



C/2026/2323

21.4.2026

COMMUNICATION FROM THE COMMISSION

**Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union
to technology transfer agreements**

(Text with EEA relevance)

(C/2026/2323)

TABLE OF CONTENTS

1.	INTRODUCTION	3
2.	GENERAL PRINCIPLES	4
2.1.	Article 101 of the Treaty and intellectual property rights	4
2.2.	Concepts relevant for the application of Article 101 of the Treaty to technology transfer agreements ...	6
2.2.1.	The concept of undertaking	6
2.2.2.	Restriction of competition and the distinction between restrictions by object and restrictions by effect	6
2.2.3.	The effects of technology transfer agreements	7
2.2.3.1.	Positive effects	7
2.2.3.2.	Negative effects	8
2.2.4.	Market definition	9
2.2.5.	The distinction between competitors and non-competitors	11
2.3.	Agreements that generally fall outside the scope of Article 101(1) of the Treaty	13
3.	APPLICATION OF THE TECHNOLOGY TRANSFER BLOCK EXEMPTION REGULATION ('TTBER')	13
3.1.	Legal effects of the TTBER	13
3.2.	Scope and duration of the TTBER	14
3.2.1.	The concept of technology transfer agreements	14
3.2.1.1.	Provisions in technology transfer agreements relating to the purchase of products and the licensing of other types of intellectual property rights	14
3.2.1.2.	Licensing of intellectual property rights outside the scope of the TTBER	15
3.2.1.3.	Licensing of certain types of data	15
3.2.2.	The concept of 'transfer'	18
3.2.3.	Agreements between two parties	18
3.2.4.	Agreements for the production of contract products	19
3.2.5.	Duration	21
3.2.6.	Relationship with other block exemption regulations	21
3.2.6.1.	The block exemption regulations on specialisation and R&D agreements	21
3.2.6.2.	The Vertical Agreements Block Exemption Regulation	22

3.3.	The market share thresholds of the TTBER	23
3.3.1.	Market share thresholds	23
3.3.2.	Calculating market shares in technology markets under the TTBER	23
3.4.	Hardcore restrictions under the TTBER	27
3.4.1.	General principles	27
3.4.2.	Agreements between competitors	27
3.4.3.	Agreements between non-competitors	32
3.5.	Excluded restrictions	35
3.6.	Withdrawal and disapplication of the block exemption	38
3.6.1.	Withdrawal of the benefit of the block exemption	38
3.6.2.	Disapplication of the TTBER	39
4.	APPLICATION OF ARTICLE 101(1) AND (3) OF THE TREATY OUTSIDE THE SCOPE OF THE TTBER	40
4.1.	The general framework of analysis	40
4.1.1.	Relevant factors for the assessment under Article 101(1) of the Treaty	41
4.1.2.	Relevant factors for the assessment under Article 101(3) of the Treaty	42
4.2.	Application of Article 101 of the Treaty to various types of licensing restraints	44
4.2.1.	Royalty obligations	44
4.2.2.	Exclusive licensing and sales restrictions	45
4.2.2.1.	Exclusive and sole licences	45
4.2.2.2.	Sales restrictions	47
4.2.3.	Output restrictions	48
4.2.4.	Field of use restrictions	49
4.2.5.	Captive use restrictions	50
4.2.6.	Tying and bundling	51
4.2.7.	Non-compete obligations	52
4.3.	Settlement agreements	53
4.4.	Technology pools	55
4.4.1.	The assessment of the creation and operation of technology pools	56
4.4.2.	Assessment of restraints in agreements between the pool and its licensees	60
4.5.	Licensing negotiation groups	61
4.5.1.	Introduction	61
4.5.2.	Assessment under Article 101(1) of the Treaty	62
4.5.3.	Assessment under Article 101(3) of the Treaty	66

1. INTRODUCTION

1. These Guidelines set out the principles for the assessment of technology transfer agreements under Article 101 of the Treaty on the Functioning of the European Union ('the Treaty')⁽¹⁾. Technology transfer agreements are agreements whereby a licensor authorises a licensee to use certain technology rights for the production of goods or services, as defined in Article 1(1), point (c), of Commission Regulation (EU) 2026/877 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of technology transfer agreements ('the TTBER')⁽²⁾.
2. These Guidelines provide guidance on the application of the TTBER and on the application of Article 101 of the Treaty to technology transfer agreements that fall outside the scope of the TTBER. By issuing these Guidelines, the Commission aims to help undertakings to assess their technology transfer agreements under the Union's competition rules and thus to facilitate the use of such agreements. Technology transfer agreements enable the dissemination of technology and incentivise initial research and development, thereby promoting innovation⁽³⁾. The dissemination of technology and innovation are key drivers of a competitive, resilient and sustainable Union economy⁽⁴⁾.
3. The principles set out in these Guidelines must be applied in the light of the particular facts of each case. This excludes a mechanical application. Examples provided in these Guidelines serve only as illustrations and are not intended to be exhaustive.
4. These Guidelines are without prejudice to the interpretation of Article 101 of the Treaty and the TTBER by the General Court and the Court of Justice of the European Union (together referred to as 'the Court of Justice of the European Union').
5. The TTBER and these Guidelines are without prejudice to the application of Article 102 of the Treaty to technology transfer agreements.
6. These Guidelines are structured as follows:
 - (a) Section 2.1 outlines the general principles governing the application of Article 101 of the Treaty to technology transfer agreements. Section 2.2 discusses concepts relevant for the assessment of these agreements under Article 101, including the positive and negative effects of intellectual property licensing on competition, the definition of the relevant market and the distinction between competitors and non-competitors; Section 2.3 discusses agreements that generally fall outside the scope of Article 101.
 - (b) Section 3 provides guidance on the scope of the TTBER. It explains the definition of technology transfer agreements for the production of contract products, the relationship between the TTBER and other block exemption regulations, the market share thresholds set out in Article 3 of the TTBER, and the hardcore and excluded restrictions set out in Articles 4 and 5 of the TTBER.

⁽¹⁾ These Guidelines replace the Commission Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements (OJ C 89, 28.3.2014, p. 3).

⁽²⁾ OJ L, 2026/877, 21.4.2026, ELI: <http://data.europa.eu/eli/reg/2026/877/oj>. The TTBER replaces Commission Regulation (EU) No 316/2014 of 21 March 2014 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of technology transfer agreements (OJ L 93, 28.3.2014, p. 17, ELI: <http://data.europa.eu/eli/reg/2014/316/oj>).

⁽³⁾ See the Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions 'A Competitiveness Compass for the EU', COM (2025) 30 final.

⁽⁴⁾ Resilience includes defence readiness, resilience of defence supply chains and of the internal market.

- (c) Section 4 explains how technology transfer agreements that are not covered by the TTBER are assessed under Article 101(1) and (3) of the Treaty, and provides guidance on various types of restraints that are commonly found in technology transfer agreements, as well as guidance on other types of agreement relating to technology rights.

2. GENERAL PRINCIPLES

2.1. Article 101 of the Treaty and intellectual property rights

7. The objective of Article 101 of the Treaty is to ensure that undertakings do not use agreements, decisions by associations of undertakings and concerted practices ⁽⁵⁾ to prevent, restrict or distort competition on the market to the ultimate detriment of consumers. Article 101 also pursues the objective of achieving an integrated internal market, which enhances competition in the Union.
8. Article 101 of the Treaty applies to agreements between undertakings that may affect trade between Member States ⁽⁶⁾ and that prevent, restrict or distort competition ⁽⁷⁾. Article 101 provides a framework for the assessment of anti-competitive and pro-competitive effects.
9. The assessment of agreements under Article 101 of the Treaty consists of two steps. The first step, under Article 101(1), is to assess whether the agreement has an anti-competitive object or produces actual or potential restrictive effects. The second step, which only becomes necessary if an agreement is found to restrict competition within the meaning of Article 101(1), is to assess whether the agreement generates efficiencies that meet the four conditions of the exception provided for in Article 101(3). Those conditions are that the agreement (i) must contribute to improving the production or distribution of products or to promoting technical or economic progress, while (ii) allowing consumers a fair share of the resulting benefits, without (iii) imposing restrictions that are not indispensable to the attainment of those objectives and without (iv) affording the participating undertakings the possibility of eliminating competition in respect of a substantial part of the products concerned ⁽⁸⁾. Pursuant to Article 2 of Regulation 1/2003, the burden of proving that an agreement restricts competition within the meaning of Article 101(1) rests on the competition authority or claimant alleging an infringement of Article 101, whereas the burden of proving that the four conditions of the Article 101(3) exception are fulfilled rests on the undertakings claiming the benefit of that exception.
10. Intellectual property laws confer exclusive rights on holders of patents, copyright, design rights, trade marks and other legally protected rights. The owner of intellectual property is entitled under intellectual property laws to prevent unauthorised use of its intellectual property and to exploit it, for example, by licensing it to third parties. With the exception of performance rights ⁽⁹⁾, once a product incorporating an intellectual property right has been put on the market in the European Economic Area by the holder or with its consent, the intellectual property right is exhausted, meaning that the holder can no longer use it to control the sale of the product (principle of Union

⁽⁵⁾ In these Guidelines, unless indicated otherwise, the term 'agreement' includes concerted practices and decisions of associations of undertakings.

⁽⁶⁾ See Commission Notice – Guidelines on the effect on trade concept contained in Articles 81 and 82 of the Treaty (OJ C 101, 27.4.2004, p. 81).

⁽⁷⁾ In these Guidelines, the term 'restriction' includes the prevention and distortion of competition.

⁽⁸⁾ The conditions of Article 101(3) of the Treaty and the methodology for applying them are further explained in the Commission Guidelines on the application of Article 81(3) of the Treaty (OJ C 101, 27.4.2004, p. 97).

⁽⁹⁾ This exception also applies to rental rights. See in this respect Article 1(2) of Directive 2006/115/EC of the European Parliament and of the Council of 12 December 2006 on rental right and lending right and on certain rights related to copyright in the field of intellectual property (OJ L 376, 27.12.2006, p. 28, ELI: <http://data.europa.eu/eli/dir/2006/115/oj>).

exhaustion) ⁽¹⁰⁾. The right holder has no right under intellectual property laws to prevent sales by licensees or buyers of products incorporating the licensed technology. The principle of Union exhaustion is consistent with the essential function of intellectual property rights, which is to grant the holder the right to exclude others from exploiting its intellectual property without its consent.

11. The fact that intellectual property laws grant exclusive rights of exploitation does not imply that intellectual property rights are immune from the application of competition law. Article 101 of the Treaty is in particular applicable to agreements whereby the holder licenses another undertaking to exploit its intellectual property rights ⁽¹¹⁾. Nor does it imply that there is a conflict between intellectual property rights and the Union competition rules. Intellectual property rights promote innovation by incentivising undertakings to invest in researching and developing new or improved products and processes. So does competition by putting pressure on undertakings to innovate. Innovation constitutes an essential and dynamic component of an open and competitive market economy. Therefore, both intellectual property rights and competition are necessary to promote innovation and to ensure that it is exploited competitively.
12. For the assessment of technology transfer agreements under Article 101 of the Treaty it must be kept in mind that the creation of intellectual property rights often entails substantial investment and that this is often a risky endeavour. In order not to limit dynamic competition and to maintain the incentive to innovate, innovators should not be unduly restricted in the exploitation of intellectual property rights that turn out to be valuable. For these reasons, innovators should be free to seek appropriate remuneration for successful projects that is sufficient to maintain their incentive to invest, taking failed projects into account. Technology licensing may also require the licensee to make significant sunk investments (that is to say that, upon leaving that particular field of activity, the investment cannot be used by the licensee for other activities or sold other than at a significant loss) in the licensed technology and production assets necessary to exploit it. Article 101 cannot be applied without considering such ex ante investments made by the parties and the risks relating thereto. The risk facing the parties and the sunk investment that must be committed may thus lead to an agreement falling outside Article 101(1) or fulfilling the conditions of Article 101(3) during the period of time required to recoup the investment.
13. The legal framework provided by Article 101 of the Treaty is sufficiently flexible to take into account the dynamic aspects of technology licensing. There is no presumption that intellectual property rights and licence agreements as such give rise to competition concerns. Most technology licensing agreements do not restrict competition. Indeed, technology licensing is generally pro-competitive, as it leads to the dissemination of technology and promotes innovation by licensors and licensees. Where technology licensing agreements do restrict competition, they often give rise to pro-competitive efficiencies that meet the conditions of Article 101(3) ⁽¹²⁾. The great majority of technology licensing agreements are therefore compatible with Article 101.

⁽¹⁰⁾ This principle of Union exhaustion is, for example, enshrined in Article 15(1) of Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of the Member States relating to trade marks (OJ L 336, 23.12.2015, p. 1, ELI: <http://data.europa.eu/eli/dir/2015/2436/oj>), Article 15(1) of Regulation (EU) 2017/1001 of the European Parliament and of the Council of 14 June 2017 on the European Union trade mark (OJ L 154, 16.6.2017, p. 1, ELI: <http://data.europa.eu/eli/reg/2017/1001/oj>), Article 15 of Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on the legal protection of designs (OJ L 289, 28.10.1998, p. 28, ELI: <http://data.europa.eu/eli/dir/1998/71/oj>), Article 21 of Council Regulation (EC) No 6/2002 of 12 December 2001 on European Union designs (OJ L 3, 5.1.2002, p. 1, ELI: <http://data.europa.eu/eli/reg/2002/6/oj>), Article 9(2) of Directive 2006/115/EC, cited in footnote 9, Article 4(2) of Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society (OJ L 167, 22.6.2001, p. 10, ELI: <http://data.europa.eu/eli/dir/2001/29/oj>), Article 4(2) of Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs (OJ L 111, 5.5.2009, p. 16, ELI: <http://data.europa.eu/eli/dir/2009/24/oj>), Article 5, point (c), of Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases (OJ L 77, 27.3.1996, p. 20, ELI: <http://data.europa.eu/eli/dir/1996/9/oj>), Article 5(5) of Council Directive 87/54/EEC of 16 December 1986 on the legal protection of topographies of semiconductor products (OJ L 24, 27.1.1987, p. 36, ELI: <http://data.europa.eu/eli/dir/1987/54/oj>), Article 16 of Council Regulation (EC) No 2100/94 of 27 July 1994 on Community plant variety rights (OJ L 227, 1.9.1994, p. 1, ELI: <http://data.europa.eu/eli/reg/1994/2100/oj>), Article 6 of Regulation (EU) No 1257/2012 of the European Parliament and of the Council of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection (OJ L 361, 31.12.2012, p. 1, ELI: <http://data.europa.eu/eli/reg/2012/1257/oj>). On software copyright, see, for example, the judgments of 3 July 2012, *UsedSoft GmbH v Oracle International Corp.*, C-128/11, ECLI:EU:C:2012:407 and of 12 October 2016, *Ranks and Vasiljević*, C-166/15, ECLI:EU:C:2016:762.

⁽¹¹⁾ See, for example, the judgment of 27 September 2023, *Valve v Commission*, T-172/21, ECLI:EU:T:2023:587, paragraph 191.

⁽¹²⁾ See the Commission Guidelines on the application of Article 81(3) of the Treaty cited in footnote 8.

2.2. Concepts relevant for the application of Article 101 of the Treaty to technology transfer agreements

2.2.1. The concept of undertaking

14. Article 101(1) of the Treaty applies to undertakings and associations of undertakings. An undertaking is any entity of personal, tangible and intangible elements engaged in an economic activity, irrespective of its legal status and the way in which it is financed.

2.2.2. Restriction of competition and the distinction between restrictions by object and restrictions by effect

15. Article 101(1) of the Treaty prohibits agreements which have as their object or effect the restriction of competition. Article 101(1) applies to restrictions of competition between the parties to the agreement and to restrictions of competition between any of those parties and third parties.
16. To assess whether a technology transfer agreement restricts competition, it is necessary to consider the actual context in which competition would occur in the absence of the agreement, as well as any restrictions contained in the agreement. In making this assessment, it is necessary to take account of the likely impact of the agreement on inter-technology competition (competition between undertakings using competing technologies) and on intra-technology competition (competition between undertakings using the same technology) ⁽¹³⁾. Article 101(1) of the Treaty prohibits restrictions of inter-technology competition and intra-technology competition. It is therefore necessary to assess to what extent the agreement affects or is likely to affect those two aspects of competition on the market.
17. The concept of restrictions by object refers to certain types of coordination between undertakings that reveal a sufficient degree of harm to competition, such that it is unnecessary to assess their effects ⁽¹⁴⁾.
18. The concept of restrictions by effect refers to agreements that do not have an anti-competitive object, but for which it is demonstrated that they have actual or potential restrictive effects on competition that are appreciable ⁽¹⁵⁾. For an agreement to have restrictive effects on competition, it must have, or be likely to have, an appreciable adverse impact on at least one of the parameters of competition on the market, such as price, output, product quality, product variety or innovation. To establish that an agreement restricts competition by effect, it is generally necessary to define the relevant market(s) and assess the effects of the agreement on market dynamics in the specific case. For instance, appreciable anti-competitive effects are more likely to occur where at least one of the parties to the agreement has or obtains some degree of market power ⁽¹⁶⁾.

⁽¹³⁾ Competition between undertakings that use the same technology (intra-technology competition) constitutes an important complement to competition between undertakings that use competing technologies (inter-technology competition). For instance, intra-technology competition may lead to lower prices for the products incorporating the technology in question, which may not only produce direct and immediate benefits for consumers of such products, but also spur further competition between undertakings that use competing technologies. In the context of licensing, the fact that licensees are selling their own product must also be taken into account. They are not re-selling a product supplied by another undertaking. There may thus be greater scope for product differentiation and quality-based competition between licensees than in the case of vertical agreements for the resale of products.

⁽¹⁴⁾ See, for example, the judgment of 21 December 2023, *European Superleague Company*, C-333/21, ECLI:EU:C:2023:1011, paragraph 162 and the case law cited.

⁽¹⁵⁾ For further guidance on the notion of restrictions by object and restrictions by effect, the analytical framework used to assess them and examples of such restrictions, see, for example, the judgment of 21 December 2023, *European Superleague Company*, C-333/21, ECLI:EU:C:2023:1011, paragraphs 161 *et seq.* and the judgment of 5 December 2024, *Tallinna Kaubamaja Grupp and KIA Auto*, C-606/23, ECLI:EU:C:2024:1004, paragraphs 23 *et seq.*; see also the Commission Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal cooperation agreements ('Horizontal Guidelines') (OJ C 259, 21.7.2023, p. 1), paragraphs 22 *et seq.*

⁽¹⁶⁾ Market 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. The degree of market power normally required to find an infringement under Article 101(1) of the Treaty for agreements that restrict competition by effect is less than the degree of market power required for a finding of dominance under Article 102 of the Treaty.

19. Where undertakings engage in cooperation that does not fall within the prohibition laid down in Article 101(1) of the Treaty because it has neutral or positive effects on competition, a restriction of the commercial autonomy of one or more of the parties does not fall within that prohibition either, provided it is objectively necessary to implement the cooperation and is proportionate to the objectives of the cooperation ('ancillary restraints')⁽¹⁷⁾. To determine whether a restriction constitutes an ancillary restraint, it is necessary to examine whether the cooperation would be impossible to carry out in the absence of the restriction in question. The fact that the cooperation is more difficult to implement or less profitable without the restriction is not sufficient to make the restriction objectively necessary and thus ancillary⁽¹⁸⁾.
20. As explained in paragraph 9 of these Guidelines, an agreement that restricts competition within the meaning of Article 101(1) of the Treaty may still be compatible with Article 101 if the parties can show that the agreement fulfils the four cumulative conditions of Article 101(3).

2.2.3. *The effects of technology transfer agreements*

21. To assess technology transfer agreements under Article 101 of the Treaty, it is necessary to take into account all the relevant parameters of competition, such as prices, output in terms of product quantities, product quality and variety, and innovation. The following Sections present examples of the possible effects of technology transfer agreements on these parameters, distinguishing between positive and negative effects.

2.2.3.1. Positive effects

22. Technology transfer agreements can have substantial pro-competitive effects. Indeed, the vast majority of such agreements are pro-competitive. In particular, technology transfer agreements may promote innovation by allowing innovators to earn a return on their investments in research and development ('R&D').
23. Technology transfer agreements also enable the dissemination of technology, which may create value by reducing the production costs of the licensee or by enabling it to produce new or improved products. At the level of the licensee, efficiencies often result from the combination of the licensor's technology with the assets and technologies of the licensee. Licensing often occurs because it is more efficient for the licensor to license the technology than to exploit it itself, for example because the licensee already has the necessary production assets. The agreement thus gives the licensee access to a technology that can be combined with those assets. For example, a university or research institute may grant a technology licence to a manufacturing company.
24. Technology licensing can also create efficiencies in the form of synergies by allowing the licensee to combine its technology with the licensor's technology. This may enable the licensee to attain a cost-output configuration that would not otherwise be possible.
25. Technology licensing agreements can also give rise to efficiencies at the distribution stage, in the same way as vertical agreements for the distribution of goods and services. Such efficiencies can take the form of cost savings or the provision of valuable services to consumers. The positive effects of vertical agreements are described in the Commission Guidelines on vertical restraints⁽¹⁹⁾ ('Vertical Guidelines').

⁽¹⁷⁾ Judgment of 26 October 2023, *EDP – Energias de Portugal and Others*, C-331/21, ECLI:EU:C:2023:812, paragraphs 88 *et seq.*; judgment of 11 September 2014, *MasterCard v Commission*, C-382/12 P, ECLI:EU:C:2014:2201, paragraph 89; judgment of 11 July 1985, *Remia and Others v Commission*, C-42/84, EU:C:1985:327, paragraphs 19-20; judgment of 28 January 1986, *Pronuptia*, C-161/84, ECLI:EU:C:1986:41, paragraphs 15-17; judgment of 15 December 1994, *Göttrup-Klim*, C-250/92, ECLI:EU:C:1994:413, paragraph 35, and judgment of 12 December 1995, *Oude Luttikhuis and Others*, C-399/93, ECLI:EU:C:1995:434, paragraphs 12-15.

