for sourcing aluminium automotive body sheets from EEA-based suppliers and the relevant geographic market was defined as EEA-wide. For similar reasons, in markets for flat stainless steel products, the relevant geographic market for cold rolled stainless steel and hot white band stainless steel were defined as not wider than the EEA in case M.6471 *Outokumpu/Inoxum*, paragraphs 241-243 and 244-260. The market has also been defined as EEA-wide for refractory products, due to, among other factors, customers' strong common preference for sourcing from EEA-based suppliers – see M.8286 *RHI/Magnesita Refratarios*, paragraphs 55, 56, 57 and 61.

regardless of the customers' location, for instance if they purchase from undertakings located anywhere in the world on similar terms, the relevant geographic market is likely to be global⁹³. A market may also be defined as global from which only specific areas are excluded due to high entry barriers or other obstacles to global sourcing by customers⁹⁴. In such cases, and when geographic markets are defined based on customer location, any imports from the excluded areas into the defined geographic market would be counted in the calculation of market shares⁹⁵ and the possibility that such imports could constrain the undertaking(s) involved in the relevant market should be analysed in the competitive assessment.

3.3.1.3. Barriers and costs associated with supplying customers in different areas

70. The Commission assesses whether suppliers are able and willing to offer their products on competitive terms throughout the candidate market, or whether there are barriers or costs that make it impossible or unattractive for a supplier to serve customers on competitive terms in areas that it does not currently serve. This assessment includes an examination of whether customer preferences require suppliers to have a local presence or access to a distribution network or relevant distribution channels to sell throughout the candidate market. It also includes an examination of the regulatory framework, namely any type of barrier created by state action that may affect suppliers from other areas. Such barriers may include public procurement rules, public subsidies, price regulation, quotas and tariffs limiting trade or production, technical standards, linguistic requirements, legal monopolies, limits to freedom of establishment, administrative authorisation requirements (for instance licences and permits), or other sector-specific regulation. Such barriers can effectively limit the degree to which suppliers in a certain area are subject to competitive pressure from suppliers based outside that area and thus lead to differences in the conditions of competition. The same barriers can also hinder customers from purchasing from suppliers in different areas.
71. Conversely, the regulatory framework, in particular regulatory harmonisation, for instance at the level of the Union or globally, may reduce barriers to trade and indicate that geographic markets are wider or likely to become so in the future. The Commission takes into account the process of market integration when defining geographic markets. Where regulatory barriers are removed, the Commission

⁹³ For instance, in markets for civil aerospace products, customers procure original aircraft equipment and aerospace systems and components from the same suppliers worldwide, and the Commission found that the relevant geographic market for these products was global. See, for example, cases M.8658 *UTC/Rockwell Collins*, paragraphs 204, 205 and 207; M.8425 *Safran/Zodiac Aerospace*, paragraph 298; M.8948 *Spirit/Asco*, paragraphs 37 and 38.

⁹⁴ Accordingly, the Commission may define a global market excluding only specific areas with different conditions of competition, as for example in case M.7278 *General Electric/Alstom (Thermal Power – Renewable Power & Grid Business)*, paragraphs 162-191 – see footnote 68 of this Notice. Likewise, for example, in case M.8677 *Siemens/Alstom*, paragraph 133, the Commission found that the relevant geographic market for both high speed and very high-speed trains could be global excluding China, South Korea and Japan, as there were insurmountable entry barriers for foreign suppliers in those three countries. See also, for example, case M.6541 *Glencore/Xstrata*, paragraphs 43, 44 and 45, in which the Commission assessed potential geographic markets defined as global excluding China, because exports from China were limited, because industry analysts reported figures for China and the rest of the world separately and because a number of market participants supported such a geographic split.

⁹⁵ See paragraph 109 below.

assesses relevant evidence indicating a structural market transition, for instance regarding prices, market shares or trade patterns.

3.3.1.4. Distance-related factors, transport costs and catchment areas

72. In some markets, the competitive positions of suppliers may depend on the distance between each supplier and the customer. For example, transport costs may represent an important fraction of costs for certain products, which may put suppliers that are located at a greater distance from the customer at a significant competitive disadvantage relative to suppliers that are located closer to the customer. Other factors, such as security of supply considerations, sustainability considerations⁹⁶, product perishability or accessibility may have a similar effect. Moreover, in consumer markets, travel distance or time to the supplier may be an important consideration. This is typically the case, for example, for airports, supermarkets or petrol stations.
73. In such situations, markets are likely to be geographically differentiated in the sense that competitive conditions change as a function of the distance between each supplier and the customer⁹⁷. In such cases, the Commission may define the geographic market based on catchment areas. Catchment areas can be drawn around customers or around suppliers, depending on the specificities of the case and on whether suppliers offer their products at different conditions based on the location or the geographic area of the customer location. Absent such discrimination, the Commission often considers catchment areas around supplier locations. By contrast, in markets with customer-specific prices, it is normally preferable to assess competitive conditions at different customer locations and draw catchment areas around customer locations⁹⁸. Where this is not possible, for example because customers are many and dispersed or because there is no information on the location of customers of competitors, the Commission may draw catchment areas around supplier locations.
74. Catchment areas are generally either measured in terms of customers' travel distance or time (in which case they are called isochrones) or in terms of the delivery distance or time around a location within which a given proportion of sales occurs. The Commission usually relies on catchment areas that are representative of the purchasing patterns of most customers⁹⁹. This can be determined from the actual distribution of delivery or travel distances or time, and/or can be based on the views of market participants. On that basis, the Commission typically considers catchment

⁹⁶ See, for example, case M.10047 *Schwarz Group/Suez Waste management companies*, paragraphs 56-58, where the Commission considered environmental costs as one of the relevant factors when defining the geographic market for the sorting of lightweight packaging.

⁹⁷ See also Section 4.1 on market definition in the presence of significant differentiation.

⁹⁸ See, for example, case M.7408 *Cargill/ADM Chocolate Business*, paragraphs 99-102 and 113-114, in relation to the market for industrial chocolate where the Commission analysed aggregated market shares in catchment areas drawn around individual customers. See also, for example, case M.7567 *Ball/Rexam*, paragraphs 642-644 and 663-670, in relation to the market for beverage cans where the Commission assessed capacity and volume sales shares for each of the customer-centred catchment areas.

⁹⁹ Relying on catchment areas that reflect purchasing patterns of all customers would often result in implausibly large catchment areas due to outlier observations.

areas covering 80 % of sales or customers¹⁰⁰. Depending on market-specific considerations, the Commission may also rely on alternative sets of ranges. The Commission has, for instance, also defined geographic markets on the basis of catchment areas covering 70 % and/or 90 % of sales¹⁰¹.

3.3.1.5. Trade flows and pattern of shipments

75. An analysis of the pattern and evolution of shipments and trade flows and of the drivers of such flows may indicate the absence or existence of barriers. The responsiveness of such flows to changes in relative supply conditions may also indicate the degree of competitive pressure exerted by suppliers located outside the candidate geographic market on the undertaking(s) involved. In some cases, it may be possible to quantify this constraint, for example by econometrically estimating import elasticities or through event studies demonstrating the responsiveness of imports to price changes¹⁰². However, the mere existence of trade flows or their responsiveness to changes in relative supply conditions does not necessarily imply that conditions of competition in the area from which the trade flows originate are sufficiently homogeneous to those in the candidate geographic market to warrant an expansion of the relevant geographic market. When this is not the case, and as explained in paragraph 43, the Commission takes the competitive constraints (if any) from importers on the undertaking(s) involved into account in the competitive assessment (including with respect to market shares and potential future expansion), rather than by expanding the relevant geographic market.

3.4. Gathering and evaluating evidence

76. The Commission uses various sources of information and types of evidence to define the relevant market and it may rely on both qualitative and quantitative information. Certain types of evidence may be decisive in one case, but of limited or no importance in other cases involving a different industry, a different product or different circumstances. In most cases and in particular where a detailed assessment is required, the Commission bases its decisions on the consideration of a number of factors, as set out in Sections 3.2 and 3.3, and different sources. The Commission adopts an open approach to empirical evidence, aimed at making effective use of all available information which may be relevant in individual cases, and makes an overall assessment based on that evidence¹⁰³. The Commission does not apply a rigid hierarchy of different sources of information or types of evidence¹⁰⁴.

¹⁰⁰ See, for example, cases M.7408 *Cargill/ADM Chocolate Business*, paragraphs 63-78, in relation to the market for industrial chocolate and M.7567 *Ball/Rexam*, paragraph 248, in relation to the market for beverage cans.

¹⁰¹ See, for example, case M.7878 *Heidelberg Cement/Schwenk/Cemex Hungary/Cemex Croatia*, paragraphs 182, 189 and 190, where the Commission found circular catchment areas representing 90 % of deliveries around the parties' plants to be more appropriate than catchment areas representing 70 % of deliveries, but also considered modified catchment areas based on road distances and delivery patterns. In any event, the Commission may also assess the sensitivity of market shares to the catchment area cut-off used as part of its competitive assessment.

¹⁰² See, for example, case M.6541 *Glencore/Xstrata*, paragraphs 141-148, where the Commission assessed the responsiveness of imports to relative price changes for zinc metal in the EEA.

¹⁰³ In its judgment of 6 July 2010, *Ryanair v Commission*, T-342/07, EU:T:2010:280, paragraph 136, the General Court stated: "It is the Commission's task to make an overall assessment of what is shown by

77. Evidence used by the Commission to define markets should be reliable¹⁰⁵. This is likely to be the case, for instance, when the evidence comes from public authorities or is supported by multiple sources, including by market participants with conflicting interests, such as suppliers and their direct customers. In addition, to the extent possible, the Commission uses recent evidence in relation to the period under investigation, in particular when assessing markets in an industry undergoing change. Where the case calls for a forward-looking assessment and when market definition is based on changes in competitive dynamics within the time period considered, such changes must be supported by reliable evidence showing with a sufficient level of likelihood that the expected changes will indeed materialise. When conducting such forward-looking assessments, some categories or sources of evidence may be less reliable or even unavailable. For instance, evidence of past substitution may not be available when assessing new products under development. By contrast, internal documents of market participants produced in the ordinary course of business or independent industry reports including robust projections may be particularly relevant for the purposes of conducting a forward-looking assessment.
78. Evidence carries a higher probative value if it can be established that the evidence could not have been influenced by the Commission's investigation, such as evidence pre-dating discussions of a concentration or conduct and pre-dating the Commission's investigation. When faced with contradictory evidence, the Commission tests the relevant statements or data when necessary, for example by checking whether independent and reliable sources are available. If independent and reliable sources are not available, the Commission assesses which evidence carries a higher probative value, taking into account the sources of the information, as well as the context of how and when the information was generated or provided to the Commission.
79. Where appropriate, as well as relying on submissions by the undertaking(s) involved, the Commission gathers evidence by addressing written requests for information to market participants, including the undertakings involved, or by interviewing them. In that context, the Commission seeks to obtain, primarily from the main competitors and customers in the industry, factual evidence and their views of the boundaries of the product and geographic markets. Requests for information may give rise to fines

the set of indicative factors used to evaluate the competitive situation. It is possible, in that regard, for certain items of evidence to be prioritised and other evidence to be discounted". The same reasoning applies *mutatis mutandis* to market definition.

¹⁰⁴ In its judgment of 11 January 2017, *Topps Europe v Commission*, T-699/14, EU:T:2017:2, paragraph 82, the General Court stated: "*the definition of the relevant market does not require the Commission to follow a rigid hierarchy of different sources of information or types of evidence*". This was confirmed in the judgment of the General Court of 22 June 2022, *thyssenkrupp v Commission*, T-584/19, EU:T:2022:386, paragraphs 78 and 156.