⁽¹⁸⁾ Judgment of 26 October 2023, *EDP – Energias de Portugal and Others*, C-331/21, ECLI:EU:C:2023:812, paragraph 90 and judgment of 11 September 2014, *MasterCard v Commission*, C-382/12 P, ECLI:EU:C:2014:2201, paragraph 91.

⁽¹⁹⁾ OJ C 248, 30.6.2022, p. 1, paragraphs 12 *et seq.*

26. Technology licensing may also serve the pro-competitive purpose of removing obstacles to the development and exploitation of the licensee's own technology. In particular, in sectors where there are large numbers of patents, licensing is often used to create design freedom, by removing the risk of patent infringement claims by the licensor ⁽²⁰⁾.

2.2.3.2. Negative effects

27. Technology transfer agreements are generally pro-competitive, however in certain cases, undertakings may use them to pursue anti-competitive objectives that ultimately harm consumers.
28. Restrictive technology transfer agreements can lead to negative effects on the market, including:
- (a) reduction of inter-technology competition, including facilitation of collusion, both explicit and tacit;
 - (b) foreclosure of competitors by raising their costs, restricting their access to inputs or otherwise raising barriers to entry; and
 - (c) reduction of intra-technology competition.
29. The risk of reduced inter-technology competition is higher where reciprocal obligations are imposed ⁽²¹⁾. For example, where competitors transfer competing technologies to each other and impose a reciprocal obligation to provide each other with future improvements of their respective technologies, and where the agreement prevents either competitor from gaining a technological lead over the other, competition in innovation between the parties is restricted (see also paragraph 264).
30. Technology transfer agreements between competitors can also facilitate coordination. The risk of a collusive outcome is higher in concentrated markets ⁽²²⁾. Technology transfer agreements can facilitate coordination by increasing transparency in the market, by controlling certain behaviour and by raising barriers to entry. Coordination can also be facilitated by agreements that lead to a high degree of commonality of costs (namely the proportion of costs that the parties have in common), as this may increase the parties' ability to achieve a collusive outcome on prices ⁽²³⁾.
31. Coordination can also be facilitated by the exchange of commercially sensitive information between competitors during the implementation of a technology transfer agreement. However, the exchange of certain commercially sensitive information may be objectively necessary for the implementation of the agreement ⁽²⁴⁾. Where the agreement does not itself fall within the prohibition laid down in Article 101(1) of the Treaty because it has neutral or positive effects on competition, an information exchange that is ancillary to that agreement does not fall within that prohibition either. That is the case if the information exchange is objectively necessary to implement the licensing agreement and is proportionate to the objectives thereof. Where the information exchange goes beyond what is objectively necessary to implement the agreement or is not proportionate to the objectives thereof, it should be assessed using the guidance provided in Chapter 6 of the Horizontal Guidelines. If the information exchange falls within Article 101(1), it may still fulfil the conditions of Article 101(3).

⁽²⁰⁾ However, where such licensing agreements result in one of the parties exiting from the market, they may fall within the scope of Article 101(1).

⁽²¹⁾ An example would be where two undertakings established in different Member States cross-license competing technologies to each other and agree not to sell products in each other's home markets. Such an agreement restricts potential competition between them.

⁽²²⁾ Coordination requires that the undertakings concerned have similar views on what is in their common interest and on how the coordination mechanisms function. For coordination to work, the undertakings must also be able to monitor each other's market behaviour and there must be adequate deterrents to ensure that there is an incentive not to depart from the common policy on the market, while entry barriers must be high enough to limit entry or expansion by outsiders.

⁽²³⁾ See, for example, paragraphs 241 *et seq.* of the Horizontal Guidelines, cited in footnote 15.

⁽²⁴⁾ See paragraphs 34 and 369 of the Horizontal Guidelines. Where the negotiation of the agreement requires the exchange of commercially sensitive information, appropriate safeguards should be implemented; see Section 6.2.4.4 of the Horizontal Guidelines.

32. Technology transfer agreements can also restrict inter-technology competition by creating barriers to entry or expansion by competitors. For instance, third party suppliers of technology may be foreclosed where incumbent licensors impose non-compete obligations on licensees to such an extent that an insufficient number of licensees are available to conclude licences with third party suppliers and where entry at the licensee level is difficult ⁽²⁵⁾.
33. Technology transfer agreements can also restrict intra-technology competition. This may result, for example, from the imposition on licensees of resale price maintenance or territorial or customer sales restrictions. Restrictions of intra-technology competition can facilitate collusion between licensees. They can also facilitate collusion between holders of competing technologies or reduce inter-technology competition by raising barriers to entry.

2.2.4. Market definition

34. The Commission's approach to defining the relevant market is set out in its Notice on the definition of the relevant market for the purposes of Union competition law ⁽²⁶⁾ ('Market Definition Notice'). These Guidelines only address aspects of market definition that are particularly important for technology licensing.
35. Technology is an input, which is integrated either into a product or a production process. Technology licensing can therefore affect competition both upstream in input markets and downstream in output markets. For example, an agreement between two undertakings that sell competing products downstream and that also cross-license technology rights relating to the production of those products upstream may restrict competition on the relevant downstream market for goods or services. The cross-licensing may also restrict competition on the relevant upstream market for technology and possibly also on other upstream input markets. To assess the competitive effects of technology licensing agreements, it may therefore be necessary to define the relevant product market(s) as well as the relevant technology market(s) ⁽²⁷⁾.
36. The relevant product market comprises the contract products (incorporating the licensed technology) and products that are regarded by the buyers as interchangeable with or substitutable for the contract products, by reason of 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 market. Contract products can belong to a final and/or an intermediate product market.
37. The relevant technology market consists of the licensed technology rights and their substitutes, that is to say, other technology rights that are regarded by licensees as interchangeable with or substitutable for the licensed technology rights, by reason of the technology rights' characteristics, their royalties and their intended use, taking into consideration the conditions of competition and the structure of supply and demand on the market. Starting from the technology that is marketed by the licensor, it is necessary to identify those other technologies to which

⁽²⁵⁾ Foreclosure of suppliers of substitute technologies can also occur where a licensor with significant market power bundles various components of a technology into a single licensing package, even though only part of the package is essential to produce a particular product.

⁽²⁶⁾ OJ C, C/2024/1645, 22.2.2024, ELI: <http://data.europa.eu/eli/C/2024/1645/oj>.

⁽²⁷⁾ See, for example, Commission Decision of 17 November 2010 in Case M.5675 – SYNGENTA / MONSANTO'S SUNFLOWER SEED BUSINESS, where the Commission analysed the merger of two vertically integrated sunflower breeders by examining both (i) the upstream market for the trading (namely the exchange and licensing) of varieties (parental lines and hybrids) and (ii) the downstream market for the commercialisation of hybrids. In its Decision of 13 March 2009 in Case M.5406 – IPIC / MAN FERROSTAAL AG, the Commission defined a market for the production of high-grade melamine, as well as an upstream technology market for the supply of melamine production technology. See also Commission Decision of 8 June 1994 in Case M.269 – SHELL / MONTECATINI and Commission Decision of 2 June 2023 in Case M.10783 – EQT FUTURE / AM FRESH / SNFL / IFG, in which the Commission assessed a merger involving companies active in the table grape industry by examining the upstream market for the breeding and licensing of seedless protected table grape vine varieties, as well as the downstream markets for the production and distribution of table grapes.

licensees would switch in response to a deterioration in the conditions of supply of the licensor's technology relative to those of other technologies (such as a small but permanent increase in the licence fees charged). An alternative approach is to look at the market for products incorporating the licensed technology rights (see paragraph 40).

38. The term 'relevant market' used in Article 3 of the TTBER and defined in Article 1(1), point (m), thereof refers to the relevant product market and the relevant technology market in both their product and geographic dimension.
39. The 'relevant geographic market' is defined in Article 1(1), point (l), of the TTBER and comprises the area in which the undertakings concerned are involved in the supply of and demand for products or the licensing of technology, in which the conditions of competition are sufficiently homogeneous, and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas. The geographic dimension of the relevant technology market(s) can differ from the geographic dimension of the relevant product market(s).
40. Once relevant markets have been defined, market shares can be assigned to each of the sources of competition in the market and used as an indication of the relative strength of market players. In the case of technology markets, one way to proceed is to calculate market shares on the basis of each technology's share of total licensing income from royalties, representing a technology's share of the market where competing technologies are licensed. However, this is often not a practical way to proceed, due to the lack of available information about royalty income. Another approach, which is the one used for the purpose of applying the TTBER, is to calculate market shares on the technology market based on sales of products incorporating the licensed technology on downstream product markets (for more detail, see paragraphs 112-117 of these Guidelines). For the individual assessment of technology transfer agreements that fall outside the block exemption provided by the TTBER, it may be necessary, where practically possible, to apply both of the described approaches in order to assess the market position of the licensor more accurately, and to take into account other factors that give a good indication of the relative strength of the available technologies (for more detail on those factors, see paragraphs 187-196 of these Guidelines) ⁽²⁸⁾.
41. Technology licensing agreements can affect competition in innovation ⁽²⁹⁾. In analysing such effects, however, the Commission will normally confine itself to examining the impact of the agreement on competition within existing product and technology markets. Competition on such markets may be affected by agreements that delay the introduction of improved products or new products which over time will replace existing products. In such cases, innovation is a source of potential competition that must be taken into account when assessing the impact of the agreement on existing product markets and technology markets. In a limited number of cases, however, it may be useful and necessary to also analyse the effects on competition in innovation separately. This is particularly the case for highly innovative markets characterised by frequent and significant R&D and where the agreement affects innovation aimed at creating new products or technologies ⁽³⁰⁾. In such cases, it may be appropriate to assess whether, following the conclusion of the agreement, there will remain a sufficient number of competing R&D projects to ensure that effective competition in innovation is maintained ⁽³¹⁾.

⁽²⁸⁾ See, for example, Commission Decision of 20 December 2012, in Case AT.39230 – *Rio Tinto Alcan*, paragraphs 38-41. See also Commission Decision in Cases M.10783 – *EQT FUTURE / AM FRESH / SNFL / IFG*, M.5675 – *SYNGENTA / MONSANTO'S SUNFLOWER SEED BUSINESS* and M.5406 – *IPIC / MAN FERROSTAAL AG*, cited in footnote 27 and Commission Decision of 21 March 2018 in Case M.8084 – *BAYER / MONSANTO*.

⁽²⁹⁾ For instance, technology licensing agreements may affect the development of products or technologies that will (i) improve existing products or technologies; (ii) replace existing products or technologies, or that would (iii) create an entirely new demand. Technology licensing agreements may also affect (iv) early innovation efforts, namely R&D activities that are not closely related to a specific product or technology.

⁽³⁰⁾ See, for example, paragraphs 90 *et seq.* of the Market Definition Notice, cited in footnote 26. In such markets, the level of R&D expenditure or the number of patents or patent citations may be used as metrics to assess the market position of the undertakings concerned; see paragraph 108 of the Market Definition Notice.

⁽³¹⁾ In this respect, these Guidelines provide a soft safe harbour for technology transfer agreements that fall outside the block exemption because the market share thresholds are exceeded: see paragraph 184.

2.2.5. The distinction between competitors and non-competitors

42. In general, agreements between competitors pose a greater risk to competition than agreements between non-competitors ⁽³²⁾.
43. To determine the competitive relationship between the parties to an agreement, it is necessary to examine whether the parties would have been actual or potential competitors in the absence of the agreement. If, without the agreement, the parties would not have been actual or potential competitors in any relevant market affected by the agreement, they are deemed to be non-competitors.
44. The parties are actual competitors on the product market if prior to the agreement both are already active on the same relevant product market.
45. A party is considered to be a potential competitor of the other party on the product market if, in the absence of the agreement, there would have existed real and concrete possibilities for the first party to enter the relevant market and compete with the other party that is established on that market ⁽³³⁾. A finding of potential competition must be based on a body of consistent facts taking into account the structure of the market and the economic and legal context within which it operates. The hypothetical possibility of entry or the mere wish or desire of a party to enter is not sufficient ⁽³⁴⁾. Conversely, it is not necessary to demonstrate with certainty that the undertaking will in fact enter the relevant market and that it will be capable of retaining its place there ⁽³⁵⁾. For example, entry is more likely if the licensee possesses assets that can easily be used to enter the market without incurring significant sunk costs, or if it has already developed plans, or otherwise started to invest, to enter the market.
46. In the specific context of intellectual property rights, it may be the case that one or both parties hold valid intellectual property rights that prevent the other party from operating in or entering the relevant market without infringing such technology rights. This is referred to as a 'blocking position'. In assessing the possible impact of a blocking position on their competitive relationship, the parties should consider the following factors:
 - (a) If both parties are already operating in the relevant market, it is very unlikely that they are in a blocking position, unless a final court judgment has confirmed both the validity and the infringement of the intellectual property right. In the absence of such a judgment, the parties are generally considered actual competitors.
 - (b) If one of the parties is not yet operating in the market, but has already made substantial investments or has taken significant preparatory steps to enter the market, it is very likely that the parties are at least potential competitors ⁽³⁶⁾. In the absence of such investments and steps, to assess whether the parties are potential

⁽³²⁾ See, for example, the considerations in paragraph 10 of the Vertical Guidelines (cited in footnote 19), which apply *mutatis mutandis* to technology licensing.

⁽³³⁾ See the judgment of 26 October 2023, *EDP – Energias de Portugal and Others*, C-331/21, ECLI:EU:C:2023:812, paragraph 61. For the purposes of the TTBER, entry must be likely to occur within a timeframe that is sufficiently short to impose competitive pressure on the undertakings that are already active on the relevant market. Normally, a period of no more than three years is appropriate. However, in certain cases (for example, in pharmaceutical markets), longer periods may be more appropriate.

⁽³⁴⁾ See, for example, the judgment of 26 October 2023, *EDP – Energias de Portugal and Others*, C-331/21, ECLI:EU:C:2023:812, paragraphs 60-63 and judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, ECLI:EU:C:2020:52, paragraphs 36-39.

⁽³⁵⁾ See, for example, the judgment of 26 October 2023, *EDP – Energias de Portugal and Others*, C-331/21, ECLI:EU:C:2023:812, paragraph 62; judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, ECLI:EU:C:2020:52, paragraphs 36-45; judgment of 25 March 2021, *H. Lundbeck A/S and Lundbeck Ltd v European Commission*, C-591/16 P, ECLI:EU:C:2021:243, paragraphs 54-57, and judgment of 27 June 2024, *Commission v Servier and Others*, C-176/19 P, ECLI:EU:C:2024:549, paragraphs 100-101.

⁽³⁶⁾ For instance, the parties are likely to be considered potential competitors on the product market where the licensee produces on the basis of its own technology in one geographic market and starts producing in another geographic market on the basis of a competing licensed technology. In such circumstances, it is likely that the licensee would have been able to enter the second geographic market on the basis of its own technology, unless such entry is precluded by objective factors, including the existence of blocking intellectual property rights.

competitors, it is necessary to take into account all the evidence available at the time, including the possibility that intellectual property rights are infringed, the validity of the rights in question and whether there are effective possibilities to work around existing intellectual property rights. Particularly convincing evidence of the existence of a blocking position is required where the parties have a common interest in claiming the existence of a blocking position in order to be categorised as non-competitors, for example, where the alleged blocking position concerns technologies that are technological substitutes (see paragraph 37) or if there is a significant inducement from one or both parties to the other ⁽³⁷⁾.

47. The parties are actual competitors on a technology market if they are both already licensing out substitutable technology rights or if the licensee is already licensing out its technology rights and the licensor enters the technology market by granting a licence for competing technology rights to the licensee.
48. The parties are potential competitors on a technology market if they own substitutable technologies and they would be likely to license them out in the event of a deterioration in the conditions of supply in that technology market. For example, a licensee will be considered to be a potential competitor of a licensor if it is not licensing out its own technology but would be likely to do so in the event of a deterioration in the conditions of supply on the relevant technology market ⁽³⁸⁾. In the case of technology markets, it is generally more difficult to assess whether the parties are potential competitors. That is why, for the application of the TTBER, potential competition on the technology market is not taken into account (see paragraph 109 below) and the parties are treated as non-competitors.
49. In some cases, it may also be possible to conclude that while the licensor and the licensee produce competing products, they are non-competitors on the relevant product market and the relevant technology market because the licensed technology represents such a drastic innovation that the technology of the licensee has become obsolete or uncompetitive. In such cases, the licensor's technology either creates a new market or excludes the licensee's technology from the existing market. However, it is often not possible to come to this conclusion at the time the agreement is concluded. It is usually only after the technology or the products incorporating it have been available to consumers for some time that it becomes apparent that the older technology has become obsolete or uncompetitive. For example, when compact disc technology was developed and compact discs were first put on the market, it was not obvious that this new technology would replace vinyl records. This only became apparent some years later. The parties will therefore be considered to be competitors if at the time of the conclusion of the agreement it is not obvious that the licensee's technology is obsolete or uncompetitive. However, given that both Article 101(1) and (3) of the Treaty must be applied in the light of the actual context in which the agreement occurs, the assessment is sensitive to material changes in the facts. The relationship between the parties may therefore change to a relationship of non-competitors if at a later point in time the licensee's technology becomes obsolete or uncompetitive on the market.
50. In some cases, the parties may become competitors after the conclusion of the agreement because the licensee develops or acquires and starts exploiting a competing technology. In such cases, the fact that the parties were non-competitors at the time of conclusion of the agreement and that the agreement was concluded in that context must be taken into account. The Commission will therefore mainly focus on the impact of the agreement on the licensee's ability to exploit its own (competing) technology. For that reason, the list of hardcore restrictions applicable to agreements between competitors does not apply to such agreements unless the agreement is subsequently amended in any material respect after the parties have become competitors (see paragraph 123).

⁽³⁷⁾ See, to that effect, the judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, ECLI:EU:C:2020:52, paragraphs 54-56; judgment of 27 June 2024, *Commission v Servier and Others*, C-176/19 P, ECLI:EU:C:2024:549, paragraphs 87-89, 103 and 131, and judgment of 27 June 2024, *Commission v Krka*, C-151/19 P, ECLI:EU:C:2024:546, paragraph 411.

⁽³⁸⁾ For operational and practical purposes, that assessment typically focuses on reactions to price increases. For example, one method is to consider whether the licensee would be likely to start licensing out its own technology in response to a small but permanent increase in technology prices. However, the assessment can also take into account changes affecting other parameters of competition, such as product quality or the level of innovation.

51. The parties to an agreement may also become competitors after the conclusion of the agreement where the licensee was already active on the relevant market where the contract products are sold before the conclusion of the agreement and the licensor subsequently enters that market either on the basis of the licensed technology rights or on the basis of another technology. In that case, the hardcore list applicable to agreements between non-competitors will again continue to apply for the full life of the agreement unless the agreement is subsequently amended in any material respect (see paragraph 123).

2.3. Agreements that generally fall outside the scope of Article 101(1) of the Treaty

52. Agreements that are not capable of appreciably affecting trade between Member States (no effect on trade) or which do not appreciably restrict competition (agreements of minor importance) fall outside the scope of Article 101(1) of the Treaty. The Commission has provided guidance on the lack of effect on trade in the Commission Guidelines on the effect on trade concept contained in Articles 81 and 82 of the EC Treaty ⁽³⁹⁾ ('Effect on Trade Guidelines') and on agreements of minor importance in the Commission Notice on agreements of minor importance which do not appreciably restrict competition under Article 101(1) of the Treaty on the Functioning of the European Union ⁽⁴⁰⁾ ('De Minimis Notice'). Both the Effect on Trade Guidelines and the De Minimis Notice are particularly relevant for the assessment of technology transfer agreements between small and medium-sized enterprises ('SMEs') ⁽⁴¹⁾.

3. APPLICATION OF THE TECHNOLOGY TRANSFER BLOCK EXEMPTION REGULATION ('TTBER')

3.1. Legal effects of the TTBER

53. Technology transfer agreements that fulfil the conditions of the TTBER are exempted from the prohibition contained in Article 101(1) of the Treaty. Block-exempted agreements are legally valid and enforceable ⁽⁴²⁾.
54. The block exemption provided by the TTBER is based on the assumption that – to the extent that they fall within Article 101(1) of the Treaty – certain categories of technology transfer agreements generally fulfil the four conditions of Article 101(3) ⁽⁴³⁾. The market share thresholds (Article 3 of the TTBER), the hardcore restrictions (Article 4 of the TTBER) and the excluded restrictions (Article 5 of the TTBER) are intended to ensure that only agreements that can reasonably be assumed to fulfil the conditions of Article 101(3) are block-exempted.
55. Technology transfer agreements that fall outside the block exemption are not subject to any presumption of illegality. Such agreements require an individual assessment to determine whether they restrict competition appreciably within the meaning of Article 101(1) and, if so, whether they meet the four conditions of the exception provided by Article 101(3). In particular, the mere fact that the market shares of the parties exceed the market share thresholds set out in Article 3 of the TTBER is not sufficient to establish that the agreement restricts competition within the meaning of Article 101(1). See Section 4 of these Guidelines for guidance on the individual assessment of technology transfer agreements that fall outside the block exemption.
56. As set out in Section 2 of these Guidelines, many technology transfer agreements fall outside the scope of Article 101(1) of the Treaty, either because they do not restrict competition at all, or because any restriction of competition is not appreciable ⁽⁴⁴⁾. In any case, where a technology transfer agreement meets the conditions of the TTBER, there is no need to determine whether it falls within Article 101(1) ⁽⁴⁵⁾.

⁽³⁹⁾ OJ C 101, 27.4.2004, p. 81.

⁽⁴⁰⁾ OJ C 291, 30.8.2014, p. 1.

⁽⁴¹⁾ For guidance on the definition of relevant markets and the calculation of market shares in the context of technology transfer agreements, see Section 2.2.4 of these Guidelines.

⁽⁴²⁾ Block-exempted agreements can only be prohibited following a withdrawal of the block exemption by the Commission or the competition authorities of the Member States in an individual case; see Section 3.6 of these Guidelines on withdrawal of the block exemption.