¹⁰⁵ As regards the probative value of the various items of evidence, the sole criterion for evaluating the evidence adduced is its reliability (see, for example, judgment of 13 September 2013, *Total Raffinage Marketing v Commission*, T-566/08, EU:T:2013:423, paragraph 43). The nature of the procedure at hand plays a role in this respect. In particular in merger control, the case law of EU courts establishes that in view of the need for speed and the very tight deadlines to which the Commission is subject, it cannot be required to verify all the information it receives, in the absence of evidence indicating that information provided to it is inaccurate. See judgment of 20 October 2021, *Polskie Linie Lotnicze "LOT" v Commission*, T-240/18, EU:T:2021:723, paragraphs 87 and 88 and case law cited.

should answers provided be misleading or incorrect, which contributes to ensuring that accurate information is provided. The Commission may also contact relevant trade or customer associations, undertakings active in upstream or related markets, and other key stakeholders, including local, national or international government authorities and agencies or non-governmental organisations.

80. In order to define the relevant market, the Commission may also request internal documents from relevant entities, including in particular the undertaking(s) involved. Internal documents are particularly relevant where these have been prepared in the ordinary course of business, as opposed to documents prepared in view of or during the Commission's investigation, as they may better reflect how these undertakings view the market. This may include marketing studies that undertakings have commissioned in the past to inform decisions about, for example, the pricing of their products or marketing actions. Customer surveys on usage patterns and attitudes, data on customer purchasing patterns, the views expressed by suppliers and market research studies submitted by the undertaking(s) involved and their competitors may be taken into account to establish whether an economically significant proportion of customers considers two products as substitutable. Evidence showing that an undertaking monitors the behaviour of certain competitors, or strategic documents relied on by the undertaking to inform business decisions, such as business plans or assessments of strengths, weaknesses, opportunities or threats, may also indicate the strength of competitive constraints exercised by various rival undertakings¹⁰⁶. Factors relating to the context of individual documents should be taken into account to assess their relevance. These include the documents' date, the identity of authors and potential addressees (such as their function, expertise and/or seniority), and the purpose of the documents.
81. In some cases, ad hoc surveys conducted for the purpose of the investigation and covering a representative sample of customers or suppliers can provide useful information on the relevant market¹⁰⁷. The Commission may decide to conduct or commission a survey in a particular case depending on the issue at hand and the evidence available from other sources, and taking into account administrative constraints, such as the timeframe of the investigation. Surveys must be designed carefully in order to elicit meaningful replies from the population of interest¹⁰⁸.
82. The Commission may also rely on public information, market or industry reports, financial analyst reports, as well as market statistics or economic studies, including

¹⁰⁶ See, for example, case M.7902 *Marriott International/Starwood Hotels & Resorts Worldwide*, paragraph 28, where the Commission relied on the fact that the merging parties benchmarked themselves against both chain and independent hotels to find that these suppliers were in the same market. See also, for example, case M.6663 *Ryanair/Aer Lingus III*, paragraphs 98-103, where the Commission assessed Ryanair's and Aer Lingus' price monitoring on air passenger routes as evidence to determine whether different airports in the same cities were substitutes.

¹⁰⁷ See, for example, case M.4439 *Ryanair/Aer Lingus*, paragraphs 36, 94, 99(9) and Annex I, where the Commission relied on a customer survey at Dublin airport that it had commissioned from an independent consultant. The Commission used the results of that survey as indirect evidence to assess whether certain airports are substitutable for customers.

¹⁰⁸ For example, it is in principle preferable to ask about recent past decisions rather than about hypothetical decisions; the questions should be clear and should not induce responses in a particular direction, and the range of response options provided should be sufficiently comprehensive.

by external consultants¹⁰⁹. In cases involving regulated markets, including, for instance, the telecommunications, energy or healthcare sectors, the Commission may also seek data from and the views of sector-specific regulators.

83. Where appropriate, the Commission may also carry out informal visits or formal inspections at the premises of the undertaking(s) involved, their customers or their competitors, in order to better understand how products are manufactured or supplied.

4. MARKET DEFINITION IN SPECIFIC CIRCUMSTANCES

84. This Section addresses certain aspects of market definition that are specific to particular industries, sectors or types of markets. Unless otherwise specified in this Section, the general principles of product and geographic market definition set out in this Notice also apply to the particular industries, sectors or types of markets mentioned in this Section.

4.1. Market definition in the presence of significant differentiation

85. Products may be significantly differentiated such that some products are closer substitutes than others. Differentiation can occur at the product or geographic level. Product differentiation occurs where attributes of the products matter for the customer's choice¹¹⁰, including design, brand image, technical specifications, durability, level of service or any other specific feature¹¹¹. Geographic differentiation occurs where the location of the individual customer and supplier matters for the customer's choice¹¹².

¹⁰⁹ The source and the context within which such studies are prepared is also relevant. In particular, studies prepared in the context of a specific case will be subject to particular scrutiny, since evidence carries a lower probative value if it has been influenced by the Commission's investigation.

¹¹⁰ See, for example, the judgment of 18 May 2022, *Wieland-Werke v Commission*, T-251/19, EU:T:2022:296, in the market for rolled products made of copper and copper alloys, where the General Court noted in paragraph 39 that: "[...] the applicant does not dispute that rolled products are not homogeneous products but that they are products which are differentiated according to a great number of criteria (composition, level of finishing, end applications, etc.). Each of those criteria allows the overall market for rolled products to be segmented, without any of them being, a priori, paramount or allowing separate product markets to be identified."

¹¹¹ For example, in the telecoms industry, where different types of customers can have different consumption habits that influence their choice of supplier. See, for example, case M.8792 *T-Mobile NL/Tele2 NL*, where the Commission concluded on a broad market definition with product differentiation across customer groups, due to differences in monthly spend, contract formation and duration, contract performance, and differences in customer needs. In this particular case, although concluding on an overall retail market for the provision of mobile telecommunications services to all end customers, the Commission still found that two separate customer groups were identifiable with respect to the provision of retail mobile telecommunications services: private customers and business customers.

¹¹² See, for example, case M.7155 *SSAB/Rautaruukki*, paragraph 102, where the Commission considered that the strong geographic differentiation for flat steel products, as evidenced by the analysis of divergent prices between the Nordic countries, mainland Europe and the UK, warranted an assessment of the impact of the concentration focused on the Nordic countries. See also, for example, case M.7878 *Heidelberg Cement/Schwenk/Cemex Hungary/Cemex Croatia*, paragraphs 174-176 and 229-239, where the Commission explained that even within a relevant geographic market defined as an area where conditions of competition are sufficiently homogeneous, competitive conditions may change gradually

86. Analysing the substitutes effectively available to customers to define the relevant market can lead the Commission to identify separate relevant markets within a continuum of differentiated products. In other cases, it is possible for the Commission to define a relatively broad relevant market that includes differentiated products¹¹³.
87. In certain cases, the existence of chains of substitution¹¹⁴ may lead the Commission to consider defining relevant markets where products or areas at the extremes of the market are not directly substitutable¹¹⁵. However, in prior cases the Commission's analysis of the facts has generally led it to reject such wider market definitions¹¹⁶.
- 4.2. Market definition in the presence of discrimination between customers or customer groups**
88. Discrimination between customers or customer groups occurs when they are offered different conditions of supply (such as different prices or levels of quality) for the same product, for reasons unrelated to costs¹¹⁷. This can lead to a distinct group of

from one location to another, and that such variations may need to be taken into account in the competitive assessment. This approach was confirmed by the judgment of the General Court of 5 October 2020, *HeidelbergCement and Schwenk Zement v Commission*, T-380/17, EU:T:2020:471, paragraph 325. See also, for example, cases M.8444 *ArcelorMittal/Ilva* and M.8713 *Tata Steel/ThyssenKrupp/JV*, where the relevant geographic market for finished flat carbon steel products was found to be EEA-wide, with geographic differentiation within the EEA (as confirmed in the latter case by the judgment of 22 June 2022, *thyssenkrupp v Commission*, T-584/19, EU:T:2022:386, paragraphs 145-258).

¹¹³ In such cases, the Commission may take into account the competitive dynamics in specific market segments in its assessment. See the judgment of 18 May 2022, *Wieland-Werke v Commission*, T-251/19, EU:T:2022:296, concerning the market for rolled products made of copper and copper alloys, where the General Court explained in paragraph 40: “Moreover, it must be borne in mind that, in the context of differentiated product markets, the existence of an overall market does not affect the possibility of identifying different competitive dynamics in some market segments”.

¹¹⁴ For example, even though customers of product A may not consider product C as an alternative, there may be a chain of substitution where product A's customers consider product B as a substitute and product B's customers consider product C as a substitute. Product A may then be indirectly constrained by competition from product C via such a chain of substitution.

¹¹⁵ See, for example, case M.9413 *Lactalis/Nuova Castelli*, paragraph 89, where the Commission found that there was evidence that there was a chain of substitution for branded and private-label cheeses and that they competed with each other, although it could not exclude that branded products may primarily compete in a different market and left the market definition open.

¹¹⁶ See, for example, case M.5335 *Lufthansa/SN Airholding*, paragraph 33, where the Commission rejected the existence of a chain of substitution between different types of tickets, given that this was not corroborated by evidence. The price analysis conducted by the Commission showed that prices at the extremes of the alleged chain of substitution had very different levels and were not interdependent. See also, for example, case M.6905 *Ineos/Solvay/JV*, paragraphs 260, 261, 262 and 338, where the Commission rejected the existence of overlaps between the shipment areas of the principal S-PVC suppliers forming a chain of substitution across the EEA, based on a quantitative analysis showing lack of arbitrage and different pricing trends between the different overlapping catchment areas.

¹¹⁷ This section is concerned with situations where firms can discriminate between customers or groups of customers on the basis of observable customer criteria (such as customer identity, location, age, sex, etc.). When firms offer the same menu of choices to all customers and the latter self-select into different groups based on their underlying preferences, the Commission may define separate relevant product markets (or different market segments) for different products in the menu (for example business versus economy airline tickets, or pre-paid and post-paid mobile phone tariffs).

customers for the relevant product constituting a narrower, distinct market. This is typically the case when three cumulative conditions are met¹¹⁸:

- (a) it is possible to identify clearly to which group an individual customer belongs at the moment of selling the relevant product to the customer;
- (b) trade between customers or arbitrage by third parties is unlikely;
- (c) the discrimination between customers or customer groups is of a non-transitory nature.

89. In situations when discrimination between customers or customer groups occurs, the conditions of competition across the different customer groups can differ such that the conduct or concentration in question can have different effects on different groups of customers. This can warrant defining separate relevant markets for each customer or customer group¹¹⁹. Discrimination based on customer location can also be a reason to define the relevant geographic market according to these locations¹²⁰.

4.3. Market definition in the presence of significant R&D

90. Innovation is often a key parameter of competition. The Commission takes into account the specificities of highly innovative industries characterised by frequent and significant research and development ('R&D'). These specificities, which may be present in any industry sector, are usually taken into account at the stage of the competitive assessment but may also be relevant for market definition. Given that the outcome of innovation efforts in terms of final products can be uncertain, the Commission may factor in various potential outcomes of R&D processes in its assessment.
91. A prominent example of cases where the Commission may take these specificities into consideration for market definition are so-called pipeline products. While these products are not yet be available to customers, there may be sufficient visibility on their R&D process to establish with which other product(s) the pipeline product is likely to be substitutable, if the development of the pipeline product is completed successfully and the product is brought to market. The Commission may conclude that such pipeline product belongs to an existing relevant product market¹²¹ or to a

¹¹⁸ This can also apply when such conditions will only be met in the future, for instance due to changes in the competitive conditions brought about by the concentration under review.

¹¹⁹ When conditions of competition and likely effects are similar across such customers or customer groups, for instance because of supply substitution, the Commission may nevertheless include such customers or customer groups in the same relevant market, as explained in Section 2.1.2.

¹²⁰ Examples of product and geographic market definitions affected by price discrimination can be found in cases such as M.5830 – *Olympic/Aegean Airlines*, paragraph 58, and M.7155 *SSAB/Rautaruukki*, paragraphs 101 and 102.