⁽⁴³⁾ See paragraph 9.

⁽⁴⁴⁾ See, for example, Section 2.3.

⁽⁴⁵⁾ Article 3(2) of 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) provides that agreements which affect trade between Member States but which do not restrict competition within the meaning of Article 101(1) of the Treaty, or which fulfil the conditions of Article 101(3) of the Treaty or are covered by a regulation for the application of Article 101(3) may not be prohibited by national competition law.

3.2. Scope and duration of the TTBER

3.2.1. *The concept of technology transfer agreements*

57. The TTBER and these Guidelines cover agreements for the transfer of technology. In accordance with Article 1(1), point (b), of the TTBER, the concept of 'technology rights' covers know-how, patents, utility models, design rights, topographies of semiconductor products, supplementary protection certificates for medicinal products or other products for which such supplementary protection certificates may be obtained, plant breeder's certificates and software copyrights, as well as combinations of those rights and applications for those rights and for registration of those rights. The licensed technology rights should allow the licensee, with or without other inputs, to produce the contract products. The TTBER only applies in Member States where the licensor holds relevant technology rights. Otherwise, there are no technology rights to be transferred within the meaning of the TTBER.
58. Know-how is defined in Article 1(1), point (i), of the TTBER as a package of practical information resulting from experience and testing which is secret, substantial and identified:
- (a) 'Secret' means that the know-how is not generally known or easily accessible.
 - (b) 'Substantial' means that the know-how includes information which is significant and useful for the production of the products covered by the licence agreement or the application of the process covered by the licence agreement. In other words, the information must significantly contribute to or facilitate the production of the contract products. In cases where the licensed know-how relates to a product rather than a process, this condition implies that the know-how is useful for the production of the contract product. This condition is not satisfied where the contract product can be produced on the basis of freely available technology. However, the condition does not require that the contract product is of higher value than products produced with freely available technology. In the case of process technologies, this condition implies that the know-how is useful in the sense that, at the date of conclusion of the agreement, it can reasonably be expected that the know-how is capable of significantly improving the competitive position of the licensee, for example, by reducing its production costs.
 - (c) 'Identified' means that it is possible to verify that the licensed know-how fulfils the criteria of secrecy and substantiality. This condition is satisfied where the licensed know-how is described in digital or paper form. However, in some cases this may not be reasonably possible. The licensed know-how may consist of practical knowledge possessed by the licensor's employees. For instance, the licensor's employees may possess secret and substantial knowledge about a certain production process which is passed on to the licensee in the form of training of the licensee's employees. In such cases, it is sufficient to describe in the agreement the general nature of the know-how and to list the employees that will be or have been involved in passing it on to the licensee.

3.2.1.1. Provisions in technology transfer agreements relating to the purchase of products and the licensing of other types of intellectual property rights

59. Article 2(3) of the TTBER provides that the block exemption also covers provisions in technology transfer agreements that relate to the purchase of products by the licensee if, and to the extent that, those provisions are directly related to the production or sale of the contract products. Therefore, the TTBER does not apply to those provisions that relate to inputs or equipment that are used for purposes other than the production of the contract products. For instance, where milk is sold together with a licence of technology to produce cheese, only the milk used for the production of cheese with the licensed technology will be covered by the TTBER.
60. Article 2(3) also provides that the block exemption covers provisions in technology transfer agreements that relate to the licensing of other types of intellectual property, such as trade marks and copyright other than software copyright ⁽⁴⁶⁾ if, and to the extent that, those provisions are directly related to the production or sale of the contract

⁽⁴⁶⁾ Regarding software copyright, see paragraphs 57 and 88-89.

products. This condition ensures that provisions covering other types of intellectual property rights are block-exempted to the extent that those other intellectual property rights enable the licensee to better exploit the licensed technology rights. For example, where a licensor authorises a licensee to use its trade mark on the products incorporating the licensed technology, this trade mark licence may allow the licensee to better exploit the licensed technology by allowing consumers to make an immediate link between the product and the characteristics imputed to it by the licensed technology rights. An obligation on the licensee to use the licensor's trade mark may also promote the dissemination of technology by allowing the licensor to identify itself as the source of the underlying technology. The TTBER covers technology transfer agreements in this scenario even if the principal interest of the parties lies in the exploitation of the trade mark rather than the technology ⁽⁴⁷⁾.

3.2.1.2. Licensing of intellectual property rights outside the scope of the TTBER

61. The Commission will not extend the principles set out in the TTBER and these Guidelines to trade mark licensing (except in the situation set out in paragraph 60). Trademark licensing often occurs in the context of distribution and resale of goods and services and is generally more akin to distribution agreements than technology licensing. Where a trade mark licence is directly related to the use, sale or resale of goods and services and does not constitute the primary object of the agreement, the licence agreement is covered by Commission Regulation (EU) 2022/720 ⁽⁴⁸⁾ (the 'Vertical Agreements Block Exemption Regulation').
62. The TTBER does not cover licensing of copyright other than software copyright (except in the situation set out in paragraph 60). The Commission will, however, as a general rule, apply the principles set out in the TTBER and these Guidelines when assessing the licensing of copyright for the production of contract products under Article 101 of the Treaty ⁽⁴⁹⁾. Conversely, the Commission will not extend the principles of the TTBER and these Guidelines to copyright licensing in merchandising agreements. Those agreements typically involve the right holder licensing a brand, fictional character or public figure for the purpose of the manufacture and sale of products bearing that sign or character. Such agreements are often more akin to distribution agreements than technology transfer agreements ⁽⁵⁰⁾.

3.2.1.3. Licensing of certain types of data

Application of the principles of the TTBER and Guidelines

63. The TTBER does not cover the licensing of data, except where the data that is being licensed constitutes know-how within the meaning of Article 1(1), point (i), of the TTBER (see paragraph 58 of these Guidelines) or one of the technology rights listed in Article 1(1), point (b), of the TTBER, or where the data licensing takes place in a technology transfer agreement and meets the conditions of Article 2(3) of the TTBER ⁽⁵¹⁾.

⁽⁴⁷⁾ For example, the TTBER could cover the technology transfer agreement assessed in Commission Decision 90/186/EEC of 23 March 1990 relating to a proceeding under Article 85 of the EEC Treaty (IV/32.736 – *Moosehead/Whitbread*) (OJ L 100, 20.4.1990, p. 32, ELI: <http://data.europa.eu/eli/dec/1990/186/oj>); see in particular paragraph 16 of that Decision.

⁽⁴⁸⁾ 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 (OJ L 134, 11.5.2022, p. 4, ELI: <http://data.europa.eu/eli/reg/2022/720/oj>).

⁽⁴⁹⁾ In assessing whether to apply the principles set out in the TTBER and these Guidelines, the Commission will consider the specificities of the legal and economic context. As regards the application of Article 101 to copyright licences, see, for example, the judgment of 4 October 2011, *Football Association Premier League and Others*, joined cases C-403/08 and C-429/08, ECLI:EU:C:2011:631, paragraphs 137-146 and judgment of 9 December 2020, *Groupe Canal + v Commission*, C-132/19 P, ECLI:EU:C:2020:1007.

⁽⁵⁰⁾ See, for example, Commission Decision of 25 March 2019 in case AT.40436 – *Ancillary Sports Merchandise*; Commission Decision of 9 July 2019 in case AT.40432 – *Character merchandise*, and Commission Decision of 30 January 2020 in case AT.40433 – *Film merchandise*.

⁽⁵¹⁾ This will be the case where the licensing of data takes place in a technology transfer agreement; is directly related to the production or sale of the contract products, and qualifies as the licensing or assignment of intellectual property rights or know-how to the licensee. The Commission considers that the last requirement is fulfilled where the licensed data is protected by copyright or the *sui generis* right defined in Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases (the 'Database Directive') (OJ L 77, 27.3.1996, p. 20, ELI: <http://data.europa.eu/eli/dir/1996/9/oj>).

64. The Commission will, however, generally apply the principles of the TTBER and these Guidelines when assessing under Article 101 of the Treaty data licensing agreements between two undertakings for the purpose of producing goods or services where the licensed data concerns a database that is protected by copyright or by the *sui generis* right defined in the Database Directive ⁽⁵²⁾.
65. The assessment of agreements for the licensing of such databases for the production of goods or services under Article 101 of the Treaty gives rise to similar considerations as the licensing of technology rights covered by the TTBER. In particular, the creation of databases protected by copyright or the database *sui generis* right may entail significant investments, and their licensing is, in general, pro-competitive. It promotes innovation, by allowing database creators to earn a return on their R&D costs. It also leads to the dissemination of data protected by intellectual property rights, which may increase downstream innovation and create value, by reducing the production costs of licensees or by enabling them to produce new or improved products ⁽⁵³⁾.
66. However, similarly to technology transfer agreements, restrictions of competition in licensing agreements relating to databases protected by copyright or the database *sui generis* right can produce anti-competitive effects in the market ⁽⁵⁴⁾, in particular in cases where one of the parties has market power. When assessing such restrictions, the Commission will generally apply the principles of the TTBER and these Guidelines. However, the licensing of data is a fast-evolving practice, and it cannot be excluded that certain restrictions of competition included in such licences are either not covered by these Guidelines or they produce effects on competition or consumers that are substantially different from those described in these Guidelines. In such cases, the Commission will assess the restrictions under Article 101 of the Treaty by applying general principles (see Section 2 of these Guidelines) to the facts of the case.
67. Where data licensing agreements concern data that is not protected by database *sui generis* rights or copyright in databases, the Commission will assess whether it is appropriate to apply the principles of the TTBER and these Guidelines, based on the circumstances of each case. Data licensing agreements entered into for the purpose of producing goods or services may concern various types of data. Due to differences in the characteristics of the data and in the levels of investment involved in obtaining and processing the data, the principles set out in the TTBER and these Guidelines (including the principles set out in the following paragraphs of this Section) may not be appropriate for assessing such agreements in all cases.

The exchange of commercially sensitive information

68. The exchange of commercially sensitive information between competitors may infringe Article 101 of the Treaty, regardless of whether the exchange occurs directly or indirectly through a third party ⁽⁵⁵⁾.
69. In the context of the licensing of databases protected by the database *sui generis* right or copyright, the exchange of commercially sensitive information may occur: (i) where the database itself contains commercially sensitive information, or (ii) where, in order to implement the data licensing agreement, the parties exchange commercially sensitive information that is not part of the database itself.

⁽⁵²⁾ Cited in footnote 51.

⁽⁵³⁾ The pro-competitive effects on the downstream market where the licensee operates are linked to the purpose of the licence, namely the production of contract products. However, licensed databases can also be used by licensees for other purposes, including for anti-competitive purposes that harm consumers, for example, for exploitative practices targeting particular (groups of) consumers. The guidance provided in this Section is limited to licensing agreements for the purpose of producing goods or services.

⁽⁵⁴⁾ Guidance on how to define relevant markets can be found in the Market Definition Notice cited in footnote 26.

⁽⁵⁵⁾ See Chapter 6 of the Horizontal Guidelines cited in footnote 15; see also the judgment of 29 July 2024, *Banco BPN v BIC Português and Others*, C-298/22, ECLI:EU:C:2024:638, paragraphs 51 *et seq.*

70. Where the licensing of the database itself does not fall within the prohibition in Article 101(1) of the Treaty because the licensing agreement has neutral or positive effects on competition, an information exchange that is ancillary to that agreement does not fall within that prohibition either. This will be the case if the exchange of commercially sensitive information is objectively necessary to implement the data licensing agreement and is proportionate to the objectives thereof.
71. By contrast, where the exchange of commercially sensitive information is not objectively necessary to implement the data licensing agreement (or is not proportionate to the objectives thereof) or where the exchange of commercially sensitive information is itself the main object of the data licensing agreement, the Commission will apply the principles set out in Chapter 6 of the Horizontal Guidelines concerning information exchange to assess whether the information exchange restricts competition ⁽⁵⁶⁾. In particular, an exchange of commercially sensitive information will constitute a restriction of competition by object where it is capable of removing uncertainty regarding the timing, extent and details of the modifications to be adopted by the undertakings concerned in their conduct on the market ⁽⁵⁷⁾.
72. In many cases, however, the exchange of commercially sensitive information in the context of database licensing does not restrict competition by object, in which case it will be necessary to assess whether the exchange has restrictive effects ⁽⁵⁸⁾. For an information exchange to have restrictive effects on competition within the meaning of Article 101(1) of the Treaty, it must be likely to have an appreciable adverse impact on the operation of the market in question, by impacting one (or more) of the parameters of competition in that market, including, for example, price, output, product quality, product variety or innovation. For that assessment, the nature of the information exchanged, the characteristics of the exchange and the market characteristics are relevant, as well as any measures implemented by the parties to reduce the risk of competition law infringements ⁽⁵⁹⁾.

Obligations imposed by other Union legislation

73. The guidance provided in these Guidelines is without prejudice to the application of Regulation (EU) 2016/679 of the European Parliament and Council ('General Data Protection Regulation') ⁽⁶⁰⁾ and other Union law applicable to the exchange of data. To the extent that undertakings retain discretion on how to implement such legislation, Article 101 of the Treaty continues to apply.
74. Where the data licensing is mandated by a data-sharing obligation imposed by Union legislation, the Commission will take such obligation into account when applying the principles of the TTBER and these Guidelines to the licensing agreement.

⁽⁵⁶⁾ This, however, does not prejudice the application of the safe harbour provided by the TTBER in the situations described in paragraph 63 above, namely where the data that is being licensed constitutes know-how within the meaning of Article 1(1), point (i), of the TTBER or one of the technology rights listed in Article 1(1), point (b), of the TTBER, or where the data licensing takes place in a technology transfer agreement and meets the conditions of Article 2(3) of the TTBER.

⁽⁵⁷⁾ See, for example, the judgment of 12 January 2023, *HSBC Holdings and Others v Commission*, C-883/19 P, EU:C:2023:11, paragraphs 115-116 and the case law cited.

⁽⁵⁸⁾ See Section 6.2.7 of the Horizontal Guidelines, cited in footnote 15.

⁽⁵⁹⁾ See Section 6.2.4.4 of the Horizontal Guidelines, cited in footnote 15.

⁽⁶⁰⁾ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1, ELI: <http://data.europa.eu/eli/reg/2016/679/oj>).

75. The Commission considers that data-sharing agreements mandated by Chapter II of the Data Act ⁽⁶¹⁾ will generally fall outside the prohibition of Article 101(1) of the Treaty and/or will satisfy the conditions of Article 101(3). This will, however, not be the case where such agreements are used by the parties to disguise agreements that have the object of restricting competition, such as price fixing, customer allocation or illicit exchanges of commercially sensitive information ⁽⁶²⁾.

3.2.2. *The concept of 'transfer'*

76. The concept of 'transfer' implies that technology must flow from one undertaking to another. Such transfers normally take the form of licensing, whereby the licensor grants the licensee the right to use its technology rights against the payment of royalties.
77. As set out in Article 1(1), point (c), of the TTBER, assignments where part of the risk associated with the exploitation of the technology rights remains with the assignor are also deemed to be technology transfer agreements. In particular, this is the case where the sum payable in consideration of the assignment is dependent on the turnover generated by the assignee from sales of products produced using the assigned technology, the quantity of such products produced or the number of operations carried out using the technology.
78. An agreement whereby the licensor commits not to exercise its technology rights against the licensee can also be considered as a transfer of technology rights. Indeed, the essence of a pure patent licence is the right to operate inside the scope of the exclusive right of the patent. It follows that the TTBER also covers so-called non-assertion agreements, whereby the licensor permits the licensee to produce within the scope of the patent ⁽⁶³⁾.

3.2.3. *Agreements between two parties*

79. In accordance with Article 1(1), point (c), of the TTBER, the block exemption only applies to technology transfer agreements 'between two undertakings'. Technology transfer agreements between more than two undertakings are therefore not covered by the block exemption ⁽⁶⁴⁾.
80. Agreements concluded between two undertakings are covered by the TTBER even if the agreement contains provisions relating to more than one level of trade. For example, the TTBER covers technology transfer agreements that concern not just the production stage but also the distribution stage, stipulating the obligations that the licensee must or may impose on resellers of the products produced under the licence ⁽⁶⁵⁾.
81. Agreements establishing technology pools and licensing out from technology pools are generally multi-party agreements and are therefore not covered by the TTBER ⁽⁶⁶⁾. The notion of technology pools covers agreements whereby two or more parties agree to pool their respective technologies and license them as a package. The notion of technology pools also covers arrangements whereby two or more undertakings agree to license a third party and authorise it to license-on the package of technologies.

⁽⁶¹⁾ Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act) (OJ L, 2023/2854, 22.12.2023, ELI: <http://data.europa.eu/eli/reg/2023/2854/oj>).

⁽⁶²⁾ Recital 116 of the Data Act states that the Data Act 'should not affect the application of the rules of competition, in particular Articles 101 and 102 TFEU' and that 'the measures provided for in this Regulation should not be used to restrict competition in a manner contrary to the TFEU'.

⁽⁶³⁾ The terms 'licensing' and 'licensed' used in these Guidelines also include non-assertion arrangements, provided a transfer of technology rights takes place as described in this Section.

⁽⁶⁴⁾ Pursuant to Article 1(1)(b) of Regulation No 19/65/EEC of the Council of 2 March 1965 on application of Article 85(3) of the Treaty to certain categories of agreements and concerted practices (OJ 36, 6.3.1965, p. 533, ELI: <http://data.europa.eu/eli/reg/1965/19/oj>), the Commission's power to block-exempt technology transfer agreements is limited to agreements to which only two undertakings are party.

⁽⁶⁵⁾ See recital 6 of the TTBER and Section 3.2.6 of these Guidelines.

⁽⁶⁶⁾ For more details, see paragraphs 270-271.

82. Technology licensing agreements concluded between more than two undertakings often give rise to the same issues as agreements of the same nature concluded between two undertakings. For the individual assessment under Article 101 of the Treaty of technology licensing agreements that are of the same nature as those covered by the block exemption but which are concluded between more than two undertakings, the Commission will apply by analogy the principles set out in the TTBER. However, technology pools and licensing out from technology pools are covered by specific guidance in Section 4.4 of these Guidelines.

3.2.4. *Agreements for the production of contract products*

83. It follows from Article 1(1), point (c), of the TTBER that, to benefit from the block exemption, technology transfer agreements must be entered into 'for the purpose of the production of contract products', namely products that incorporate or are produced using the licensed technology rights. Therefore, the agreement must permit the licensee and/or its sub-contractor(s) to exploit the licensed technology for the purpose of producing goods or services (see also recital 7 of the TTBER).
84. Where the purpose of the agreement is not the production of contract products but, for example, merely to block the development or commercialisation of a competing technology, the agreement is not covered by the TTBER, and these Guidelines may not be appropriate for assessing the agreement. More generally, if the parties refrain from exploiting the licensed technology rights, no efficiency-enhancing activity takes place, in which case the rationale for the block exemption is absent.
85. Exploitation of the licensed technology rights does not necessarily have to take the form of an integration of assets. Exploitation also occurs where the licence creates design freedom for the licensee, by allowing it to exploit its own technology without facing the risk of infringement claims by the licensor. However, in the case of licensing between competitors, the fact that the parties do not exploit the licensed technology may be an indication that the arrangement is a disguised cartel. For these reasons, the Commission will examine cases of non-exploitation very closely.
86. The TTBER applies to technology transfer agreements for the purpose of the production of contract products by the licensee and/or its sub-contractor(s). Therefore, the TTBER does not apply to (those parts of) technology transfer agreements that allow for sub-licensing. However, the Commission will apply by analogy the principles set out in the TTBER and these Guidelines to 'master licensing' agreements between a licensor and a licensee (that is to say an agreement whereby the licensor allows the licensee to sublicense the technology). Agreements between the licensee and sub-licensees for the production of contract products are covered by the TTBER.
87. The term 'contract products' encompasses goods and services produced using the licensed technology rights. That is the case both where the licensed technology is used in the production process and where it is incorporated into the product itself. In these Guidelines, the term 'products incorporating the licensed technology' covers both situations. The TTBER applies in all cases where technology rights are licensed for the purposes of producing goods and services. The analytical framework provided by the TTBER and these Guidelines is based on the premise that there is a direct link between the licensed technology rights and a contract product. In cases where no such link exists, namely where the purpose of the agreement is not to enable the production of an identified product, the analytical framework provided by the TTBER and these Guidelines may not be appropriate.
88. The licensing of software copyright for the purpose of reselling or otherwise distributing the software, whether through physical or digital channels ⁽⁶⁷⁾, is not considered to be 'production' within the meaning of the TTBER and thus is not covered by the TTBER or these Guidelines. Such licensing is instead covered by analogy by the Vertical

⁽⁶⁷⁾ See, for example, the Commission Decision of 20 January 2021 in case AT.40413 – *Focus Home – Video Games*.

Agreements Block Exemption Regulation ⁽⁶⁸⁾ and the Vertical Guidelines ⁽⁶⁹⁾. For example, the TTBER and these Guidelines do not cover the licensing of software copyright whereby the software is provided to the licensee in digital or physical form to enable the licensee to offer the software to end users. Nor do they cover the licensing of software copyright and distribution of software by means of 'clickwrap' licences, that is, a set of conditions presented to the end user during software installation or online download or streaming, which the user is deemed to have accepted by clicking an 'I agree' or equivalent button before proceeding.

89. However, where the licensed software is incorporated by the licensee into the contract product, this is not considered as reselling but as production. For example, the TTBER and these Guidelines cover the licensing of software copyright where the licensee is authorised to incorporate the software into a device with which the software interacts. Similarly, where the licensed software is used as an input for the licensee's industrial processes or where the licensee adds significant value to the software through modification or further development, that is considered licensing for the purpose of production.
90. The TTBER covers subcontracting, whereby the licensor licenses technology rights to the licensee who undertakes to produce certain products on the basis thereof exclusively for the licensor. Subcontracting may also involve the supply of equipment by the licensor to be used in the production of the goods and services covered by the agreement. For the latter type of subcontracting to be covered by the TTBER as part of a technology transfer agreement, the supplied equipment must be directly related to the production of the contract products ⁽⁷⁰⁾. Subcontracting is also covered by the Commission Notice on subcontracting agreements ⁽⁷¹⁾. In accordance with that Notice, subcontracting agreements whereby the subcontractor undertakes to produce certain products exclusively for the contractor generally fall outside Article 101(1) of the Treaty. Subcontracting agreements whereby the contractor determines the transfer price of the intermediate contract product between subcontractors in a value chain of subcontracting generally also fall outside Article 101(1), provided the contract products are produced exclusively for the contractor. However, other restrictions imposed on the subcontractor, such as the obligation not to conduct or exploit its own R&D may fall within Article 101(1) ⁽⁷²⁾.
91. The TTBER also applies to agreements whereby the licensee must carry out R&D before obtaining a product or a process that is ready for commercial exploitation, provided that the object of the agreement is the production of an identified contract product, that is to say, a product produced using the licensed technology rights. Where the licensor is an academic body, research institute or SME, which, in each case, is not engaged in production activities, the technology transfer agreement can identify the product in more general terms (for instance, by specifying the field of use or product market in which the licensed technology may be used).
92. The TTBER and these Guidelines do not cover agreements whereby technology rights are licensed for the purpose of enabling the licensee to carry out further R&D, including further developing a product arising out of such R&D. Such agreements are covered by Commission Regulation (EU) 2023/1066 ⁽⁷³⁾ (the 'R&D Block Exemption Regulation') provided they meet the conditions of that Regulation, and are assessed in accordance with the guidance provided in Chapter 2 of the Horizontal Guidelines ⁽⁷⁴⁾. For instance, the TTBER and these Guidelines do not cover R&D sub-contracting, whereby the licensee agrees to carry out paid-for R&D in the field of the licensed

⁽⁶⁸⁾ Cited in footnote 48.

⁽⁶⁹⁾ Cited in footnote 19.

⁽⁷⁰⁾ See paragraph 59.

⁽⁷¹⁾ Commission Notice of 18 December 1978 concerning its assessment of certain subcontracting agreements in relation to Article 85(1) of the EEC Treaty (OJ C 1, 3.1.1979, p. 2).

⁽⁷²⁾ See paragraph 3 of the Commission Notice on subcontracting agreements cited in footnote 71.

⁽⁷³⁾ 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, ELI: <http://data.europa.eu/eli/reg/2023/1066/oj>). See also Section 3.2.6.1 of these Guidelines.

⁽⁷⁴⁾ Cited in footnote 15. See also Section 3.2.6.1 of these Guidelines.

technology and to transfer the improved technology package back to the licensor ⁽⁷⁵⁾. Also, the mere licensing of a technological research tool for use in further research activity is more akin to R&D agreements from the perspective of the assessment under Article 101 of the Treaty. To assess such agreements, the Commission will, as a general rule, apply the principles set out in the R&D Block Exemption Regulation and Chapter 2 of the Horizontal Guidelines.

3.2.5. Duration

93. The block exemption applies for as long as the licensed technology right has not expired, lapsed or been declared invalid. In the case of know-how, the block exemption applies as long as the licensed know-how remains secret, and stops applying when the know-how loses its secrecy, except where the know-how becomes publicly known as a result of action by the licensee, in which case the exemption applies for the duration of the agreement (see Article 2(2) of the TTBER).
94. The block exemption applies to each licensed technology right covered by the agreement and ceases to apply on the date of expiry, invalidity or the entry into the public domain of the last technology right within the meaning of the TTBER.

3.2.6. Relationship with other block exemption regulations

95. The TTBER covers agreements between two undertakings concerning the licensing of technology rights for the purpose of producing goods or services. However, other types of agreements can also contain provisions relating to technology licensing. In addition, the products incorporating licensed technology are subsequently sold on the market. It is therefore necessary to explain the relationship between the TTBER and Commission Regulation (EU) 2023/1067 ⁽⁷⁶⁾ (‘the Specialisation Block Exemption Regulation’), the R&D Block Exemption Regulation ⁽⁷⁷⁾ and the Vertical Agreements Block Exemption Regulation ⁽⁷⁸⁾.

3.2.6.1. The block exemption regulations on specialisation and R&D agreements

96. Pursuant to Article 9 of the TTBER, the TTBER does not apply to technology licensing in specialisation agreements that are covered by the Specialisation Block Exemption Regulation or to technology licensing in R&D agreements that are covered by the R&D Block Exemption Regulation. In other words, where an agreement is covered by one of those two Block Exemption Regulations, that Regulation applies, and not the TTBER.
97. The Specialisation Block Exemption Regulation covers specialisation agreements, whereby one or more parties agree to cease producing certain products and to buy them from another party, and joint production agreements, whereby two or more parties agree to produce certain products jointly ⁽⁷⁹⁾. That Regulation extends to provisions concerning the assignment or use of intellectual property rights, provided that those provisions do not constitute the primary object of the agreement, but are directly related to and necessary for its implementation.
98. Where undertakings establish a production joint venture and grant a technology licence to the joint venture for the purpose of production, such licensing is covered by the Specialisation Block Exemption Regulation and not by the TTBER. However, where the joint venture licenses the technology to third parties, that activity is not linked to production by the joint venture and therefore is not covered by the Specialisation Block Exemption Regulation. Such licensing arrangements, which bring together the technologies of the parties, may constitute technology pools, which are covered by Section 4.4 of these Guidelines.

⁽⁷⁵⁾ However, this last example is covered by the R&D Block Exemption Regulation, cited in footnote 73; see also Section 3.2.6.1 of these Guidelines.

⁽⁷⁶⁾ 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, ELI: <http://data.europa.eu/eli/reg/2023/1067/oj>).

⁽⁷⁷⁾ Cited in footnote 73.

⁽⁷⁸⁾ Cited in footnote 48.

⁽⁷⁹⁾ See Article 1(1) of the Specialisation Block Exemption Regulation.

99. The R&D Block Exemption Regulation covers agreements between two or more undertakings relating to joint or paid-for R&D and the joint exploitation of the results thereof. In accordance with Article 1(1), point (10), of that Regulation, joint R&D and joint exploitation of the results thereof means that the task is carried out by a joint team, organisation or undertaking, jointly entrusted to a third party or allocated between the parties by way of specialisation. Exploitation includes production and distribution, including licensing.
100. It follows that the R&D Block Exemption Regulation covers licensing between the parties and by the parties to a joint entity in the context of an R&D agreement, and that such licensing is not covered by the TTBER. In the context of such agreements, the parties can also determine the conditions for licensing the results of the joint or paid-for R&D to third parties. However, since third party licensees are not party to the R&D agreement, the individual licence agreements concluded with third parties are not covered by the R&D Block Exemption Regulation. Those licence agreements are covered by the TTBER provided they meet the conditions of the TTBER.

3.2.6.2. The Vertical Agreements Block Exemption Regulation

101. The Vertical Agreements Block Exemption Regulation ⁽⁸⁰⁾ applies to agreements between two or more undertakings, each operating, for the purposes of the agreement, at different levels of the production or distribution chain, and relating to the conditions under which the parties may purchase, sell or resell certain goods or services. It therefore covers supply and distribution agreements.
102. Technology transfer agreements between a licensor and a licensee are covered by the TTBER, whereas agreements between a licensee and buyers of the contract products are covered by the Vertical Agreements Block Exemption Regulation.
103. The TTBER also covers technology transfer agreements that impose obligations on the licensee regarding the manner in which it must sell the products incorporating the licensed technology. In particular, the licensor can require the licensee to establish a certain type of distribution system, such as exclusive distribution or selective distribution. The distribution agreements concluded for the purpose of implementing such obligations are not covered by the TTBER but they can benefit from the Vertical Agreements Block Exemption Regulation, provided they meet the conditions of that Regulation. For example, if the licensor obliges the licensee to establish an exclusive distribution system to sell the contract products, the exclusive distribution agreements between the licensee and its distributors are not covered by the TTBER, but they can benefit from the Vertical Agreements Block Exemption Regulation provided the licensee ensures that its distributors remain free to make passive sales into territories allocated to other exclusive distributors appointed by the licensee ⁽⁸¹⁾.
104. Furthermore, to benefit from the Vertical Agreements Block Exemption Regulation, distributors must in principle be free to sell both actively and passively into territories covered by the distribution systems of other suppliers, that is to say, other licensees producing their own products on the basis of the licensed technology rights. That is because, for the purposes of the Vertical Agreements Block Exemption Regulation, each licensee is a separate supplier. However, the rationale for block-exempting active sales restrictions within a supplier's distribution system under that Regulation may also apply where the products incorporating the licensed technology are sold by separate licensees under a common brand belonging to the licensor. In that case, there may be the same efficiency reasons for applying the same types of restraints between the licensees' distribution systems as within a single vertical distribution system. In such cases, the Commission is unlikely to challenge restraints where, by analogy, the requirements of the Vertical Agreements Block Exemption Regulation are fulfilled. For a common brand identity to exist, the products must be sold and marketed under a common brand, capable of conveying quality and other relevant information to the consumer. It is not sufficient that, in addition to the licensees' brands, the product carries the licensor's brand, which identifies it as the source of the licensed technology.

⁽⁸⁰⁾ Cited in footnote 48.

⁽⁸¹⁾ See Article 4, points (b), (c) and (d), of the Vertical Agreements Block Exemption Regulation.

3.3. The market share thresholds of the TTBER

105. The legal safe harbour provided by the TTBER is subject to market share thresholds, which limit the scope of the block exemption to agreements that can generally be assumed to fulfil the conditions of Article 101(3) of the Treaty. The fact that a technology transfer agreement falls outside the safe harbour because the parties' market shares exceed the thresholds does not create a presumption either that the agreement falls within Article 101(1) or that it does not fulfil the conditions of Article 101(3). Such agreements require an individual assessment under Article 101.

3.3.1. Market share thresholds

106. The TTBER provides for separate market share thresholds for agreements between competitors and agreements between non-competitors.
107. The market share thresholds apply both to the relevant market(s) of the licensed technology rights and the relevant market(s) of the contract products. If the applicable market share threshold is exceeded on one or more relevant product or technology market(s), the block exemption does not apply to the agreement for that market(s). For example, if the technology transfer agreement concerns two separate product markets, the block exemption may apply to one of the markets and not to the other.
108. Where the undertakings party to the technology transfer agreement are competing undertakings, Article 3(1) of the TTBER provides that the block exemption applies on condition that the combined market share of the parties does not exceed 20 % on any relevant market. The market share threshold set out in Article 3(1) of the TTBER is applicable if the parties are actual or potential competitors on the product market(s) or actual competitors on the technology market, or both. For the distinction between competitors and non-competitors, see Section 2.2.5 of these Guidelines.
109. Potential competition on the technology market is not taken into account for the purpose of applying the TTBER's market share threshold or the hardcore restrictions or excluded restrictions relating to agreements between competitors. However, for agreements that fall outside the block exemption, potential competition on the technology market is taken into account for the individual assessment of the agreement under Article 101 of the Treaty.
110. Where the undertakings party to the technology transfer agreement are not competitors, the market share threshold set out in Article 3(2) of the TTBER applies. This provides that the block exemption applies if the market share of each party does not exceed 30 % on the relevant technology and product markets.
111. Where the parties become competitors within the meaning of Article 3(1) of the TTBER at a later point in time, for example where the licensee was already present on the relevant market for the contract products before the date of the agreement and the licensor subsequently becomes an actual or potential supplier on that market, the 20 % market share threshold will apply from the point in time when they became competitors. However, in that case, the hardcore list applicable to agreements between non-competitors continues to apply for the full life of the agreement, unless the agreement is subsequently amended in any material respect (see Article 4(3) of the TTBER and paragraph 123 of these Guidelines).

3.3.2. Calculating market shares in technology markets under the TTBER

112. Article 8, point (d), of the TTBER specifies the method that must be used to calculate market shares in relevant technology markets for the purpose of applying the TTBER. Under this method, the market share of a party that is active as a licensor on a relevant technology market is calculated on the basis of the presence of that party's technology rights on the relevant market(s) (namely the product market(s) and geographic market(s)) where the contract products are sold. For that purpose, it is necessary to take the combined sales of products incorporating that party's technology rights, whether sold by that party itself or by its licensees, and divide them by the total sales of all products competing on that relevant market, irrespective of whether those products are produced using a licensed technology. In cases where the licensee is itself active as a licensor on the relevant technology market, this method is also used to calculate the market share of the licensee.

113. This approach to calculating market shares on relevant technology markets, based on the technology's 'footprint' at the product level, has been chosen because of the practical difficulties of calculating market shares on technology markets using royalty income (see paragraph 40). In addition to the practical difficulty of obtaining reliable royalty income data, the actual royalty income may also underestimate a technology's position on the market in the event that royalty payments are reduced as a result of cross-licensing or the supply of tied products. This risk is not present when market shares in the technology market are calculated based on the products produced using the relevant technology. The technology's footprint at the product level will generally reflect its market position well.
114. It follows from Article 3 and Article 8, point (d), of the TTBER that if the licensed technology has not generated sales of contract products in the preceding calendar year, for example because the technology is new and products incorporating the technology have not yet been commercialised, the technology is considered, for the purposes of applying the TTBER, to have a market share of zero for that calendar year. This principle is illustrated in Example 1 below.
115. Ideally, products produced using in-house technologies that are not licensed out would be excluded from the product market for the purpose of calculating the footprint, as in-house technologies exert only an indirect constraint on the licensed technology. However, as it may be difficult in practice for licensors and licensees to know whether other products in the same product market are produced using licensed or in-house technologies, for the purpose of applying the TTBER, the market share of the licensed technology is calculated based on sales of products incorporating that technology as a share of all sales in that product market. This approach can be expected to reduce the calculated market share by including sales of products produced using in-house technologies, but will nonetheless generally provide a good indication of the market position of the licensed technology. First, it captures any potential competition from undertakings that are producing using their own technology and that are likely to start licensing in the event of a deterioration in the conditions of supply on the technology market (such as a small but permanent increase in the licence fees charged). Second, even where it is unlikely that other technology holders would start licensing, the licensor does not necessarily have market power on the technology market even if it has a high share of licensing income. If the downstream product market is competitive, competition at that level may effectively constrain the licensor. An increase in royalties upstream affects the costs of the licensee, which makes it less competitive and thereby may cause it to lose sales. Calculating a technology's market share based on its footprint on the product market also captures this constraint.
116. For the purpose of applying the TTBER, the geographic dimension of the relevant technology market is also determined by the product market(s). However, for the assessment of technology transfer agreements that fall outside the block exemption, it may be appropriate to consider a wider geographic area in which the licensor and licensees of competing technologies are active, in which the conditions of competition are sufficiently homogeneous, and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas.
117. Where the parties' market share(s) rise(s) above the relevant threshold of 20 % or 30 % during the life of the agreement, the safe harbour continues to apply for a period of three consecutive calendar years following the year in which the threshold was exceeded (see Article 8, point (e), of the TTBER).

Calculating market shares in product markets under the TTBER

118. The licensee's market share on the relevant markets where the contract products are sold is calculated on the basis of the licensee's sales of products incorporating the licensor's technology and its sales of competing products, that is to say, the total sales of the licensee on the product market in question. Where the licensor is also a supplier of products on the relevant market, its sales of products on that market must also be taken into account. Sales made by other licensees are not taken into account for the purpose of calculating the licensee's or the licensor's market share on the relevant product market(s).

Data used to calculate market shares

119. Market shares should be calculated on the basis of sales value data for the preceding calendar year, where such data are available. Sales value data normally provide a more accurate indication of the strength of a technology than volume data. However, where value-based data are not available, estimates based on other reliable market information may be used, including sales volume data ⁽⁸²⁾. In general, market shares must be calculated using sales data relating to the preceding calendar year. However, in cases where sales data relating to the preceding calendar year are not representative of the parties' position in the relevant market(s), market shares are calculated as an average of the parties' market shares for the three preceding calendar years (see Article 8, point (b), of the TTBER) ⁽⁸³⁾.
120. The principles set out in this Section 3.3 can be illustrated by the following examples:

*Examples of licensing between non-competitors**Example 1*

Company A is specialised in developing bio-technological products and techniques and has developed a new product Xeran. It is not active as a producer of Xeran, for which it has neither the production nor the distribution facilities. Company B is a producer of competing products, produced using freely available non-proprietary technologies. In year 1, B sold EUR 25 million worth of products produced using the freely available technologies. In year 2, A gives a licence to B to produce Xeran. In that year B sells EUR 15 million produced using the freely available technologies and EUR 15 million of Xeran. In year 3 and the following years B produces and sells only Xeran worth EUR 40 million annually. In addition, in year 2 A also licenses to C. C was not active on the product market before. C produces and sells only Xeran: EUR 10 million in year 2 and EUR 15 million in year 3 and thereafter. The total market for Xeran and its substitutes where B and C are active is worth EUR 200 million in each year.

In year 2, the year in which the licence agreements are concluded, A's market share on the technology market is 0 %, as, for the purpose of applying the TTBER, its market share is calculated on the basis of the total sales of Xeran in the preceding year. In year 3, A's market share on the technology market is 12,5 %, reflecting the value of Xeran produced by B and C in the preceding year 2. In year 4 and thereafter A's market share on the technology market is 27,5 %, reflecting the value of Xeran produced by B and C in the preceding year.

In year 2, B's market share on the product market is 12,5 %, reflecting B's EUR 25 million sales in year 1. In year 3, B's market share is 15 % because its sales have increased to EUR 30 million in year 2. In year 4 and thereafter B's market share is 20 %, as its sales in year 3 and thereafter are EUR 40 million annually. C's market share on the product market is 0 % in year 1 and year 2, 5 % in year 3 and 7,5 % thereafter.

As the licence agreements between A and B and the agreements between A and C are between non-competitors, and the individual market shares of A, B and C are below 30 % each year, each agreement falls within the safe harbour of the TTBER.

Example 2

The situation is the same as in Example 1, however now B and C are operating in different geographic markets. It is established that the total market of Xeran and its substitutes is worth EUR 100 million annually in each geographic market.

In this case, A's market share on the relevant technology markets has to be calculated on the basis of product sales data for each of the two geographic product markets separately.

⁽⁸²⁾ See, for example, paragraphs 108 *et seq.* of the Market Definition Notice, cited in footnote 26.

⁽⁸³⁾ See also paragraph 95 of the Horizontal Guidelines.

In the market where B is active, A's market share depends on the sale of Xeran by B. As the total market is worth EUR 100 million, that is to say, half the size of the market in Example 1, the market share of A is 0 % in year 2, 15 % in year 3 and 40 % thereafter. B's market share is 25 % in year 2, 30 % in year 3 and 40 % thereafter. In years 2 and 3 the individual market shares of A and B do not exceed the 30 % threshold. The threshold is however exceeded from year 4. This means that, in accordance with Article 8, point (e), of the TTBER, after year 7 the licence agreement between A and B can no longer benefit from the safe harbour, but has to be assessed on an individual basis.

In the market where C is active, A's market share depends on the sales of Xeran by C. A's market share on the technology market, based on C's sales in the previous year, is therefore 0 % in year 2, 10 % in year 3 and 15 % thereafter. The market share of C on the product market is the same: 0 % in year 2, 10 % in year 3 and 15 % thereafter. The licence agreement between A and C therefore falls within the safe harbour for the whole period.

Example of licensing between competitors

Example 3

Companies A and B are active on the same relevant product and geographic market for a certain chemical product. They also each own a patent on different technologies used to produce that product. In year 1, A and B sign a cross licence agreement licensing each other to use their respective technologies. In year 1, A and B produce only with their own technology and A sells EUR 15 million of the product and B sells EUR 20 million of the product. From year 2, they both use their own and the other's technology. From that year onward, A sells EUR 10 million of the product produced with its own technology and EUR 10 million of the product produced with B's technology. From year 2, B sells EUR 15 million of the product produced with its own technology and EUR 10 million of the product produced with A's technology. The total market for the product and its substitutes is worth EUR 100 million in each year.

To assess the licence agreement under the TTBER, it is necessary to calculate the market shares of A and B both on the technology market and the product market.

The market share of A on the technology market depends on the amount of the product sold in the preceding year that was produced by both A and B using A's technology. In year 2, the market share of A on the technology market is therefore 15 %, reflecting its own production and sales of EUR 15 million in year 1. From year 3, A's market share on the technology market is 20 %, reflecting the EUR 20 million sales of the product produced using A's technology and produced and sold by A and B (EUR 10 million each). Similarly, in year 2 B's market share on the technology market is 20 % and thereafter 25 %.

The market shares of A and B on the product market depend on their respective sales of the product in the previous year, irrespective of the technology used. The market share of A on the product market is 15 % in year 2 and 20 % thereafter. The market share of B on the product market is 20 % in year 2 and 25 % thereafter.

As the agreement is between competitors, in order to benefit from the TTBER safe harbour their combined market share must be below 20 % on both the technology and the product market. It is clear that this is not the case here. The parties' combined market share on the technology market and on the product market is 35 % in year 2 and 45 % thereafter. This agreement between competitors will therefore have to be assessed on an individual basis.

3.4. Hardcore restrictions under the TTBER

3.4.1. General principles

121. Article 4 of the TTBER contains a list of hardcore restrictions. These are serious restrictions of competition which are not block-exempted because of the harm that they generally cause to consumers. In exceptional cases, hardcore restrictions may fall outside Article 101(1) of the Treaty where they are objectively necessary for the conclusion of a technology transfer agreement ⁽⁸⁴⁾ or for reasons of safety or health related to the dangerous nature of the product in question. Such exclusion of the application of Article 101(1) can only be made on the basis of objective factors external to the parties themselves and not the subjective views and characteristics of the parties. The question is not whether the parties in their particular situation would not have accepted to conclude a less restrictive agreement, but whether, given the nature of the agreement and the characteristics of the market, a less restrictive agreement would not have been concluded by undertakings in a similar setting.
122. It follows from Article 4(1) and (2) of the TTBER that, when a technology transfer agreement contains a hardcore restriction, the whole agreement falls outside the block exemption. Moreover, the Commission considers that in the context of an individual assessment it is unlikely that hardcore restrictions will fulfil the four conditions of Article 101(3) of the Treaty.
123. Article 4 of the TTBER contains separate lists of hardcore restrictions for agreements between competitors and agreements between non-competitors. Where the parties to the agreement are not competing undertakings at the time when they conclude the agreement but become competing undertakings afterwards, the list of hardcore restrictions applicable to agreements between non-competitors continues to apply for the full life of the agreement, unless the agreement is subsequently amended in any material respect (see Article 4(3) of the TTBER). Such an amendment includes the conclusion of a new technology transfer agreement between the parties concerning competing technology rights.