¹²¹ In particular alongside products with the same intended use(s). Relevant examples of such assessments can be found in the pharmaceutical industry. See, for example, case M.7275 *Novartis/GlaxoSmithKline Oncology Business*, paragraphs 23-31, where the Commission assessed the B-Raf inhibitors and MEK inhibitors under development by the parties as part of the market for targeted therapies for the treatment of advanced melanoma, in which existing products were already marketed. Other examples concern high technology products, such as heavy-duty gas turbines assessed in case M.7278 *General Electric/Alstom (Thermal Power Renewable Power & Grid Business)*, paragraphs 985-991, where the Commission assessed Alstom's pipeline heavy-duty gas turbine as part of the existing product market for heavy-duty gas turbines.

new product market, which is limited to the pipeline product and its substitutes¹²². The intended use of the pipeline product and its projected substitutability with other products play a particular role in defining the relevant market. The geographic dimension of a relevant market containing pipeline products may need to reflect the geographic dimension of the underlying R&D effort. It could hence be broader than the relevant geographic market of commercialised products¹²³.

92. By contrast, in some cases, an R&D process may not (yet) be closely related to any specific product¹²⁴ but related to early stages of research, which may serve multiple purposes and, in the longer term, feed into various products. Although the fact that such early innovation efforts do not immediately translate into tradeable products may render it difficult to identify a relevant product market in the strict sense, it may still be relevant to identify the boundaries within which undertakings compete in such earlier innovation efforts, in order to assess whether there could be a loss of innovation competition due to a concentration or behaviour¹²⁵. In this type of assessment, factors such as the nature and scope of the innovation efforts, the objectives of the different lines of research, the specialisation of the different teams involved or the results of the undertaking's past innovation efforts may be relevant for the purposes of defining the boundaries within which innovation competition takes place. In defining these boundaries, it is appropriate to have regard to the geographic areas within which R&D takes place alongside any other geographic specificities¹²⁶.
93. The general factors for defining the relevant product and geographic market as set out in Section 3 can be relevant for defining markets in the presence of significant R&D, depending on the degree of visibility that exists with respect to these factors. Related to this, a continuum may exist between R&D processes that are closely

¹²² In particular in cases where various undertakings develop the same or comparable pipeline products, or such products are expected to considerably alter industry dynamics due to their characteristics. See, for example, case M.9461 *AbbVie/Allergan*, paragraphs 48-54, and 56-60, where the Commission identified a plausible relevant market limited to IL-23 inhibitors for the treatment of ulcerative colitis and Crohn's disease, even though no IL-23 inhibitor was then marketed by any supplier, the products being in development at the time, in particular due to the promising nature of such products to treat these diseases.

¹²³ In particular in the pharmaceutical industry, the Commission has considered in previous cases that the geographic scope of the market was global or at least EEA-wide, to the extent that R&D for the relevant pipeline products is at least EEA-wide. See, for example cases M.7275 *Novartis/GSK Oncology Business*, paragraph 32 and M.7480 *Actavis/Allergan*, paragraph 17.

¹²⁴ As mentioned in footnote 9, the term "product" also covers technologies. This section is also particularly relevant for defining markets in the presence of such technologies. Technologies may be licensed or sold independently from a tangible good or service as intellectual property rights and may as such be considered a product for the purposes of this Notice.

¹²⁵ An example of such a situation can be found in case M.7932 *Dow/DuPont*, where the Commission applied the concept of innovation spaces to define such boundaries, see in particular section 4.4 of the decision in that case. M.7932 *Dow/DuPont* concerned a merger between two companies active in crop protection and which, at an industry level, had the assets and capabilities to discover and develop new products which, as a result of the R&D effort, can be brought to the market. As such, these companies were involved in innovation competition.

¹²⁶ See case M.7932 *Dow/DuPont*, paragraphs 353ff. Innovation efforts tend to be of a global nature and, in the absence of evident national or other geographic specificities, the relevant geographic markets are often global in scope, or in any case not narrower than EEA-wide.

related to a specific product or pipeline product and early innovation efforts which are not. This may be the case in particular at the stage when R&D processes become more targeted but are still capable of leading to multiple and alternative potential results, which are not yet sufficiently refined to be classified as specific pipeline products with a defined use and finalised characteristics. In that case, the Commission's approach to market definition may be closer to the approach used for pipeline products or for early innovation efforts, depending on where the relevant R&D process stands on this continuum.

4.4. Market definition in the presence of multi-sided platforms

94. Multi-sided platforms support interactions between different groups of users, creating a situation where the demand from one group of users has an influence on the demand from the other groups¹²⁷. In this situation, the reaction by one group to a change in supply conditions may also affect other groups, which gives rise to feedback loops between the different sides of the platform, that is to say to indirect network effects¹²⁸. Platforms typically internalise these indirect network effects between different groups when setting their supply conditions.
95. In the presence of multi-sided platforms, the Commission may define a relevant product market for the products offered by a platform as a whole, in a way that encompasses all (or multiple) user groups¹²⁹, or it may define separate (although interrelated) relevant product markets for the products offered on each side of the platform¹³⁰. Depending on the facts of the case, it may be more appropriate to define separate markets where there are significant differences in the substitution possibilities on the different sides of the platform. To assess whether such differences exist, the Commission may take into account factors such as whether the undertakings offering substitutable products for each user group differ, the degree of product differentiation on each side (or each user group's perception thereof), behavioural factors such as the homing decisions¹³¹ of each user group and the nature of the platform (for instance whether it is a transaction or a matching platform). In either case, the Commission takes into account, where relevant, the indirect network effects between user groups on different sides of the platform when defining the relevant markets or in the competitive assessment.
96. In practice, the presence of indirect network effects may render the assessment of demand substitution and, in particular, the application of the SSNIP test more

¹²⁷ Typical examples of multi-sided platforms include payment card systems (see case AT.34579 *Mastercard*) and advertising-sponsored platforms (see case M.8124 *Microsoft/LinkedIn*).

¹²⁸ For instance, a price rise on side A of the platform decreases demand from users on that side. The decrease in demand on side A may then affect the demand from users on side B, which in turn may affect the demand from users on side A (or on a third side C). See examples in case AT.39740 *Google search (Shopping)*, paragraph 159, and case AT.40099 *Google Android*, paragraphs 464, 469 and 638.

¹²⁹ In case M.8124 *Microsoft/LinkedIn*, section 3.7, the Commission defined a single market for online recruitment services, encompassing both job seekers and recruiters.