3.4.2. Agreements between competitors

124. Article 4(1) of the TTBER lists the hardcore restrictions for technology transfer agreements between competitors. Article 4(1) provides that the block exemption does not apply to agreements which, directly or indirectly, in isolation or in combination with other factors under the control of the parties, have as their object any of the following:
- (a) the restriction of a party's ability to determine its prices when selling products to third parties;
 - (b) the limitation of output, except limitations on the output of contract products imposed on the licensee in a non-reciprocal agreement or imposed on only one of the licensees in a reciprocal agreement;
 - (c) the allocation of markets or customers except:
 - (i) the obligation on the licensor and/or the licensee, in a non-reciprocal agreement, not to produce with the licensed technology rights within the exclusive territory reserved for the other party and/or not to sell the contract products, actively and/or passively, into the exclusive territory or to the exclusive customer group reserved for the other party;
 - (ii) the restriction, in a non-reciprocal agreement, of active sales of the contract products by the licensee into the exclusive territory or to the exclusive customer group allocated by the licensor to another licensee provided the latter was not a competing undertaking of the licensor at the time of the conclusion of its own licence;

⁽⁸⁴⁾ See paragraph 18 of the Guidelines on the application of Article 81(3) of the Treaty, cited in footnote 8.

- (iii) the obligation on the licensee to produce the contract products only for its own use, provided that, where the licensee incorporates the contract products into its own products, it is not restricted in selling the contract products actively and passively as spare parts for its own products;
- (iv) the obligation on the licensee, in a non-reciprocal agreement, to produce the contract products only for a particular customer, where the licence was granted in order to create an alternative source of supply for that customer;
- (d) the restriction of the licensee's ability to exploit its own technology rights or the restriction of the ability of any of the parties to the agreement to carry out R&D, unless such latter restriction is indispensable to prevent the disclosure of the licensed know-how to third parties.

Distinction between reciprocal and non-reciprocal agreements between competitors

125. For certain hardcore restrictions, the TTBER makes a distinction between reciprocal and non-reciprocal agreements. The hardcore list is stricter for reciprocal agreements between competitors than for non-reciprocal agreements between competitors. Reciprocal agreements are cross-licensing agreements where the licensed technologies are competing technologies or can be used for the production of competing products. A non-reciprocal agreement is an agreement where only one of the parties is licensing its technology rights to the other party or where, in the case of cross-licensing, the licensed technology rights are not competing technologies and the licensed rights cannot be used for the production of competing products. An agreement is not reciprocal for the purposes of the TTBER merely because the agreement contains a grant-back obligation or because the licensee licenses back its own improvements of the licensed technology. Where a non-reciprocal agreement subsequently becomes a reciprocal agreement due to the conclusion of a second licence between the same parties, those parties may have to revise the first licence in order to avoid the agreement containing a hardcore restriction. In its assessment of such cases, the Commission will take into account the length of the period between the conclusion of the first and the second licence.

Price restrictions between competitors

126. The hardcore restriction contained in Article 4(1), point (a), of the TTBER concerns agreements between competitors that have as their object the fixing of prices for products sold to third parties, including the products incorporating the licensed technology. Price fixing between competitors generally constitutes a restriction of competition by object. Price fixing can take the form of an agreement on the exact price to be charged or on a price list with certain allowed maximum rebates. It is immaterial whether the agreement concerns fixed prices, minimum prices (including minimum advertised prices), maximum prices or recommended prices. Price fixing can also be implemented indirectly by applying disincentives to deviate from an agreed price level, for example, by providing that the royalty rate will increase if product prices are reduced below a certain level. However, an obligation on the licensee to pay a certain minimum royalty does not in itself amount to price fixing.
127. Where royalties are calculated on the basis of individual product sales, the amount of the royalty has a direct impact on the marginal cost of the product and thus a direct impact on product prices⁽⁸⁵⁾. Competitors can therefore use cross-licensing with reciprocal running royalties as a means of coordinating and/or increasing prices on downstream product markets⁽⁸⁶⁾. However, the Commission will only treat cross licences with reciprocal running royalties as price fixing in specific circumstances, such as where the agreement provides for the payment of royalties regardless of whether the technology is actually used, or where the agreement is devoid of any pro-competitive purpose and therefore does not constitute a *bona fide* licensing arrangement.

⁽⁸⁵⁾ See in this respect paragraph 98 of the Guidelines on the application of Article 81(3) of the Treaty cited in footnote 8.

⁽⁸⁶⁾ That is also the case where one party grants a licence to the other party and accepts to buy a physical input from the licensee. The purchase price can serve the same function as the royalty.

Output restrictions between competitors

128. The hardcore restriction set out in Article 4(1), point (b), of the TTBER concerns output restrictions in agreements between competitors. An output restriction is a limitation of how much a party may produce and sell. Article 4(1), point (b), does not apply to output restrictions imposed on the licensee in a non-reciprocal agreement or output limitations imposed on only one of the licensees in a reciprocal agreement, provided that, in each case, the output restriction is limited to products produced using the licensed technology. Article 4(1), point (b), thus categorises as hardcore reciprocal output restrictions and output restrictions imposed on either party – whether a licensor or licensee – in respect of that party's use of its own technology⁽⁸⁷⁾. Where competitors agree to reciprocal output limitations, the object and likely effect of the agreement is to reduce output in the market. This hardcore restriction also applies to agreements that reduce the incentive of the parties to expand output, for example by applying reciprocal running royalties per unit which increase as output increases or by obliging each party to make payments if a certain level of output is exceeded.
129. The rationale for the more favourable treatment of non-reciprocal output restrictions is that a one-way restriction does not necessarily lead to a lower output on the market. The risk that the agreement is not a *bona fide* licensing arrangement is also lower when the restriction is non-reciprocal. Where a licensee is willing to accept a one-way restriction, it is likely that the agreement leads to a real integration of complementary technologies or an efficiency-enhancing integration of the licensor's superior technology with the licensee's productive assets. Similarly, in a reciprocal agreement an output restriction imposed on only one of the licensees is likely to reflect the higher value of the technology licensed by one of the parties, and may serve to promote pro-competitive licensing.

Market and customer allocation between competitors

130. The hardcore restriction set out in Article 4(1), point (c), of the TTBER concerns the allocation of markets and customers. Agreements whereby competitors share markets and customers have as their object the restriction of competition. An agreement whereby competitors agree, in a reciprocal agreement, not to produce in certain territories or not to sell actively, passively, or both, into certain territories or to certain customers reserved for the other party, is a hardcore restriction. Thus, for example, reciprocal exclusive licensing between competitors is considered market allocation.
131. Article 4(1), point (c), of the TTBER applies irrespective of whether the licensee remains free to use its own technology rights. Once the licensee has tooled up to use the licensor's technology to produce a given product, it may be costly to maintain a separate production line using another technology in order to serve customers that are not affected by the restrictions. Moreover, given the anti-competitive potential of the restraints, the licensee may have little incentive to produce under its own technology. Such restrictions are also highly unlikely to be indispensable for pro-competitive licensing to occur.
132. Under Article 4(1), point, (c)(i), of the TTBER, it is not a hardcore restriction for the licensor in a non-reciprocal agreement to grant the licensee an exclusive licence to produce on the basis of the licensed technology in a particular territory and thus agree not to produce the contract products itself in that territory or supply the contract products from that territory. Such exclusive licences are block-exempted irrespective of the scope of the territory. If the licence is worldwide, the exclusivity implies that the licensor will abstain from entering or remaining on the market. The block exemption also applies if in a non-reciprocal agreement the licensee is restricted from producing in an exclusive territory reserved for the licensor. The purpose of such agreements may be to give the licensor, the licensee, or both, an incentive to invest in and develop the licensed technology. The object of the agreement is therefore not necessarily to share markets.

⁽⁸⁷⁾ Output restrictions in respect of the parties' use of their own technology are also covered by the hardcore restriction in Article 4(1)(d); see paragraph 141.

133. Under Article 4(1), point (c)(i), of the TTBER, it is also not a hardcore restriction for the parties to a non-reciprocal agreement to agree not to sell the contract products actively or passively into an exclusive territory or to an exclusive customer group reserved for the other party ⁽⁸⁸⁾. 'Active' and 'passive' sales are defined in Article 1(1), points (s) and (t) respectively, of the TTBER ⁽⁸⁹⁾. Restrictions of the ability of the licensee or licensor to sell actively, passively, or both, into the other party's territory or customer group are only block-exempted if that territory or customer group has been exclusively reserved to that other party. Active and passive sales restrictions in relation to a territory or customer group that is not exclusively reserved are not block-exempted, but in certain circumstances they may be found to meet the conditions of Article 101(3) of the Treaty based on an individual assessment of the agreement under Article 101. For example, the parties may agree to share the exclusivity on an ad hoc basis where this is necessary to alleviate a temporary shortage in the production of the party to which the territory or customer group is allocated.
134. By implication, it is also not a hardcore restriction for the licensor to appoint the licensee as its sole licensee in a particular territory, implying that third parties will not be licensed to produce on the basis of the licensor's technology in the territory in question. The block exemption applies to such sole licences, irrespective of whether the agreement is reciprocal or not, given that the agreement does not affect the ability of the parties to exploit their own technology rights in the territories covered by the agreement.
135. Article 4(1), point (c)(ii), of the TTBER excludes from the hardcore list restrictions in a non-reciprocal agreement on active sales of contract products by the licensee into a territory or to a customer group allocated by the licensor to another licensee, provided that the protected licensee was not a competitor of the licensor at the time when the protected licensee's licence agreement was concluded. In this scenario, it is not warranted to treat such active sales restrictions as hardcore restrictions. By allowing the licensor to grant a licensee, who was not already on the relevant market, protection against active sales by licensees that are competitors of the licensor, and which for that reason were already established on the market, such restrictions are likely to induce the licensee to exploit the licensed technology more efficiently. However, if the licensees were to agree between themselves not to sell actively or passively into certain territories or to certain customer groups, the agreement would amount to a cartel amongst the licensees. Since such an agreement does not involve any transfer of technology, it would in any case fall outside the scope of the TTBER.
136. Article 4(1), point (c)(iii), of the TTBER excludes from the hardcore list captive use restrictions, that is to say, obligations on the licensee to produce the products incorporating the licensed technology only for its own use. Where the contract product is a component, the licensee can thus be obliged to produce that component only for incorporation into its own products and not to sell the components to other producers. The licensee must, however, be able to sell the components as spare parts for its own products and thus to supply third parties that perform after-sales services on those products. Captive use restrictions may be necessary to promote the dissemination of technology, particularly between competitors, and are thus covered by the block exemption. Section 4.2.5 of these Guidelines provides guidance for the assessment of captive use restrictions in agreements that fall outside the block exemption.

⁽⁸⁸⁾ In certain circumstances, restrictions of passive sales by the licensor or licensees to end users may be void pursuant to Article 6(2) of Regulation (EU) 2018/302 of the European Parliament and of the Council of 28 February 2018 on addressing unjustified geo-blocking and other forms of discrimination based on customers' nationality, place of residence or place of establishment within the internal market and amending Regulations (EC) No 2006/2004 and (EU) 2017/2394 and Directive 2009/22/EC (OJ L 60 I, 2.3.2018, p. 1, ELI: <http://data.europa.eu/eli/reg/2018/302/oj>) (the 'Geo-blocking Regulation').

⁽⁸⁹⁾ For more guidance on the concepts of 'active' and 'passive' sales, see paragraphs 211-215 of the Vertical Guidelines cited in footnote 19.

137. Finally, Article 4(1), point (c)(iv), of the TTBER excludes from the hardcore list an obligation on the licensee in a non-reciprocal agreement to produce the contract products only for a particular customer, where the licence is granted in order to create an alternative source of supply for that customer. The licence must therefore be granted for the purpose of supplying a particular customer. However, more than one undertaking can be licensed to supply the same customer. Article 4(1), point (c)(iv), applies regardless of the duration of the licence. For example, a one-off licence to fulfil the requirements of a project of a particular customer is covered by this exception. The potential for such agreements to be used to share markets is limited, due to the fact that the licence is granted only for the purpose of supplying a particular customer. In particular, it cannot be assumed that such agreements will cause the licensee to cease exploiting its own technology.
138. Field of use restrictions in agreements between competitors which limit the licence to one or more technical fields of application, product markets or industrial sectors ⁽⁹⁰⁾ are not hardcore restrictions. Such restrictions are block-exempted up to the market share threshold of 20 %, irrespective of whether the agreement is reciprocal or not. Such restrictions are not considered to have as their object the allocation of markets or customers. It is a condition for the application of the block exemption, however, that the field of use restrictions do not go beyond the scope of the licensed technologies. For instance, where licensees are also limited in the technical fields of application in which they can use their own technology rights, the agreement amounts to market sharing.
139. The block exemption applies irrespective of whether the field of use restriction is symmetrical or asymmetrical. An asymmetrical field of use restriction in a reciprocal licence agreement implies that each party is permitted to use the respective technologies that they license-in for different fields of use. Provided that the agreement does not restrict the parties' ability to use their own technologies, there is no presumption that the agreement will lead them to abandon or refrain from entering the field(s) covered by the licence to the other party. Even if the licensees tool up to use the licensed technology within the licensed field of use, there may be no impact on assets used to produce outside the scope of the licence. It is important in this regard that the restriction relates to distinct product markets, industrial sectors or technical fields of application and not to customers, allocated by territory or by group, who purchase products falling within such product markets, industrial sectors or technical fields of application. The risk of market sharing is substantially greater in the latter case (see paragraph 130). In addition, field of use restrictions may be necessary to promote pro-competitive licensing (see paragraph 235).

Restrictions on the parties' ability to carry out research and development

140. The hardcore restriction set out in Article 4(1), point (d), of the TTBER covers restrictions on the ability of either party to carry out R&D. Both parties must be free to carry out independent R&D. That rule applies irrespective of whether the restriction applies to a field covered by the licence or to other fields. However, the mere fact that the parties agree to provide each other with future improvements of their respective technologies does not amount to a restriction of independent R&D. Article 4(1), point (d), also does not apply to restrictions of a party's ability to carry out R&D with third parties where such a restriction is necessary to protect the licensed know-how against disclosure. In order to be covered by this exception, the restrictions imposed must be necessary and proportionate to ensure such protection. For instance, where the agreement designates particular employees of the licensee to be trained in and responsible for the use of the licensed know-how, it may be sufficient to oblige the licensee not to allow those employees to be involved in R&D with third parties. Other safeguards may be equally appropriate.

Restrictions on the use of the licensee's own technology

141. The hardcore restriction set out in Article 4(1), point (d), of the TTBER also applies to restrictions on the licensee's ability to use its own technology rights, provided that in doing so it does not make use of the technology rights licensed from the licensor. In particular, as regards its own technology rights, the licensee must not be subject to limitations in terms of where it produces or sells, the technical fields of use or product markets within which it

⁽⁹⁰⁾ See Section 4.2.4 of these Guidelines for more guidance on field of use restrictions.

produces, how much it produces or sells, or the price at which it sells. It must also not be obliged to pay royalties on products produced on the basis of its own technology rights, as such obligations raise the cost of using those rights ⁽⁹¹⁾. Moreover, the licensee must not be restricted in licensing its own technology rights to third parties. Where restrictions are imposed on the licensee's use of its own technology rights or its right to carry out R&D, the competitiveness of the licensee's technology is reduced. The effect of this is to reduce competition on existing product and technology markets and to reduce the licensee's incentive to invest in the development and improvement of its own technology. Article 4(1), point (d), of the TTBER does not apply to restrictions on the licensee's use of third-party technology, for example third-party technology that competes with the licensed technology. Although such non-compete obligations may have foreclosure effects on third-party technologies (see Section 4.2.7 of these Guidelines), they usually do not have the effect of reducing the incentive of licensees to invest in the development and improvement of their own technologies.

3.4.3. *Agreements between non-competitors*

142. Article 4(2) of the TTBER lists the hardcore restrictions for licensing between non-competitors. Article 4(2) provides that the block exemption does not apply to agreements which, directly or indirectly, in isolation or in combination with other factors under the control of the parties, have as their object any of the following:
- (a) the restriction of a party's ability to determine its prices when selling products to third parties, without prejudice to the possibility of imposing a maximum sale price or recommending a sale price, provided that it does not amount to a fixed or minimum sale price as a result of pressure from, or incentives offered by, any of the parties;
 - (b) the restriction of the territory into which, or of the customers to whom, the licensee may passively sell the contract products, except:
 - (i) the restriction of passive sales into an exclusive territory or to an exclusive customer group reserved for the licensor;
 - (ii) the obligation to produce the contract products only for its own use provided that, where the licensee incorporates the contract products into its own products, it is not restricted from selling the contract products actively and passively as spare parts for its own products;
 - (iii) the obligation to produce the contract products only for a particular customer, where the licence was granted in order to create an alternative source of supply for that customer;
 - (iv) the restriction of sales to end users by a licensee operating at the wholesale level of trade;
 - (v) the restriction of sales to unauthorised distributors located in a territory where the licensor operates a selective distribution system for the contract products;
 - (c) the restriction of active or passive sales to end users by a licensee which is a member of a selective distribution system and which operates at the retail level, without prejudice to the possibility of prohibiting a member of the system from operating out of an unauthorised place of establishment.

⁽⁹¹⁾ See the judgment of 25 February 1986, *Windsurfing International*, C-193/83, ECLI:EU:C:1986:75, paragraph 67. Outside the block exemption, agreements under which royalties are calculated on the basis of all product sales may exceptionally fulfil the conditions of Article 101(3) of the Treaty where, on the basis of objective factors, it can be concluded that the restriction is indispensable for pro-competitive licensing to occur. This may be the case where, in the absence of the restraint, it would be impossible or unduly difficult to calculate and monitor the royalty payable by the licensee, for example, because the licensor's technology leaves no visible trace on the final product and there are no practicable alternative monitoring methods.

Price fixing

143. The hardcore restriction set out in Article 4(2), point (a), of the TTBER concerns the fixing of prices charged when selling products to third parties. More specifically, that provision covers restrictions which have as their direct or indirect object the establishment of a fixed or a minimum selling price or a fixed or minimum price level to be observed by the licensor or the licensee when selling products to third parties. Price fixing can be achieved directly through an express agreement, such as a contractual obligation, or through indirect means. Examples of the latter are agreements fixing margins, fixing the maximum level of discounts, linking the sales price to the sales prices of competitors, imposing minimum advertised prices, threats, intimidation, warnings, penalties, or contract terminations in relation to the observance of a given price level. Direct or indirect means of achieving price fixing can be made more effective when combined with measures to identify price cutting, such as the implementation of a price monitoring system ⁽⁹²⁾, or an obligation to report price deviations. Similarly, direct or indirect price fixing can be made more effective when combined with measures that reduce the seller's incentive to lower its price, such as an obligation to apply a most-favoured-customer clause, that is to say, an obligation to grant a customer any more favourable terms granted to any other customer. In agreements between non-competitors, the use of recommended selling prices or the imposition of maximum prices are not in themselves considered as fixed or minimum selling prices. However, if the use of recommended prices or maximum prices is combined with incentives to apply a certain price level or disincentives to lower the sale price, this can amount to price fixing.

Restrictions of the licensee's ability to make passive sales

144. The hardcore restriction set out in Article 4(2), point (b), of the TTBER concerns restrictions of the licensee's ability to make passive sales ⁽⁹³⁾ of products incorporating the licensed technology ⁽⁹⁴⁾.
145. Passive sales restrictions may be the result of express obligations, such as the obligation not to sell to certain customers or to customers in certain territories, or the obligation to refer orders from such customers to other licensees. Passive sales restrictions may also result from indirect measures aimed at inducing the licensee to refrain from making such sales, such as financial incentives ⁽⁹⁵⁾.
146. Quantity limitations are not in themselves a hardcore restriction of passive sales within the meaning of Article 4(2), point (b), of the TTBER. However, they may be used as an indirect means to restrict passive sales. The Commission considers that Article 4(2), point (b), applies where quantity limitations are used to implement an underlying market partitioning agreement. Indications thereof include the adjustment of quantities over time to cover only local demand; the combination of quantity limitations and an obligation to sell minimum quantities in the territory; minimum royalty obligations linked to sales in the territory; differentiated royalty rates depending on the destination of the products, and the monitoring of the destination of products sold by individual licensees.
147. The general hardcore relating to restrictions of passive sales by licensees is subject to a number of exceptions, which are presented in paragraphs 148 to 153 below. Restrictions and obligations that fall within these exceptions are block-exempted.

⁽⁹²⁾ However, on their own, price monitoring and price reporting do not amount to price fixing.

⁽⁹³⁾ 'Active' and 'passive' sales are defined in Article 1(1), points (s) and (t), respectively, of the TTBER. For more guidance on the concepts of 'active' and 'passive' sales, see paragraphs 211-215 of the Vertical Guidelines cited in footnote 19.

⁽⁹⁴⁾ This hardcore restriction applies to technology transfer agreements affecting trade within the Union. For guidance on technology transfer agreements affecting exports outside the Union, see paragraphs 100 *et seq.* of the Effect on Trade Guidelines cited in footnote 39.

⁽⁹⁵⁾ Monitoring systems that allow the licensor to verify the destination of the contract products are not in themselves a restriction of passive sales. However, they may be considered to form part of a restriction of passive sales when used in conjunction with other measures. See, by analogy, the Commission Decision of 30 January 2020 in Case AT.40433 – *Film merchandise*, paragraphs 65 and 66.

148. Exception 1: The hardcore restriction set out in Article 4(2), point (b), of the TTBER does not cover sales restrictions (both active and passive) imposed on the licensor. All sales restrictions on the licensor are block-exempted up to the market share threshold of 30 %⁽⁹⁶⁾. The same applies to restrictions on active sales by the licensee, with the exception of restrictions on active sales to end users by licensees that belong to a selective distribution system (see paragraph 153 of these Guidelines). The block exemption of restrictions on active selling is based on the assumption that such restrictions promote investments, non-price competition and improvements in the quality of services provided by licensees, by addressing free-rider problems and hold-up problems. In the case of restrictions of active sales between licensees' territories or customer groups, it is not necessary that the protected licensee has been granted an exclusive territory or an exclusive customer group. The block exemption also applies to active sales restrictions where more than one licensee has been appointed for a particular territory or customer group. Efficiency-enhancing investment is likely to be promoted where a licensee can be sure that it will only face active sales competition from a limited number of licensees inside the territory and not also from licensees outside the territory.
149. Exception 2: Restrictions on active and passive sales by licensees into an exclusive territory or to an exclusive customer group reserved for the licensor are not hardcore restrictions (see Article 4(2), point (b)(i), of the TTBER)⁽⁹⁷⁾. Within the market share threshold, it is assumed that such restraints, where they restrict competition, promote the pro-competitive dissemination of technology and the integration of such technology into the production assets of the licensee. For a territory or customer group to be reserved for the licensor, the licensor does not actually have to be producing with the licensed technology in the territory or for the customer group in question. A territory or customer group can also be reserved by the licensor for later exploitation.
150. Exception 3: An obligation on the licensee to produce products incorporating the licensed technology only for its own (captive) use is not a hardcore restriction (see Article 4(2), point (b)(ii), of the TTBER). Where the contract product is a component, the licensee can thus be obliged to use that product only for incorporation into its own products and not to sell the product to other producers. The licensee must however be able to actively and passively sell the products as spare parts for its own products and must thus be able to supply third parties that perform after-sales services on those products. More guidance on captive use restrictions is provided in Section 4.2.5.
151. Exception 4: An obligation on the licensee to produce the contract products only for a particular customer in order to provide that customer with an alternative source of supply is not a hardcore restriction (see Article 4(2), point (b)(iii), of the TTBER). In the case of agreements between non-competitors, such restrictions are unlikely to fall within Article 101(1) of the Treaty.
152. Exception 5: Where the licensee operates at the wholesale level of trade, a restriction on its ability to sell to end users is not a hardcore restriction (see Article 4(2), point (b)(iv), of the TTBER). This type of restriction allows the licensor to assign the licensee to the wholesale distribution function and normally falls outside Article 101(1)⁽⁹⁸⁾.
153. Exception 6: Where the licensee is a member of a selective distribution system, a restriction of its ability to sell to unauthorised distributors is not a hardcore restriction (see Article 4(2), point (b)(v), of the TTBER). This exception allows the licensor to operate a selective distribution system. In that case, however, licensees that operate at the retail level must, according to Article 4(2), point (c), of the TTBER, be permitted to sell both actively and passively to end users, without prejudice to the possibility of prohibiting them from operating out of an unauthorised place of establishment. See also paragraph 152 regarding the possibility of limiting the licensee to a wholesale function, as provided for in Article 4(2), point (b)(iv), of the TTBER. Within the territory where the licensor operates a selective distribution system, the system may not be combined with exclusive territories or exclusive customer groups where this would lead to a restriction of active or passive sales to end users, as that would be a hardcore restriction under Article 4(2), point (c), of the TTBER.

⁽⁹⁶⁾ See, however, footnote 88 regarding the possible application of the Geo-blocking Regulation to passive sales restrictions.

⁽⁹⁷⁾ See, however, footnote 88 regarding the possible application of the Geo-blocking Regulation to passive sales restrictions.

⁽⁹⁸⁾ See, however, footnote 88 regarding the possible application of the Geo-blocking Regulation to passive sales restrictions.

154. Restrictions on passive sales by licensees into an exclusive territory or customer group allocated to another licensee are hardcore restrictions within the meaning of Article 4(2), point (b), of the TTBER. However, in specific circumstances, such restrictions may fall outside Article 101(1) of the Treaty for a limited duration if they are objectively necessary for the protected licensee to penetrate a new market ⁽⁹⁹⁾. For example, this may apply where a licensee must make substantial investments to start up and develop a new market and the restrictions on passive sales by other licensees are limited to the period necessary for the licensee to recoup its investments. In most cases, this period will not exceed two years from the date on which the contract products are first put on the market in the exclusive territory by the licensee or first sold to its exclusive customer group.

3.5. Excluded restrictions

155. Article 5 of the TTBER lists three types of restrictions that are excluded from the block exemption in order to protect incentives to innovate. These restrictions require an individual assessment to determine whether they restrict competition within the meaning of Article 101(1) of the Treaty and, if so, whether they meet the four conditions of Article 101(3). The exclusion of these restrictions from the block exemption is limited to the specific restriction, provided that it can be severed from the rest of the agreement. In that case, the remainder of the agreement can still benefit from the block exemption.

Exclusive grant-backs

156. Article 5(1), point (a), of the TTBER excludes from the block exemption obligations imposing exclusive grant-backs, meaning an exclusive licence back to the licensor or a third party designated by the licensor of any improvements of the licensed technology made by the licensee, or the assignment of rights to such improvements to the licensor or a third party designated by the licensor. An exclusive grant-back is a grant-back which prevents the licensee (which in this case is the innovator and licensor of the improvement) from exploiting the improvement (either for its own production or for licensing out to third parties). Exclusive grant-back obligations are likely to reduce the licensee's incentive to innovate, since they restrict the licensee's ability to exploit the improvements. This exclusion applies both where the improvement concerns the same application as the licensed technology and where the licensee develops new applications of the licensed technology.
157. The application of Article 5(1), point (a), of the TTBER does not depend on whether the licensor pays consideration in return for acquiring the improvement or obtaining an exclusive licence. However, the existence and amount of such consideration – including whether it is calculated based on the value of the improvement – may be a relevant factor for the individual assessment of exclusive grant-back obligations under Article 101 of the Treaty outside the scope of the block exemption. When grant-backs are made against consideration, it is less likely that the obligation creates a disincentive for the licensee to innovate. For the individual assessment of exclusive grant-backs outside the block exemption, the market position of the licensor on the technology market is also a relevant factor. The stronger the position of the licensor, the more likely it is that exclusive grant-back obligations will have restrictive effects on competition in innovation. The stronger the position of the licensor's technology, the more important it is that the licensee should be able to provide an alternative source of innovation and future competition. The negative impact of exclusive grant-back obligations can also be increased where there are parallel networks of technology transfer agreements containing such obligations. When available technologies are controlled by a limited number of licensors that impose exclusive grant-back obligations on licensees, the risk of anti-competitive effects is greater than in situations where there are several competing technologies and only some of them are licensed on exclusive grant-back terms.

⁽⁹⁹⁾ See, however, footnote 88 regarding the possible application of the Geo-blocking Regulation to passive sales restrictions.

158. Non-exclusive grant-back obligations are covered by the block exemption. This is the case even where the obligations are non-reciprocal, that is to say, only imposed on the licensee, and the licensor is entitled to feed-on the improvements to other licensees. A non-reciprocal grant-back obligation may promote the dissemination of new technology by permitting the licensor to freely determine whether and to what extent to pass on the improvements made by the licensee to the licensor's other licensees. A feed-on clause may also promote the dissemination of technology, in particular when each licensee knows at the time of contracting that it will be on an equal footing with other licensees in terms of the improvements to the technology on the basis of which it is producing.
159. Outside the safe harbour, non-exclusive grant-back obligations may have negative effects on competition and innovation under specific circumstances. For example, they may have negative effects on innovation in the case of cross licensing between competitors where a grant-back obligation on both parties is combined with an obligation on both parties to share improvements of their own technology with the other party. The sharing of all improvements between competitors may prevent each competitor from gaining a competitive lead over the other (see also paragraph 264). The greater the market power of the licensor and the market coverage of its grant-back clauses, the more likely such clauses are to affect inter-technology competition and innovation.

No-challenge and termination upon challenge clauses

160. Article 5(1), point (b), of the TTBER excludes from the block exemption no-challenge clauses, namely direct or indirect obligations on a party not to challenge the validity of intellectual property rights held by the other party in the Union, without prejudice to the possibility, in the case of an exclusive licence, for the licensor to terminate the technology transfer agreement in the event that the licensee challenges the validity of any of the licensed technology rights.
161. The reason for excluding no-challenge clauses from the block exemption is that licensees are normally in the best position to assess whether an intellectual property right is invalid, and it is in the interest of undistorted competition that invalid intellectual property rights should be eliminated⁽¹⁰⁰⁾. Invalid intellectual property stifles innovation rather than promoting it. Article 101(1) of the Treaty is likely to apply to no-challenge clauses where the licensed technology right is valuable and therefore creates a competitive disadvantage for undertakings that are prevented from using it, or are only able to use it against payment of royalties. In such cases, the conditions of Article 101(3) are unlikely to be fulfilled. As regards the assessment of no-challenge clauses in the context of settlement agreements, see paragraphs 265-266.
162. Generally, a clause obliging the licensee not to challenge the ownership of the technology rights does not constitute a restriction of competition within the meaning of Article 101(1) of the Treaty. Whether or not the licensor has the ownership of the technology rights, the use of the technology by the licensee or any other party is in any case dependent on obtaining a licence, and competition would thus generally not be affected⁽¹⁰¹⁾.
163. Article 5(1), point (b), of the TTBER also excludes from the block exemption the right, in a non-exclusive licence, for the licensor to terminate the agreement in the event that the licensee challenges the validity of any of the licensed technology rights ('termination upon challenge clauses'). Such a termination right can have the same effect as a no-challenge clause, in particular where switching away from the licensor's technology would result in a significant loss to the licensee (for example where the licensee has already invested in machines or tools that cannot be used for production using another technology) or where the licensor's technology is a necessary input for the licensee's

⁽¹⁰⁰⁾ See the judgment of 25 February 1986, *Windsurfing International*, C-193/83, ECLI:EU:C:1986:75, paragraph 92.

⁽¹⁰¹⁾ See, by analogy, Commission Decision 90/186/EEC in Case IV/32.736 – *Moosehead/Whitbread*, paragraph 15 (discussing clauses that prevent the challenge of trade mark ownership).

production. For example, where the licensed technology consists of standard-essential patents, a licensee producing a standard-compliant product will necessarily have to use some or all of the patents reading on the standard⁽¹⁰²⁾. In such a case, if the licensor terminates the technology transfer agreement as a result of the licensee's challenge to the validity of the relevant patents, the licensee may suffer a significant loss. Even where the licensor's technology is not standard-essential, there may be a strong disincentive to challenge where the technology has a strong market position, considering the difficulty for the licensee to find a viable alternative technology to license-in. The question whether the licensee's loss of profit would be significant, and therefore act as a strong disincentive to challenge, has to be assessed on a case by case basis.

164. However, it should also be noted that, outside the scenarios described in paragraph 163, a termination upon challenge clause will often not create a significant disincentive to challenge and will therefore not produce the same effect as a no-challenge clause.
165. Where a termination upon challenge clause is excluded from the block exemption and is found to restrict competition within the meaning of Article 101(1) of the Treaty, it is necessary to assess whether the clause meets the conditions of Article 101(3). For that purpose, it may be relevant to assess whether the clause is indispensable to incentivise the licensor to grant a licence (by ensuring that it is not forced to continue dealing with a licensee that challenges the subject matter of the licence agreement). A relevant factor in that assessment may also be whether the licensee has fulfilled all its obligations under the agreement at the time of the challenge, in particular the obligation to pay the agreed royalties.
166. Termination upon challenge clauses are, in general, less likely to have anti-competitive effects in exclusive licence agreements. Once it has granted an exclusive licence, the licensor may find itself in a particular situation of dependency, as the licensee will be its only source of income from the licensed technology rights if royalties are dependent on production with the licensed rights, as is often the case. In that scenario, the incentives for innovation and licensing out could be undermined if, for example, the licensor were to be locked into an agreement with an exclusive licensee which no longer makes significant efforts to develop, produce and market the product (to be) produced with the licensed technology rights⁽¹⁰³⁾. That is why the TTBER block-exempts termination upon challenge clauses in exclusive licensing agreements. Outside the safe harbour, a case by case assessment is necessary.
167. No-challenge and termination upon challenge clauses that relate solely to know-how are not excluded from the block exemption. The Commission takes a more favourable view of these clauses, as it is likely to be very difficult or impossible for the licensor to recover the licensed know-how once it has been disclosed. In such cases, an obligation on the licensee not to challenge the licensed know-how may promote the dissemination of technology if it allows weaker licensors to grant licences to stronger licensees without fear of a challenge once the know-how has been absorbed by the licensee.

Limiting the licensee's use or development of its own technology (agreements between non-competitors)

168. In agreements between non-competitors, Article 5(2) of the TTBER excludes from the block exemption any direct or indirect obligation limiting the licensee's ability to exploit its own technology rights or limiting the ability of either party to carry out R&D, unless the latter restriction is indispensable to prevent the disclosure of licensed know-how to third parties. The content of this exclusion is the same as that of Article 4(1), point (d), of the TTBER, which forms part of the hardcore list applicable to agreements between competitors, and is covered in paragraphs 140-141 above. Paragraphs 169-170 below provide guidance for the individual assessment under Article 101 of the Treaty of these types of restriction in agreements between non-competitors.

⁽¹⁰²⁾ In some cases, standard-compliant products may implement only part of a standard. In that case, licensees may take a licence for that part of the standard.

⁽¹⁰³⁾ In the context of agreements that are not strictly speaking exclusive, and where a termination upon challenge clause is thus not covered by the block exemption, the licensor may, in a specific case, be in a similar situation of dependency in relation to a licensee with considerable buyer power. Such dependency will be taken into account in the individual assessment of the agreement under Article 101 of the Treaty.

169. In agreements between non-competitors, the licensee normally does not own a competing technology. However, there may be cases where, for the purposes of the TTBER, the parties are considered non-competitors despite the fact that the licensee does own a competing technology. This is the case where the licensee owns a technology but does not license it and the licensor is not an actual or potential supplier on the product market. For the purposes of the TTBER, in such circumstances, the parties are neither competitors on the technology market nor competitors on the downstream product market ⁽¹⁰⁴⁾. In such cases, it is important to ensure that the licensee is not restricted in its ability to exploit its own technology and further develop it. That technology constitutes a competitive constraint, which should be preserved. In such a situation, restrictions on the licensee's use of its own technology rights or on R&D are likely to restrict competition within the meaning of Article 101(1) of the Treaty and not to satisfy the conditions of Article 101(3). For example, an obligation on the licensee to pay royalties not only on sales of products that it produces with the licensed technology but also on sales of products that it produces only with its own technology will generally limit the ability of the licensee to exploit its own technology.
170. In cases where the licensee does not own a competing technology or is not already developing such a technology, a restriction on the ability of the parties to carry out independent R&D may restrict competition, for example, where only a few technologies are available, or where the parties are an important (potential) source of innovation in the market. This is particularly so where the parties possess the necessary assets and skills to carry out further R&D. In that situation, restrictions of the parties' ability to carry out R&D are unlikely to meet the conditions of Article 101(3) of the Treaty. However, in other cases where a number of technologies are available and where the parties do not possess special assets or skills, the restriction on R&D is likely either to fall outside Article 101(1), due to lack of an appreciable restrictive effect, or it may satisfy the conditions of Article 101(3). The restraint may promote the dissemination of new technology, for example, by inducing the licensee to focus on the exploitation and development of the licensed technology.

3.6. **Withdrawal and disapplication of the block exemption**

3.6.1. *Withdrawal of the benefit of the block exemption*

171. Article 6(1) of the TTBER provides that the Commission may withdraw the benefit of the block exemption, pursuant to Article 29(1) of Regulation (EC) No 1/2003, where it finds in a particular case that a technology transfer agreement to which the block exemption applies has effects that are incompatible with Article 101(3) of the Treaty. Article 6(2) of the TTBER similarly provides that, where the competition authority of a Member State finds that a technology transfer agreement covered by the block exemption has effects that are incompatible with Article 101(3) in the territory of its Member State, or in a part thereof, that has the characteristics of a distinct geographic market, it may withdraw the benefit of the block exemption in respect of that territory, pursuant to Article 29(2) of Regulation (EC) No 1/2003.
172. The competition authority that proposes to withdraw the benefit of the block exemption bears the burden of proving that the agreement restricts competition within the meaning of Article 101(1) of the Treaty and does not fulfil one or more of the conditions of Article 101(3) ⁽¹⁰⁵⁾. Given that withdrawal implies that the agreement in question infringes Article 101 of the Treaty, it is necessarily accompanied by a negative decision pursuant to Articles 5, 7 or 9 of Regulation (EC) No 1/2003. Withdrawal of the benefit of the block exemption only produces effects *ex nunc*, that is to say that it does not affect the exempted status of the agreement for the period preceding the date on which the withdrawal becomes effective.

⁽¹⁰⁴⁾ See paragraph 48 of these Guidelines.

⁽¹⁰⁵⁾ The exception provided by Article 101(3) of the Treaty only applies where all four of the conditions of that Article are fulfilled, therefore the block exemption can be withdrawn where an agreement does not fulfil one or more of those conditions.

173. Article 6(1) of the TTBER provides that withdrawal may be warranted, in particular, in the following circumstances:

- (a) access of third parties' technologies to the market is restricted, for instance by the cumulative effect of parallel networks of similar restrictive agreements prohibiting licensees from using third parties' technologies;
- (b) access of potential licensees to the market is restricted, for instance by the cumulative effect of parallel networks of similar restrictive agreements prohibiting licensors from licensing to other licensees or because the only technology owner licensing out relevant technology rights concludes an exclusive licence with a licensee that is already active on the product market on the basis of substitute technology rights.

174. Article 6(1), point (a), of the TTBER refers to the possibility of the withdrawal of the benefit of the block exemption in cases where third-party licensors, including potential licensors, are foreclosed from relevant technology markets due to the cumulative effect of networks of technology transfer agreements that prohibit the licensees from exploiting competing technologies. Foreclosure of other licensors is likely to arise in cases where most of the undertakings on the market that could take a competing licence are prevented from doing so as a consequence of restrictive agreements and where potential licensees face relatively high barriers to entry. Article 6(1), point (b), of the TTBER refers to the possibility of withdrawal in cases where other licensees are foreclosed due to the cumulative effect of technology transfer agreements that prohibit licensors from licensing other licensees and thereby prevent potential licensees from gaining access to the necessary technology. The issue of foreclosure is examined in more detail in Sections 4.2.2 and 4.2.7 of these Guidelines.

175. Withdrawal of the benefit of the block exemption may also be warranted where:

- (a) competition between licensors is restricted as a result of the imposition by a significant number of competing licensors of requirements for their licensees to extend to them more favourable conditions agreed with other licensors;
- (b) customer access to the contract products is unduly limited as a result of restrictions of the ability of the licensor or licensees to make passive sales to an exclusive territory or exclusive customer group reserved for the licensor or a licensee;
- (c) royalties in a relevant technology market are set at a supra-competitive level as a result of the cumulative effect of similar cross-licensing agreements between competing undertakings.

3.6.2. *Disapplication of the TTBER*

176. Article 7 of the TTBER provides that the Commission may exclude from the scope of the TTBER, by means of regulation, parallel networks of similar agreements where the agreements cover more than 50 % of a relevant market. Such a measure is not addressed to individual undertakings but concerns all undertakings whose agreements are defined in the regulation declaring that the TTBER does not apply.

177. Whereas withdrawal of the benefit of the TTBER by the Commission under Article 6 implies the adoption of a decision pursuant to Articles 7 or 9 of Regulation (EC) No 1/2003, the effect of a Commission regulation adopted pursuant to Article 7 of the TTBER declaring that the TTBER is not to apply is to remove the benefit of the TTBER in respect of the restrictions and markets specified in the regulation and to restore the full application of Article 101(1) and (3) of the Treaty in respect of those restrictions and markets. Therefore, following the adoption of a regulation pursuant to Article 7 of the TTBER, undertakings must rely on the case law of the Court of Justice of the European Union, Commission decisions, notices and guidelines for guidance on the application of Article 101 to the agreements concerned. Where appropriate, the Commission will take a decision in an individual case to provide guidance to undertakings operating on the market concerned.

178. For the purpose of calculating the 50 % market coverage ratio, account must be taken of each individual network of technology transfer agreements containing restrictions, or combinations of restrictions, producing similar effects on the market.

179. Article 7 of the TTBER does not create an obligation for the Commission to act where the 50 % market coverage ratio is exceeded. In general, the adoption of a regulation pursuant to Article 7 is appropriate when it is likely that access to the relevant market or competition in that market is appreciably restricted. In assessing the need to apply Article 7, the Commission will consider whether individual withdrawal would be a more appropriate remedy. This may depend, in particular, on the number of competing undertakings contributing to a cumulative effect on a market or the number of affected geographic markets within the Union.
180. Any regulation adopted under Article 7 of the TTBER must clearly set out its scope. Therefore, the Commission must first define the relevant product and geographic market(s) and, second, identify the type of restrictions in respect of which the TTBER will no longer apply. As regards the latter aspect, the Commission may modulate the scope of the regulation according to the competition concern that it intends to address. For example, whereas all parallel networks of non-compete arrangements will be taken into account for the purpose of establishing the 50 % market coverage ratio, the Commission may nevertheless limit the scope of the regulation, for example, to non-compete obligations exceeding a certain duration. Where appropriate, the Commission may also provide guidance by specifying the market share level which, in the specific market context, may be regarded as insufficient to bring about a significant contribution by an individual undertaking to the cumulative effect. In general, when the market share of the products incorporating a technology licensed by an individual licensor does not exceed 5 %, the agreement or network of agreements covering that technology is not considered to contribute significantly to a cumulative foreclosure effect ⁽¹⁰⁶⁾.
181. The transitional period of not less than six months that the Commission must set under Article 7(2) of the TTBER is intended to allow the undertakings concerned to adapt their agreements to take account of the disapplication of the TTBER.
182. A regulation declaring that the TTBER does not apply does not affect the block-exempted status of the agreements concerned for the period preceding its entry into force.