¹³⁰ In case AT.34579 *Mastercard*, sections 6.2.3 and 6.2.4, concerning payment card systems, the Commission defined the issuing and acquiring sides of the market as distinct relevant product markets.

¹³¹ This refers to the decision by users to use one platform for a given product (single-homing) or use multiple platforms in parallel for the same product (multi-homing). In some cases, homing decisions by users on one side of the platform affect the available alternatives to interact with those users by users on other sides of the platform, and thus the substitution possibilities on the latter sides of the platform.

challenging than in situations where no such demand interdependence between user groups exists.

97. Multi-sided platforms may supply a product to a user group at a zero monetary price, or even at a negative price, in order to attract users to products offered on the other sides of the platform and monetise their products on those sides. Zero monetary prices may be an integral part of multi-sided platforms' business strategy. The fact that a product is supplied at a zero monetary price does not imply that there is no relevant market for that product.
98. In such cases, non-price parameters are particularly relevant for the assessment of substitution. The Commission focuses on factors such as product functionalities¹³², intended use¹³³, evidence of past or hypothetical substitution¹³⁴, barriers or costs of switching, such as interoperability with other products, data portability and licensing features¹³⁵. The Commission may also consider alternatives to the SSNIP, such as assessing the switching behaviour of customers of the zero-price product in response to a small but significant non-transitory decrease of quality ('SSNDQ')¹³⁶.

4.5. Market definition in the presence of after-markets, bundles and (digital) ecosystems

99. In certain circumstances, the consumption of a durable product (primary product) leads to the consumption of another connected product (secondary product). This is often called an 'after-market'. In these circumstances, the Commission also takes into account the competitive constraints imposed by market conditions in the respective connected markets when defining the relevant markets for the primary and secondary products and/or in the competitive assessment.
100. There are generally three possible ways to define relevant product markets in the case of primary and secondary products, namely:
- (a) as a system market comprising both the primary and the secondary product¹³⁷;
 - (b) as multiple markets, namely a market for the primary product and separate markets for the secondary products associated with each brand of the primary product¹³⁸;
 - (c) as dual markets, namely the market for the primary product on the one hand and the market for the secondary product on the other hand¹³⁹.

¹³² See for instance the market definition of consumer communication services and social networking services in case M.7217 *Facebook/Whatsapp*, paragraphs 24-33 and 51-61.

¹³³ See for instance the market definition of general search services in case AT.39740 – *Google Search (Shopping)*, paragraphs 163-183.

¹³⁴ See for instance the market definition of professional social networking services in case M.8124 *Microsoft/LinkedIn*, paragraphs 108-110.

¹³⁵ See for instance case AT.40099 – *Google Android* and in particular the market definition of Android app stores, paragraphs 284-305, and of licensable smart mobile operating systems, paragraph 239.

¹³⁶ See footnote 54 for an example of such assessment of an SSNDQ.

¹³⁷ In case M.7278 *General Electric/Alstom (Thermal Power - Renewable Power & Grid Business)*, section 7.2.3.3., the Commission defined a market for the sale of gas turbines and subsequent servicing.

¹³⁸ In case AT.39097 *Watch Repair*, paragraphs 86-91, the Commission defined multiple separate markets for spare parts, each associated with a particular watch brand.

101. The definition of a system market may be more appropriate:
- (a) the more likely it is that customers take the whole-life costs into account when purchasing the primary product;
 - (b) the higher the expenditure on (or the value of) the secondary product(s) compared to the expenditure on (or the value of) the primary product;
 - (c) the higher the degree of substitutability between primary products and the lower the switching costs between primary products;
 - (d) when there are no or few suppliers specialised only in the secondary product(s)¹⁴⁰.
102. Otherwise, it may be more appropriate to define dual markets or multiple markets, depending primarily on the degree of substitutability between the secondary products of the various suppliers. For instance, if secondary products from different suppliers are compatible with all or most of the primary products, the definition of dual markets may be more appropriate, whereas if customers of the primary product are locked-in to using only a restricted set of secondary products, the definition of multiple markets may be more appropriate.
103. In other circumstances, although the consumption of one or more products is not dependent on a primary product, customers may still prefer to consume several products together as a bundle. In those circumstances, the Commission may examine whether the bundle constitutes a relevant product market distinct from the individual products, by assessing substitutability between the bundle and the individual products (for instance, by assessing whether customers would source the individual products separately in the event of a degradation of the supply conditions of the bundle)¹⁴¹.
104. (Digital) ecosystems can, in certain circumstances, be thought of as consisting of a primary core product and several secondary (digital) products whose consumption is connected to the core product, for instance, by technological links or interoperability¹⁴². When considering (digital) ecosystems, the Commission may thus

¹³⁹ In case M.9408 *Assa Abloy/Agta Record*, paragraph 127, the Commission defined a market for after-sales services without distinguishing the service provider.

¹⁴⁰ See, to that effect, judgment of 15 December 2010, *CEAHR v Commission*, T-427/08, EU:T:2010:517, paragraphs 78-109, and in particular paragraphs 79, 95 and 108 as well as case M.7278 *General Electric/Alstom (Thermal Power – Renewable Power & Grid Business)*, paragraph 95.

¹⁴¹ See, for example, case M.5462 *Thomas Cook Group/Gold Metal International*, paragraphs 9-16, where the Commission assessed and left open the possibility of package holidays being in a separate market from holidays where the consumer purchases the various elements individually. Similarly, in case M.7555 *Staples/Office Depot*, paragraph 91, the Commission concluded that there was in all likelihood a separate product market for the one-stop-shop supply under contracts of the traditional office supply categories stationary, paper, and ink & toner.

¹⁴² In its judgment of 14 September 2022, *Google and Alphabet v Commission*, T-604/18, EU:T:2022:541 the General Court stated in paragraph 116: “in a digital ‘ecosystem’ [...] the products or services which form part of the relevant markets that make up that ecosystem may overlap or be connected to each other on the basis of their horizontal or vertical complementarity. Taken together, the relevant markets may also have a global dimension in the light of the system that brings its components together and of any competitive constraints within that system or from other systems.” An example of a digital

apply similar principles to those applied to after-markets to define the relevant product market(s)¹⁴³. When the secondary (digital) products are offered as a bundle, the Commission may also assess the possibility of that bundle constituting a relevant market on its own. Although not all (digital) ecosystems fit an after-market or bundle market approach, the Commission takes into account, where relevant, factors such as network effects, switching costs (including factors capable of leading to customer lock-in) and (single- or multi-) homing decisions for the purpose of defining the relevant product market(s).