4. APPLICATION OF ARTICLE 101(1) AND (3) OF THE TREATY OUTSIDE THE SCOPE OF THE TTBER

4.1. The general framework of analysis

183. Agreements that fall outside the block exemption, for example, because the market share thresholds of the TTBER are exceeded or the agreement involves more than two parties, are not subject to any presumption of illegality. Such agreements require an individual assessment under Article 101 of the Treaty. Agreements which either do not restrict competition within the meaning of Article 101(1) or which fulfil the conditions of Article 101(3) are valid and enforceable.

Safe harbour where there are sufficient independently controlled technologies

184. In order to promote predictability beyond the application of the TTBER and to confine detailed analysis to cases that are likely to present real competition concerns, the Commission considers that, in the absence of hardcore restrictions, Article 101 of the Treaty is unlikely to be infringed where there are four or more independent competing technologies in addition to the licensed technology. For this purpose, an independent competing technology must be owned or controlled by a third party and substitutable for the licensed technology, taking into account its characteristics, the royalties payable for it, its commercial strength (including, for example, sales volumes of products incorporating the technology) and its intended use ⁽¹⁰⁷⁾. The competitive constraint imposed by a technology is limited if it does not constitute a commercially viable alternative to the licensed technology. For instance, if due to network effects in the market, consumers have a strong preference for products incorporating the licensed technology, other technologies may not constitute a real alternative and may therefore impose only a limited competitive constraint.

⁽¹⁰⁶⁾ See in this respect paragraph 10 of the De Minimis Notice, cited in footnote 40.

⁽¹⁰⁷⁾ Competing technologies may include technologies that are likely to enter the market and attain comparable commercial strength within a reasonably short period of time.

185. The fact that an agreement falls outside the safe harbour set out in paragraph 184 does not imply that it falls within Article 101(1) of the Treaty or that the conditions of Article 101(3) are not satisfied. Such agreements require an individual assessment, based on the principles set out in these Guidelines.

4.1.1. *Relevant factors for the assessment under Article 101(1) of the Treaty*

186. Provided that the agreement does not contain restrictions by object, it is necessary to assess whether it has the effect of restricting competition ⁽¹⁰⁸⁾. Examples of possible restrictive effects can be found in Section 2.2.3 of these Guidelines.
187. To assess whether an agreement creates an appreciable restriction of competition, it is necessary to consider the way in which competition operates on the market in question. The following factors are relevant in this respect:
- (a) the nature of the agreement;
 - (b) the market position of the parties;
 - (c) the market position of competitors;
 - (d) the market position of buyers on the relevant markets;
 - (e) entry barriers;
 - (f) the dynamics of the market.
188. The importance of individual factors may vary from case to case and is dependent on all the other factors. For example, a high market share is usually a good indicator of market power, but in the case of low entry barriers it may not be indicative of market power. It is therefore not possible to provide firm rules on the relative importance of the individual factors.
189. The nature of the agreement encompasses the competitive relationship between the parties, as well as the restraints contained in the agreement. As regards the restraints, it is necessary to go beyond the express terms of the agreement. For example, implicit restraints may arise from the way in which the agreement is implemented or from the incentives that it creates.
190. The market position of the parties, including any undertakings *de facto* or *de jure* controlled by them, provides an indication of the degree of market power (if any) possessed by the licensor, the licensee or both. The higher their market share, the greater their market power is likely to be. That is particularly so where the market share reflects cost advantages or other competitive advantages vis-à-vis competitors. Those competitive advantages may, for example, result from being a first mover in the market, from holding standard-essential patents or from having superior technology. However, market shares are only one factor in assessing market positions. For example, in the case of technology markets, market shares may not always be a good indicator of the relative strength of the technology in question, and market share figures may differ considerably depending on the various possible calculation methods.
191. Market shares and possible competitive advantages and disadvantages are also used to assess the market position of competitors. The stronger the actual competitors and the greater their number, the lower the risk that the parties will be able to exercise market power. However, if the number of competitors is small and their market position (size, costs, R&D potential, etc.) is similar, this market structure may increase the risk of collusion.

⁽¹⁰⁸⁾ See paragraph 18.

192. The market position of buyers provides an indication of whether one or more buyers possess buyer power. The first indicator of buyer power is the market share of the buyer on the purchase market. That share reflects the importance of its demand for possible suppliers. Other indicators focus on the position of the buyer on the market that it supplies, including characteristics such as a wide geographic spread of its outlets and its brand image amongst final consumers. In some circumstances, buyer power may prevent the licensor or the licensee from exercising market power on the market and thereby solve a competition problem that would otherwise have existed. This is particularly so when strong buyers have the capacity and the incentive to bring new sources of supply on to the market in the case of a small but permanent increase in relative prices.
193. Entry barriers are measured by the extent to which incumbent undertakings can increase their price above the competitive level without attracting new entry. In the absence of entry barriers, easy and quick entry would render price increases unprofitable. As a general rule, entry barriers can be considered low when effective market entry, sufficient to prevent or erode the exercise of market power, is likely to occur within one or two years.
194. Entry barriers may result from a wide variety of factors, such as economies of scale and scope (including network effects), government regulations, especially where they establish exclusive rights, State aid, import tariffs, intellectual property rights, ownership of resources where the supply is limited due to, for example, natural limitations, essential facilities, a first mover advantage or brand loyalty of consumers created by strong advertising over a period of time. Restrictive agreements entered into by undertakings may also work as an entry barrier by making access more difficult and foreclosing (potential) competitors. Entry barriers may exist at any stage of the R&D, production and distribution process. The question whether any of these factors should be described as entry barriers depends particularly on whether they entail sunk costs. Sunk costs are costs which have to be incurred to enter or be active on a market but which are lost when the market is exited. The more costs are sunk, the more potential entrants have to weigh the risks of entering the market, and the more credibly incumbents can threaten that they will match new competition, as sunk costs make it costly for incumbents to leave the market. In general, entry requires sunk costs, sometimes minor and sometimes major. Therefore, actual competition is in general more effective and will weigh more heavily in the assessment of a case than potential competition.
195. It is also necessary to take into account the dynamics of the relevant markets. In some dynamic markets, the potential negative effects of particular restraints may be less problematic, as inter-technology competition from dynamic and innovative rivals may act as a sufficient constraint. However, in other cases, restraints may afford an incumbent in a dynamic market a lasting competitive advantage and hence result in appreciable restrictive effects. That may be the case where a restraint prevents rivals from benefiting from network effects, or where a market is prone to tipping.
196. In the assessment of particular restraints, other factors may have to be taken into account. Such factors include cumulative effects, that is to say, the coverage of the market by similar agreements, the duration of the agreements, the regulatory environment, and behaviour that may indicate or facilitate collusion, such as price leadership, pre-announced price changes and discussions on the 'right' price, price rigidity in response to excess capacity, price discrimination and past collusive behaviour.

4.1.2. *Relevant factors for the assessment under Article 101(3) of the Treaty*

197. Technology transfer agreements that restrict competition can also produce pro-competitive effects in the form of efficiencies that outweigh their anti-competitive effects. The assessment of pro-competitive effects is carried out in the framework of Article 101(3) of the Treaty, which provides an exception from the prohibition set out in Article 101(1). For that exception to be applicable, the technology transfer agreement must fulfil the four conditions of Article 101(3) (see paragraph 9 of these Guidelines). An undertaking that relies on Article 101(3) must demonstrate, using convincing arguments and evidence, that the four conditions are satisfied ⁽¹⁰⁹⁾.

⁽¹⁰⁹⁾ See the judgment of 27 June 2024, *Teva UK and Others v Commission*, C-198/19 P, ECLI:EU:C:2024:551, paragraph 135.

198. The assessment of restrictive agreements under Article 101(3) of the Treaty is made within the actual context in which they occur ⁽¹¹⁰⁾ and on the basis of the facts existing at any given point in time. The assessment is therefore sensitive to material changes in the facts. The exception rule of Article 101(3) applies as long as the four conditions are fulfilled and ceases to apply when that is no longer the case ⁽¹¹¹⁾. However, when applying Article 101(3), it is necessary to take into account the initial sunk investments made by any of the parties and the time needed and the restraints required to commit and recoup an efficiency-enhancing investment. Article 101 cannot be applied without considering the *ex ante* investment and the risks relating thereto. The risk facing the parties and the sunk investment that must be committed to implement the agreement can thus lead to the agreement falling outside Article 101(1) or fulfilling the conditions of Article 101(3) for the period of time required to recoup the investment.
199. The first condition of Article 101(3) of the Treaty requires an assessment of the objective benefits generated by the agreement. Examples of such efficiencies are set out in Section 2.2 of these Guidelines.
200. The third condition of Article 101(3) of the Treaty requires that the agreement does not impose restrictions that are not indispensable for the attainment of the objective benefits of the agreement. To assess whether the indispensability test is met, the Commission will in particular examine whether the particular restrictions make it possible to perform the activity in question more efficiently than would have been the case in the absence of the restriction concerned. In making this assessment, the market conditions and the realities facing the parties must be taken into account. Undertakings invoking the benefit of Article 101(3) are not required to consider hypothetical and theoretical alternatives. They must, however, explain and demonstrate why seemingly realistic and significantly less restrictive alternatives would not produce the same efficiencies. If the application of what appears to be a commercially realistic and less restrictive alternative would lead to a significant loss of efficiencies, the restriction in question is treated as indispensable. In some cases, it may also be necessary to examine whether the agreement as such is indispensable to achieve the efficiencies. However, in the case of simple licensing between two parties, it is generally not necessary to go beyond an examination of whether individual restraints are indispensable. Normally there is no less restrictive alternative to the licence agreement as such.
201. The second condition of Article 101(3) of the Treaty requires that consumers receive a fair share of the benefits. It implies that consumers of the products produced under the licence must at least be compensated for the negative effects of the agreement ⁽¹¹²⁾. This means that the efficiency gains must fully offset the likely negative impact on prices, output and other relevant parameters caused by the agreement. They may do so by changing the cost structure of the undertakings concerned, giving them an incentive to reduce price, or by allowing consumers to gain access to new or improved products, compensating for any likely price increase ⁽¹¹³⁾.
202. The last condition of Article 101(3) of the Treaty requires that the agreement does not afford the parties the possibility of eliminating competition in respect of a substantial part of the products concerned. It presupposes an analysis of remaining competitive pressures on the market and the impact of the agreement on such sources of competition. For the application of this condition, the relationship between Article 101(3) and Article 102 of the Treaty must be taken into account. In accordance with settled case law, the application of Article 101(3) cannot prevent the application of Article 102 ⁽¹¹⁴⁾. The fact that the agreement substantially reduces competition in

⁽¹¹⁰⁾ See the judgment of 17 September 1985, *Ford v Commission*, joined cases C-25/84 and C-26/84, ECLI:EU:C:1985:340, paragraphs 25-26 and paragraph 44 of the Guidelines on the application of Article 81(3) of the Treaty cited in footnote 8.

⁽¹¹¹⁾ See, for example, Commission Decision 1999/242/EC of 3 March 1999, relating to a proceeding pursuant to Article 85 of the EC Treaty (IV/36.237 – TPS) (OJ L 90, 2.4.1999, p. 6, ELI: <http://data.europa.eu/eli/dec/1999/242/oj>). Similarly, the prohibition of Article 101(1) of the Treaty only applies as long as the agreement has a restrictive object or restrictive effects.

⁽¹¹²⁾ See paragraph 85 of the Guidelines on the application of Article 81(3) of the Treaty, cited in footnote 8.

⁽¹¹³⁾ *Ibidem*, paragraphs 98 and 102.

⁽¹¹⁴⁾ See, by analogy, the judgment of 16 March 2000, *Compagnie Maritime Belge*, joined cases C-395/96 P and C-396/96 P, ECLI:EU:C:2000:132, paragraph 130. Similarly, the application of Article 101(3) does not prevent the application of the Treaty rules on the free movement of goods, services, persons and capital. Those rules are in certain circumstances applicable to agreements, decisions and concerted practices within the meaning of Article 101. See to that effect the judgment of 19 February 2002, *Wouters*, C-309/99, ECLI:EU:C:2002:98, paragraph 120.

relation to one relevant parameter does not necessarily mean that competition is eliminated within the meaning of Article 101(3). A technology pool can, for example, lead to the emergence of a *de facto* industry standard, leading to a situation in which there is little competition between the technological formats. Once the main market players adopt a certain format, network effects may make it very difficult for alternative formats to survive. However, this does not imply that the creation of a *de facto* industry standard always eliminates competition within the meaning of the last condition of Article 101(3), in particular where suppliers remain free to compete on price, quality, choice, innovation and product features.

4.2. Application of Article 101 of the Treaty to various types of licensing restraints

203. This Section covers various types of restraints that are commonly found in technology transfer agreements. Restraints that have already been addressed in the other Sections of these Guidelines, in particular Section 3.4 on hardcore restrictions and Section 3.5 on excluded restrictions, are covered only briefly in this Section.
204. This Section covers agreements between competitors as well as agreements between non-competitors. For agreements between competitors, a distinction is made – where appropriate – between reciprocal and non-reciprocal agreements. That distinction is not required in the case of agreements between non-competitors. When undertakings are neither actual nor potential competitors on a relevant technology market or on a market for products incorporating the licensed technology, a reciprocal licence is, for all practical purposes, equivalent to two separate licences. The situation is different for arrangements whereby the parties jointly assemble a technology package which is then licensed to third parties. Such arrangements are covered in Section 4.4 of these Guidelines.
205. This Section does not cover certain obligations in technology transfer agreements that generally do not restrict competition within the meaning of Article 101(1) of the Treaty. Those obligations include, but are not limited to:
- (a) confidentiality obligations;
 - (b) obligations on licensees not to sub-license;
 - (c) obligations not to use the licensed technology rights after the expiry of the agreement, provided that the licensed technology rights remain valid and in force;
 - (d) obligations to assist the licensor in enforcing the licensed intellectual property rights;
 - (e) obligations to pay minimum royalties or to produce a minimum quantity of products incorporating the licensed technology;
 - (f) obligations to use the licensor's trade mark or indicate the name of the licensor on the product.

4.2.1. Royalty obligations

206. The parties to a technology transfer agreement are, in general, free to determine the royalty payable by the licensee and its mode of payment without falling within Article 101(1) of the Treaty. That principle applies both to agreements between competitors and agreements between non-competitors. Royalty obligations may, for example, take the form of lump sum payments, a percentage of the selling price or a fixed amount for each product incorporating the licensed technology. Where the licensed technology relates to an input that is incorporated into a final product, it is generally not restrictive of competition for the royalties to be calculated on the basis of the price of the final product, provided that it incorporates the licensed technology⁽¹¹⁵⁾. In the case of software licensing, royalties based on the number of users, and royalties calculated on a per machine basis are generally compatible with Article 101(1).

⁽¹¹⁵⁾ This is without prejudice to the possible application of Article 102 of the Treaty to the setting of royalties; see the judgment of 14 February 1978, *United Brands*, C-27/76, ECLI:EU:C:1978:22, paragraph 250 and the judgment of 16 July 2009, *Der Grüne Punkt – Duales System Deutschland GmbH*, C-385/07 P, ECLI:EU:C:2009:456, paragraph 142.

207. Outside the block exemption, royalty provisions in technology transfer agreements between competitors may restrict competition within the meaning of Article 101(1) of the Treaty where competitors engage in cross-licensing and impose running royalties that are clearly disproportionate compared to the market value of the licence and where the parties have similar cost structures, or where such royalties have a significant impact on market prices. In assessing whether the royalties are disproportionate, it is necessary to examine the royalties paid by other licensees on the product market for the same or substitute technologies. In such cases, it is unlikely that the conditions of Article 101(3) are satisfied.
208. The block exemption only applies to technology transfer agreements as long as technology rights licensed under the agreement are valid and in force. However, agreements which contain royalty obligations that extend beyond the period of validity of the licensed technology rights do not necessarily restrict competition within the meaning of Article 101(1) of the Treaty ⁽¹¹⁶⁾. Such obligations may allow the licensee to spread the payment of royalties over a longer period. If, after the licensed technology rights expire, third parties can legally exploit the technology and create sufficient competitive pressure in the market, post-expiry royalties are unlikely to restrict competition within the meaning of Article 101(1).
209. In the case of agreements between non-competitors, the block exemption covers agreements whereby royalties are calculated on the basis of both products produced using the licensed technology and products produced using technologies licensed from third parties. Such arrangements may facilitate the metering of royalties. However, they may also lead to foreclosure by increasing the cost of using third party inputs and may thus have effects similar to those of a non-compete obligation. If royalties are paid not just on products produced with the licensed technology but also on products produced with third-party technology, then the royalties will increase the cost of the latter products and reduce demand for the third-party technology. Outside the block exemption, it is therefore necessary to consider whether the restriction has foreclosure effects. For that purpose, it is appropriate to apply the analytical framework used for non-compete obligations (see Section 4.2.7 of these Guidelines). In the case of appreciable foreclosure effects, such agreements fall within Article 101(1) of the Treaty and are unlikely to fulfil the conditions of Article 101(3), unless there is no other practical way of calculating and monitoring royalty payments.

4.2.2. *Exclusive licensing and sales restrictions*

210. For the purpose of these Guidelines, it is useful to distinguish between restrictions on production within a given territory (exclusive or sole licences) and restrictions on the sale of products incorporating the licensed technology into a given territory and/or to a given customer group (sales restrictions).

4.2.2.1. *Exclusive and sole licences*

211. An exclusive licence means that the licensor itself is not permitted to produce using the licensed technology rights, nor to license those rights to third parties, in general, or for a particular use or in a particular territory. In such cases, the licensee is the only party that is authorised to produce on the basis of the licensed technology rights for the use or in the territory concerned.
212. A sole licence means that the licensor undertakes not to license third parties to produce within a given territory, but retains the right to produce using the licensed technology itself.
213. Where the licensor undertakes not to produce itself or license others to produce within a given territory, that territory may cover the whole world or any part of it.
214. Exclusive and sole licences are often accompanied by sales restrictions that limit where the parties may sell products incorporating the licensed technology.

⁽¹¹⁶⁾ See the judgment of 12 May 1989, *Ottung*, C-320/87, EU:C:1989:195, paragraph 11 and judgment of 7 July 2016, *Genentech*, C-567/14, ECLI:EU:C:2016:526, paragraph 39.

215. Reciprocal exclusive licensing between competitors is a form of market and customer sharing and a hardcore restriction under Article 4(1), point (c), of the TTBER. However, reciprocal sole licensing between competitors is block-exempted up to the market share threshold of 20 %. Under such an agreement, the parties mutually commit not to license their competing technologies to third parties, but can continue to use the technologies themselves. Where the parties have significant market power, such agreements may facilitate collusion by ensuring that the parties are the only sources of output in the market based on the licensed technologies.
216. Non-reciprocal exclusive licensing between competitors is block-exempted up to the market share threshold of 20 %. Above the market share threshold, exclusive licensing can produce restrictive effects. The greater the market power of either party, the greater the likelihood of restrictive effects. Where the exclusive licence is worldwide, it implies that the licensor leaves the market. Where exclusivity is limited to a particular territory, such as a Member State, the agreement implies that the licensor refrains from producing goods and services incorporating the licensed technology in the territory in question. To assess such exclusive licences, it is necessary to take into account the market power of the licensor and the licensee. If both parties have a limited market position on the product market, and the licensor lacks the capacity to effectively exploit the technology in the licensee's territory, the agreement is unlikely to fall within Article 101(1) of the Treaty. A special case exists where the licensor and the licensee compete only on the technology market. For example, where the licensor is a research institute or a small research-based undertaking, such as a spin-off, which competes with the licensee only on the technology market, it may lack the production or distribution capabilities required to bring products incorporating the licensed technology to market. In such cases, the licensor may be incapable of competing downstream on the product market. As a result, the exclusive licence is unlikely to restrict competition within the meaning of Article 101(1), provided that the licensee does not have significant market power on the product market.
217. Exclusive licensing between non-competitors – to the extent that it falls within Article 101(1) of the Treaty – is likely to fulfil the conditions of Article 101(3). An exclusive licence is frequently necessary in order to induce the licensee to invest in the licensed technology and to bring the products to market in a timely manner. This is in particular the case where the licensee must make large investments to develop the licensed technology further. Intervening against exclusivity once the licensee has successfully commercialised the licensed technology would deprive the licensee of the financial return on its investment and would be detrimental to competition, the dissemination of technology and innovation. The Commission will therefore only exceptionally intervene against exclusive licensing in agreements between non-competitors, irrespective of the territorial scope of the licence.
218. However, if the licensee already owns a substitutable technology that it uses for in-house production, an exclusive licence may not be necessary to incentivise the licensee to bring a product to the market. In such cases, the exclusive licence may fall within Article 101(1) of the Treaty, in particular where the licensee has market power on the product market. For Article 101(1) to apply, entry into the technology market must be difficult and the licensed technology must constitute a real source of competition on the market. In such circumstances, an exclusive licence may foreclose third party licensees, raise barriers to entry and allow the licensee to maintain or strengthen its market power. Restrictive effects are particularly likely where a licensee with significant market power obtains an exclusive licence to one or more competing technologies. In that case, the exclusive licence is unlikely to fulfil the conditions of Article 101(3).
219. Agreements under which the parties cross-license each other and undertake not to license third parties raise particular concerns where the resulting package of technologies creates a *de facto* industry standard to which third parties must have access in order to compete effectively on the market. In such cases, the arrangement creates a closed standard reserved for the parties to the arrangement. The Commission will assess such arrangements in accordance with the principles applied to technology pools (see Section 4.4 of these Guidelines). In particular, the technologies which support such a standard should normally be licensed to third parties on fair, reasonable and non-discriminatory terms⁽¹⁷⁾. Where the parties to the arrangement compete with third parties on an existing product market and the arrangement relates to that product market, a closed standard is likely to have significant exclusionary effects. This negative impact on competition can only be avoided by licensing also to third parties.