5. MARKET SHARES

105. Market definition enables the Commission to identify the suppliers and customers active on a relevant market. It can then calculate the total market size and the market share of each supplier, generally based on sales (and, for customers, purchases) of the relevant products in the relevant geographic area.
106. Market shares reflect the relative position of suppliers on the market and, as such, can be very useful in assessing market power. However, market shares are not the sole indicator of an undertaking's strength in the market¹⁴⁴. Other factors, such as barriers to entry or expansion, including those derived from scale or network effects, access to specific assets and inputs, as well as product differentiation and degree of substitutability, may also be relevant, depending on the specific facts of the case. The Commission's guidelines on substantive assessments in competition cases explain this further¹⁴⁵.
107. The Commission usually relies on market shares based on merchant sales¹⁴⁶. Conversely, in purchasing markets, the Commission usually relies on market shares based on (merchant) purchases. Generally, both the value of sales or purchases and the volume of sales or purchases provide useful information.
108. In addition to merchant sales or purchases, depending on the specific products or the specific industry in question, other metrics can provide complementary or more useful information to determine market shares. These may include: capacity or production¹⁴⁷ (in particular for markets characterised by the strategic importance of capacity)¹⁴⁸; the number of suppliers (in particular in markets involving formal calls

ecosystem would be an ecosystem of products built around a mobile operating system, including hardware, an application store and software applications.

¹⁴³ See case AT.40099 – *Google Android*, paragraph 299, on the definition of the market for app stores, where the Commission concluded that the conditions to define a system market comprising app stores and smart mobile operating systems were not present.

¹⁴⁴ See, for example, judgment of 9 July 2007, *Sun Chemical Group and Others v Commission*, T-282/06, EU:T:2007:203, paragraph 140 and judgment of 6 July 2010, *Ryanair v Commission*, T-342/07, EU:T:2010:280, paragraph 42.

¹⁴⁵ See for instance the Horizontal Merger Guidelines, sections III and IV. See also the Guidelines for the assessment of horizontal cooperation agreements, e.g. paragraph 236.

¹⁴⁶ Merchant sales refers to sales to third parties as opposed to intragroup sales.

¹⁴⁷ Capacity or production shares are usually computed over the suppliers located in the area covered by the geographic market.

¹⁴⁸ See, for example, case M.8674 *BASF/Solvay's Polyamide Business*, paragraph 455(b), relating to the nylon polymer value chain, case M.7744 *HeidelbergCement/Italcementi*, paragraph 61, in a concentration involving the market for grey cement and case M.4000 *Inco/Falconbridge*,

for tender or in situations where innovative products are at the development stage); the number of contracts awarded¹⁴⁹; usage metrics such as the number of (active) users¹⁵⁰, the number of website visits¹⁵¹ or streams, time spent or audience numbers¹⁵², the number of downloads¹⁵³ and updates, the number of interactions¹⁵⁴ or the volume or value of transactions concluded over a platform (in particular where access to products is provided mainly at a zero monetary price, as can be the case in digital markets, or more generally in the case of multi-sided platforms); units of fleet, seat capacity, number of trips or access rights such as slots at specific airports (for instance in transport markets)¹⁵⁵; or reserves held (for instance in the mining sector)¹⁵⁶. In markets where there are frequent and significant investments in R&D, the level of R&D expenditure or the number of patents or patent citations may be used as relevant metrics to assess the relative competitive position of undertakings¹⁵⁷. Metrics used internally by market participants in their general course of business generally prove particularly relevant.

109. When markets are defined around customer locations, all sales to customers in the relevant geographic market are included in the calculation of market shares. Accordingly, sales by suppliers from other areas to customers in the relevant geographic market (that is to say imports into the relevant market) are included when computing market shares, while sales by suppliers located in the relevant market to customers located in other areas (that is to say exports from the relevant market) are excluded¹⁵⁸. By contrast, when markets are defined around supplier locations, all sales by the suppliers located in the relevant market are included in the calculation of market shares, regardless of customer location¹⁵⁹. Sales by suppliers located outside the relevant geographic market are excluded from the calculation of market shares in that case.

paragraphs 315ff, in a concentration involving the market for nickel. See also, for example, case M.8713 *Tata Steel/ThyssenKrupp/JV*, paragraphs 474-481, and the judgment of 22 June 2022, *ThyssenKrupp v Commission*, T-584/19, EU:T:2022:386, paragraph 591.

¹⁴⁹ See, for example, case M.8134 *Siemens/Gamesa*, paragraphs 75-80, which explain that the number of contracts for wind turbines awarded was a more relevant metric in that case than the installed base of wind turbines, due to a time lag between award and installation.

¹⁵⁰ See, for example, case M.7217 *Facebook/Whatsapp*, paragraphs 95-98.

¹⁵¹ See, for example, case AT.39740 – *Google Search (Shopping)*, paragraphs 273-284.

¹⁵² See, for example, case M.9064 *Telia Company/Bonnier Broadcasting Holding* in relation to the market for the wholesale supply of Free To Air and basic pay TV channels, footnotes 315, 316, 324, 327, 333 and 339.

¹⁵³ See, for example, case AT.40099 *Google Android*, paragraphs 591-593.

¹⁵⁴ See, for example, case M.10262 *Facebook/Kustomer*, paragraphs 176-179, in relation to the market for B2C communication services.

¹⁵⁵ See, for example, case M.4439 *Ryanair/Aer Lingus*, paragraphs 340-347; case M.8869 *Ryanair/LaudaMotion*, paragraphs 303-306, and case M.9287 *Connect Airways/Flybe*, paragraphs 447-453.

¹⁵⁶ See, for example, case M.4000 *Inco/Falconbridge*, paragraphs 490-494, and case M.8713 *Tata Steel/ThyssenKrupp/JV*, paragraphs 472-481.

¹⁵⁷ See, for example, case M.7932 *Dow/DuPont*, Annex 1 of the decision, and case M.8084 *Bayer/Monsanto*, paragraphs 1153ff.

¹⁵⁸ See also paragraph 43.

¹⁵⁹ For instance, in cases involving the retail distribution of daily consumer goods, all sales by the relevant retail outlets located in the relevant markets are included in the calculation of market shares. See, for example, case M.8468 *Norgesgruppen/Axfood/Eurocash*, paragraphs 32ff.

110. When products are significantly differentiated (as explained in 4.1), market shares may provide a less reliable indicator of market power, and, as part of its competitive assessment, the Commission generally also analyses whether the undertaking(s) involved and other suppliers compete closely. Therefore, although market definition remains an important step, analysing how closely suppliers compete may be more relevant than assessing market shares in the competitive assessment of differentiated markets¹⁶⁰. To that effect, the Commission may, where appropriate, rely on shares for segments of the relevant market and take those into account when assessing how closely the undertakings involved compete with each other and with their competitors¹⁶¹.
111. Furthermore, when products are significantly differentiated, market shares measured in sales value and sales volume can be significantly different. The Commission usually considers sales values as a starting point¹⁶². Nevertheless, sales volumes can complement sales value and may in some instances be better suited to assess the effects of the conduct or concentration under investigation. For example, in the case of a concentration involving two undertakings offering a product at a much lower price than other undertakings, but capturing a significant share of customers, sales value alone may underestimate the competitive importance and interactions of those undertakings¹⁶³.
112. Market share information may be provided in the form of estimates by the undertaking(s) involved, if precise market shares are not available to them. The Commission additionally or alternatively uses other sources of information on market size and market shares when necessary for the purposes of its assessment. These may include studies or reports by public authorities, industry consultants or trade associations, internal documents of the undertaking(s) involved or estimates provided by market participants. In particular where no reliable estimates from the undertaking(s) involved or information from other sources are available, the Commission may carry out a full or partial market reconstruction, through requests for information addressed to relevant market participants, asking the suppliers or customers in the relevant market to provide data on their own sales or purchase volumes or values, or other relevant metrics. In the Commission's experience, such

¹⁶⁰ For instance, the Commission can assess the intensity of competition between undertakings by focusing its analysis on the segment shares of the undertakings, on the similarity of prices and other factors relevant for competition or on measures of substitutability between different products, such as observed switching and related measures such as diversion ratios or estimated demand elasticities. See, for example, case M.5658 *Unilever/Sara Lee*, where the Commission found significant differentiation in the market for deodorants and performed a quantitative assessment of likely price effects based on estimated demand elasticities as part of its competitive assessment.

¹⁶¹ See, for example, case M.9409 *Aurubis/Metallo Group Holding*, paragraphs 227 and 468, where the Commission found that the relevant market for copper scrap for smelting and refining was highly differentiated, in particular in terms of material composition and origin, and consisted of multiple segments. The Commission reviewed market shares for these specific segments to assess how closely the merging parties competed with one another and with their competitors.

¹⁶² See, for example, case M.7278 *General Electric/Alstom (Thermal Power – Renewable Power & Grid Business)*, paragraph 426.

¹⁶³ For instance, competition between providers of private label products, which are not differentiated, may be better captured by reference to volume shares. See, for example, case M.9413 *Lactalis/Nuova Castelli*, paragraph 137.

market reconstructions are generally more suitable for markets involving a limited number of suppliers.

113. As a general rule, the Commission relies on market shares computed over 1 year reference periods. The Commission usually collects such data for at least 3 years, or, in the context of enforcement of the antitrust rules, generally for periods corresponding to the duration of the investigated conduct. However, the reference period over which market shares are computed may differ from the standard 1 year period depending on the characteristics of the relevant market. In particular, in markets characterised by lumpy or irregular demand, or seasonality of supply and/or demand, or in markets undergoing structural change, it may be appropriate to compute market shares over longer or shorter reference periods¹⁶⁴. In markets undergoing structural transitions, such as regulatory or technological changes, or where a forward-looking assessment may be appropriate to capture the market dynamics, market shares may be estimated for the future to reflect those expected changes¹⁶⁵.

6. CONCLUSIONS

114. The Commission will further develop its interpretation of the concept of relevant product and geographic market in its case practice, taking into account developments in the markets and in competition dynamics, evolutions in best practices in market definition and in line with the case law of the Union Courts.
115. The Commission's interpretation of the concept of 'relevant market' in this Notice is without prejudice to the interpretation given to the concept by the Union Courts in individual cases.
116. This Notice supersedes the 1997 Commission Notice on the definition of relevant market for the purposes of Community competition law¹⁶⁶.

¹⁶⁴ Examples of longer reference periods due to lumpy demand can be found in tender markets. See, for example, case M.7278 *General Electric/Alstom (Thermal Power – Renewable Power & Grid Business)*, paragraphs 420-422, where market shares were calculated for a five and ten year period. In case M.8677 *Siemens/Alstom*, paragraph 141, a ten year reference period was used, while in cases M.9343 *Hyundai Heavy Industries Holdings / Daewoo Shipbuilding & Marine Engineering*, paragraphs 362ff, and M.10078 *Cargotec/Konecranes*, paragraph 533, an eleven-year reference period was used, split into several sub-periods. Several years' of data for shorter reference periods (namely seasons) have for instance been used in airline cases; see, for example, case M.8869 *Ryanair/Laudamotion*, paragraph 304.

¹⁶⁵ See, for example, case M.9674 *Vodafone Italia/TIM/INWIT JV*, paragraphs 81 and 147, where market shares for the market for the supply of hospitality services on macro-sites to mobile network operators were calculated and estimated for the years 2017-2027, that is to say including several years into the future. See also, for example, case M.10534 *Traton/Aktiebolaget Volvo/Daimler Truck/JV*, paragraphs 106-109 and 118-120, where the Commission assessed the creation of a joint venture in the newly emerging market for public charging solutions for battery electric heavy-duty trucks and coaches and assessed projected market shares several years into the future.

¹⁶⁶ OJ C 372, 9.12.1997, p. 5.