⁽¹⁷⁾ See in this respect the Commission's Notice in the Canon/Kodak Case (OJ C 330, 1.11.1997, p. 10) and the IGR Stereo Television Case mentioned in: European Commission, Eleventh report on competition policy – Published in conjunction with the 'Fifteenth General Report on the Activities of the European Communities in 1981', Publications Office of the European Union, 1982, paragraph 94.

4.2.2.2. Sales restrictions

220. As regards sales restrictions, an important distinction must be made between agreements between competitors and agreements between non-competitors.
221. Restrictions on active and passive sales by one or both parties in a reciprocal agreement between competitors are a form of market and customer sharing and are hardcore restrictions under Article 4(1), point (c), of the TTBER. Such sales restrictions fall within Article 101(1) of the Treaty and are unlikely to fulfil the conditions of Article 101(3). Such restrictions are generally considered market sharing, since they prevent the affected party from selling actively and passively into territories and to customer groups which it actually served or could realistically have served in the absence of the agreement.
222. In the case of non-reciprocal agreements between competitors, the block exemption applies to restrictions on active and/or passive sales by the licensee or the licensor into an exclusive territory or to an exclusive customer group reserved for the other party (see Article 4(1), point (c)(i), of the TTBER) up to the market share threshold of 20 %⁽¹¹⁸⁾. Above the market share threshold, such sales restrictions fall within Article 101(1) of the Treaty where one or both parties have significant market power. However, such restrictions may be indispensable for the dissemination of valuable technologies and may therefore fulfil the conditions of Article 101(3). This may be the case where the licensor has a relatively weak market position in the territory where it exploits the technology itself. In such cases, restrictions on active sales by the licensee may be indispensable to induce the licensor to grant the licence. In the absence of such restrictions, the licensor could face active competition in its main area of activity. Similarly, restrictions on active sales by the licensor may be indispensable, in particular where the licensee has a relatively weak market position in the territory allocated to it and has to make significant investments to exploit the licensed technology effectively.
223. The block exemption also applies to restrictions in non-reciprocal agreements between competitors on the ability of the licensee to make active sales into an exclusive territory or to an exclusive customer group allocated to another licensee that was not a competitor of the licensor at the time when that licensee's technology transfer agreement was concluded (see Article 4(1), point (c)(ii), of the TTBER). Above the market share threshold, such active sales restrictions are likely to fall within Article 101(1) of the Treaty where the parties have significant market power. The restraint is nevertheless likely to be indispensable within the meaning of Article 101(3) for the period of time required for the protected licensee to penetrate a new market and establish a market presence in the allocated territory or vis-à-vis the allocated customer group. In particular, the restriction may allow the licensee to overcome the disadvantage that it faces where some of the licensees are competing undertakings of the licensor and thus already established on the market. Restrictions on passive sales by licensees into a territory or to a customer group that has been exclusively allocated to another licensee are hardcore restrictions under Article 4(1), point (c), of the TTBER.
224. In agreements between non-competitors, restrictions of the licensee's ability to make active and passive sales into a territory or customer group reserved exclusively to the licensor are block-exempted up to the market share threshold of 30 % (see Article 4(2), point (b)(i), of the TTBER). Above that threshold, such restrictions require an individual assessment. In certain cases, they may fall outside Article 101(1) of the Treaty or fulfil the conditions of Article 101(3), for example, if they are objectively necessary for the dissemination of valuable technologies. This may be the case where the licensor has a relatively weak market position in the territory where it exploits the technology itself. In such cases, restrictions of the licensee's ability to make active sales may be indispensable to induce the licensor to grant the licence. In the absence of such restrictions, the licensor could face active competition in its main area of activity. In other cases, sales restrictions on the licensee may fall within Article 101(1) and may not fulfil the conditions of Article 101(3). This is likely to be the case where the licensor individually has significant market power, or where a series of similar agreements concluded by licensors that together hold a strong position on the market produces a cumulative effect.

⁽¹¹⁸⁾ See, however, footnote 88 regarding the possible application of the Geo-blocking Regulation to certain passive sales restrictions.

225. Sales restrictions on the licensor, where they fall within Article 101(1) of the Treaty at all, are likely to fulfil the conditions of Article 101(3), unless there are no real alternatives to the licensor's technology on the market, or such alternatives are licensed by the licensee from third parties ⁽¹¹⁹⁾. Such restrictions and in particular restrictions of active sales are likely to be indispensable within the meaning of Article 101(3) to induce the licensee to invest in the production, marketing and sale of the products incorporating the licensed technology. It is likely that the licensee's incentive to invest would be reduced if it faced direct competition from the licensor, whose production costs are not burdened by royalty payments.
226. In agreements between non-competitors, restrictions of the licensee's ability to make active sales to particular territories or customer groups are block-exempted up to the market share threshold of 30 % ⁽¹²⁰⁾. Above that threshold, such restrictions require an individual assessment. Where the licensee has significant market power, these restrictions may limit intra-technology competition and are likely to fall within Article 101(1) of the Treaty. However, such restrictions may fulfil the conditions of Article 101(3) where they are necessary to prevent free riding and to induce a licensee to make the investments necessary for the effective exploitation of the licensed technology inside its territory and to promote sales of the licensed product. Restrictions of passive sales are hardcore restrictions under Article 4(2), point (b), of the TTBER (see paragraphs 144-154 above). Such restrictions are, in general, unlikely to fulfil the conditions of Article 101(3).

4.2.3. Output restrictions

227. In technology transfer agreements between competitors, reciprocal output restrictions are hardcore restrictions under Article 4(1), point (b), of the TTBER (see paragraph 128). However, Article 4(1), point (b), does not cover output restrictions relating to the licensed technology imposed on the licensee in a non-reciprocal agreement or imposed on only one of the licensees in a reciprocal agreement. Such restrictions are block-exempted up to the market share threshold of 20 %. Above that threshold, output restrictions require an individual assessment. Such restrictions may restrict competition within the meaning of Article 101(1) of the Treaty where the parties have significant market power. However, Article 101(3) is likely to apply in cases where the licensor's technology is substantially better than the licensee's technology and the output limitation significantly exceeds the output of the licensee prior to the conclusion of the agreement. In that case, the effect of the output limitation is limited, even in markets where demand is growing. For the application of Article 101(3) of the Treaty, it is also necessary to take into account that such restrictions may be necessary to induce the licensor to disseminate its technology as widely as possible. For instance, a licensor may be reluctant to license its competitors if it cannot limit the licence to a particular production site with a specific capacity (a site licence). Where the technology transfer agreement leads to a real integration of complementary assets, output restrictions imposed on the licensee may therefore fulfil the conditions of Article 101(3). However, this is unlikely to be the case where the parties have significant market power.
228. In technology transfer agreements between non-competitors, output restrictions are block-exempted up to the market share threshold of 30 %. Above that threshold, an individual effects assessment is required. The main competition concern that may arise from output restrictions in agreements between non-competitors is the reduction of intra-technology competition between licensees. The likelihood of such anti-competitive effects depends on the market position of the licensor and the licensees, and the extent to which the output limitation prevents the licensee from satisfying demand for the products incorporating the licensed technology.
229. Where output restrictions are combined with exclusive territories or exclusive customer groups, their restrictive effects are increased. The combination of the two types of restraints makes it more likely that the agreement serves to partition markets.

⁽¹¹⁹⁾ See, however, footnote 88 regarding the possible application of the Geo-blocking Regulation to certain passive sales restrictions.

⁽¹²⁰⁾ Where the licensor operates a selective distribution system in a territory, it may not combine that system with exclusive territorial or customer group allocations where this would lead to a restriction of active or passive sales to end users. Such combination constitutes a hardcore restriction under Article 4(2), point (c), of the TTBER (see paragraph 153 above).

230. Output restrictions imposed on the licensee in agreements between non-competitors may also have pro-competitive effects by promoting the dissemination of technology. In some cases, a licensor may be unwilling to enter into a technology transfer agreement unless it can limit the output of its licensee. This is particularly likely to be the case where the licensor is also a producer, since the licensee's output may find its way back into the licensor's main area of activity and thus have a direct impact on that activity. On the other hand, it is less likely that output restrictions are necessary to ensure dissemination of the licensor's technology when they are combined with sales restrictions that prevent the licensee from selling into a territory or customer group reserved for the licensor.

4.2.4. *Field of use restrictions*

231. Under a field of use restriction, the licensee's use of the licensed technology is limited to one or more technical fields of application, product markets or industrial sectors. This means that the licensee may only use the licensed technology rights within those specified areas. For instance, a moulding technology may be suitable for producing many types of plastic products, but the technology transfer agreement may limit the licensee's use of the technology to the production of plastic bottles.
232. Field of use restrictions are covered by the block exemption⁽¹²¹⁾. However, certain customer restrictions are hardcore restrictions under Article 4(1), point (c), and Article 4(2), point (b), of the TTBER, therefore field of use restrictions must not be used to allocate markets or customers. Paragraph 139 provides guidance on the circumstances in which field of use restrictions are more likely to be considered a form of market allocation. This concern is less likely to arise where the field of use is defined objectively by reference to identified and meaningful technical characteristics of the contract product.
233. While output restrictions are hardcore restrictions under Article 4(1), point (b), of the TTBER, field of use restrictions are not output restrictions, as they do not limit the output that the licensee may produce within the licensed field of use.
234. Similarly to territories, fields of use can be allocated to the licensee under an exclusive or sole licence. See Section 4.2.2.1 of these Guidelines for an explanation of the difference between exclusive and sole licensing, including the impact on the ability of the licensor to exploit the licensed technology within the field of use concerned. In agreements between competitors, reciprocal exclusive licensing of fields of use is a form of market sharing and a hardcore restriction under Article 4(1), point (c), of the TTBER.
235. Field of use restrictions may have pro-competitive effects by encouraging the licensor to license its technology for applications that fall outside its main area of activity. If the licensor were not able to prevent licensees from operating in fields where it exploits the technology itself or in fields where the value of the technology is not yet well established, this could disincentivise the licensor from licensing or lead it to charge a higher royalty. The fact that in certain sectors licensing often occurs to ensure design freedom by preventing infringement claims must also be taken into account. Within the scope of the licence, the licensee is able to develop its own technology without fearing infringement claims by the licensor.
236. In agreements between competitors, field of use restrictions imposed on licensees are block-exempted up to the market share threshold of 20 %. Above the market share threshold, such restrictions must be individually assessed. The main competition concern is the risk that the licensee ceases to be a competitive force outside the licensed field of use. This risk is greater in the case of cross licensing between competitors where the agreement provides for asymmetrical field of use restrictions. Field of use restrictions are asymmetrical where one party is permitted to use the licensed technology in one industrial sector, product market or technical field of application and the other party

⁽¹²¹⁾ However, see paragraph 234 regarding reciprocal exclusive licensing of fields of use in agreements between competitors.

is permitted to use the other licensed technology in a different industrial sector, product market or technical field of application. Competition concerns may in particular arise where the licensee's production facility, which is tooled up to use the licensed technology, is also used to produce products outside the licensed field of use using the licensee's own technology. If the agreement is likely to lead the licensee to reduce output outside the licensed field of use, the agreement is likely to fall within Article 101(1) of the Treaty. By contrast, symmetrical field of use restrictions, that is to say, agreements whereby the parties are licensed to use each other's technologies within the same field(s) of use, are unlikely to fall within Article 101(1). Such agreements are unlikely to restrict competition that existed in the absence of the agreement. Article 101(1) is also unlikely to apply to agreements that merely enable the licensee to develop and exploit its own technology within the scope of the licence without fearing infringement claims by the licensor. In such cases, field of use restrictions do not in themselves restrict competition that existed in the absence of the agreement. In the absence of the agreement, the licensee also risked infringement claims outside the scope of the licensed field of use. However, if the licensee terminates or scales back its activities in areas outside the licensed field of use without business justification, this may be an indication of an underlying market-sharing arrangement amounting to a hardcore restriction under Article 4(1), point (c), of the TTBER.

237. In agreements between non-competitors, field of use restrictions imposed on licensees are block-exempted up to the market share threshold of 30 %. Above the market share threshold, such restrictions require an individual assessment. In general, they either do not restrict competition within the meaning of Article 101(1) of the Treaty, or they are efficiency-enhancing and may therefore fulfil the conditions of Article 101(3). They promote the dissemination of technology by giving the licensor an incentive to license for exploitation in fields in which it does not want to exploit the technology itself. If the licensor were not able to prevent licensees from operating in fields where the licensor exploits the technology itself, it could be disincentivised from licensing.
238. In agreements between non-competitors, the licensor may grant exclusive or sole licences to different licensees limited to one or more fields of use. Such restrictions limit intra-technology competition between licensees in the same way as territorial exclusive licensing and are assessed in the same way (see Section 4.2.2.1 of these Guidelines).

4.2.5. *Captive use restrictions*

239. A captive use restriction is an obligation on the licensee to limit its production of the products incorporating the licensed technology to the quantities required for the production of its own products and the maintenance and repair of its own products. In other words, this type of restriction obliges the licensee to use the products incorporating the licensed technology only as an input for incorporation into its own production. It does not permit the licensee to sell products incorporating the licensed technology to other producers.
240. Captive use restrictions are block-exempted up to the market share thresholds of 20 % and 30 %. Above those thresholds, such restrictions require an individual assessment. In this respect, it is necessary to distinguish agreements between competitors and agreements between non-competitors.
241. In agreements between competitors, a requirement that the licensee uses the licensed technology only to produce inputs for incorporation into its own products prevents it from supplying components to third party producers. If, before the conclusion of the agreement, the licensee was not an actual or potential supplier of components to other producers, the captive use restriction does not restrict competition that existed before the conclusion of the agreement. In those cases, the restriction is assessed in the same way as for agreements between non-competitors. If, on the other hand, the licensee was an actual or potential supplier of components before the conclusion of the agreement, it is necessary to assess the impact of the agreement on that activity. If by tooling up to use the licensor's technology, the licensee ceases to use its own technology on a standalone basis and thereby ceases to operate as a component supplier, the agreement restricts competition that existed before the conclusion of the agreement. It may result in serious anti-competitive effects if the licensor has significant market power on the component market.

242. In the case of technology transfer agreements between non-competitors, captive use restrictions can raise two main types of competition concern: a restriction of intra-technology competition on the market for the supply of inputs; and the prevention of arbitrage between licensees, which may increase the licensor's ability to impose discriminatory royalties on licensees.
243. However, captive use restrictions can also promote pro-competitive licensing. Where the licensor is a supplier of components, the restraint may be necessary for the dissemination of technology between non-competitors to occur. In the absence of the restraint, the licensor may be unwilling to grant the licence, or may only do so in return for higher royalties, because otherwise it would create direct competition with itself on the component market. In such cases, a captive use restriction either does not restrict competition within the meaning of Article 101(1) of the Treaty or it fulfils the conditions of Article 101(3). However, the licensee must not be restricted from selling the licensed product as replacement parts for its own products. The licensee must be able to serve the after-market for its own products, including independent service providers that service and repair the products produced by the licensee.
244. Where the licensor is not a component supplier on the relevant product market, the above reason for imposing captive use restrictions does not apply. In such cases, a captive use restriction may in principle promote the dissemination of technology by ensuring that licensees do not sell to producers that compete with the licensor on other product markets. However, a restriction on the licensee's ability to sell to certain customer groups reserved for the licensor normally constitutes a less restrictive alternative. Consequently, in such cases, a captive use restriction is generally not necessary for the dissemination of technology to take place.

4.2.6. *Tying and bundling*

245. In the context of technology licensing, tying occurs where the licensor makes the licensing of one technology (the tying product) conditional upon the licensee taking a licence for another technology or purchasing a product from the licensor or someone designated by it (the tied product). Bundling occurs where two technologies or a technology and a product are only sold together as a bundle. In both cases, however, it is a condition that the products and technologies involved are distinct, in the sense that there is distinct demand for each product and technology forming part of the tie or the bundle. In the following, the term 'tying' refers to both tying and bundling.
246. The market share thresholds set out in Article 3 of the TTBER ensure that tying and bundling are not block-exempted above the market share thresholds of 20 % in the case of agreements between competitors and 30 % in the case of agreements between non-competitors. The market share thresholds apply to any relevant technology or product market affected by the technology transfer agreement, including the market for the tied product. The remainder of this Section provides guidance for the assessment of tying in cases where the parties' market shares exceed the market share thresholds ⁽¹²²⁾.
247. The main restrictive effect of tying is foreclosure of competing suppliers of the tied product. Tying may also allow the licensor to maintain market power in the market for the tying product by raising barriers to entry. For instance, it may force new entrants to enter several markets at the same time. Moreover, tying may allow the licensor to increase royalties, for example when the tying product and the tied product are partly substitutable and the two products are not used in fixed proportions. Tying prevents the licensee from switching to substitute inputs in response to royalty increases for the tying product. These competition concerns may arise irrespective of whether the parties to the agreement are competitors or not. For tying to produce anti-competitive effects, the licensor must have significant market power in the market for the tying product. In the absence of such market power, the licensor is unlikely to be able to leverage its technology to foreclose suppliers of the tied product. Furthermore, as in the case of non-compete obligations, the tie must cover a sufficient proportion of the market for the tied

⁽¹²²⁾ For an example of how this analytical framework has been applied in practice, see Commission Decision of 20 December 2012 in Case AT.39230 – *Rio Tinto Alcan*, paragraph 96 *et seq.*

product for appreciable foreclosure effects to occur. In cases where the licensor has market power on the market for the tied product, rather than on the market for the tying product, the restraint is generally analysed as a non-compete clause or quantity forcing. This reflects the fact that any competition concern is likely to originate in the tied product market, not in the tying product market ⁽¹²³⁾.

248. Tying can also generate efficiency gains. This may be the case, for example, where the tied product is necessary for a technically satisfactory exploitation of the licensed technology or to ensure that production under the licence conforms to quality standards respected by the licensor and other licensees. In such cases, tying will often fulfil the conditions of Article 101(3) of the Treaty. Where licensees use the licensor's trade mark or brand name, or where it is otherwise obvious to consumers that there is a link between the product incorporating the licensed technology and the licensor, the licensor has a legitimate interest in ensuring that the quality of the products does not undermine the value of its technology or its commercial reputation. Moreover, where it is known to consumers that the licensor and its licensees produce on the basis of the same technology, licensees are unlikely to take a licence unless the technology is exploited by all parties in a technically satisfactory way.

4.2.7. *Non-compete obligations*

249. Non-compete obligations in the context of technology licensing take the form of an obligation on the licensee not to use third-party technologies that compete with the licensed technology. To the extent that a non-compete obligation covers a product or an additional technology supplied by the licensor, the obligation is dealt with in Section 4.2.6 of these Guidelines on tying.
250. The TTBER exempts non-compete obligations in agreements between competitors and in agreements between non-competitors up to the market share thresholds of 20 % and 30 % respectively. The remainder of this Section provides guidance for the assessment of non-compete obligations in individual cases above the market share thresholds.
251. The main competition concern associated with non-compete obligations is foreclosure of third-party technologies. Non-compete obligations may also facilitate collusion between licensors where several licensors use them in separate agreements (cumulative use) or in the case of cross-licensing between competitors where both parties agree not to use third-party technologies. Foreclosure of competing technologies reduces competitive pressure on the royalties charged by the licensor and reduces competition between the incumbent technologies by limiting the possibilities for licensees to switch to competing technologies. As the main competition concern is foreclosure in both cases, the same analysis can in general be used for agreements between competitors and agreements between non-competitors.
252. Foreclosure may arise where a substantial proportion of potential licensees are already tied to one or, in the case of cumulative effects, more sources of technology and are prevented from exploiting competing technologies. Foreclosure effects may result from agreements concluded by a single licensor that has significant market power or from the cumulative effect of agreements concluded by several licensors, even where each individual agreement or network of agreements is covered by the TTBER. In the latter case, however, a serious cumulative effect is unlikely to arise as long as less than 50 % of the market is tied. Above that threshold, significant foreclosure is likely to occur when there are relatively high barriers to entry for new licensees. In order to determine the real possibility for entry and expansion by third parties, it is also necessary to take account of the extent to which distributors are tied to licensees by non-compete obligations. Third party technologies only have a real possibility of entry if they have access to the necessary production and distribution assets. In other words, the ease of entry depends not only on the availability of licensees but also the extent to which they have access to distribution. In assessing foreclosure effects at the distribution level, the Commission will apply the analytical framework set out in Section 8.2.1 of the Vertical Guidelines ⁽¹²⁴⁾.

⁽¹²³⁾ See Section 4.2.7 of these Guidelines on non-compete obligations and paragraphs 298 *et seq.* of the Vertical Guidelines, cited in footnote 19.

⁽¹²⁴⁾ See footnote 19.

253. Where the licensor has significant market power, obligations on licensees to obtain the technology only from the licensor can lead to significant foreclosure effects. The stronger the market position of the licensor, the higher the risk of foreclosing competing technologies. For appreciable foreclosure effects to occur, the non-compete obligations do not necessarily have to cover a substantial part of the market. Appreciable foreclosure effects may occur where non-compete obligations are targeted at undertakings that are the most likely to license-in competing technologies. The risk of foreclosure is higher where there is only a limited number of potential licensees.
254. Non-compete obligations can also produce pro-competitive effects. First, such obligations may promote dissemination of technology by reducing the risk of misappropriation, in particular in respect of licensed know-how. If a licensee is entitled to license competing technology rights from third parties, there is a risk that the licensed know-how could be used for the exploitation of the competing technologies and thus benefit competitors. Where a licensee also exploits competing technologies, this may make monitoring of royalty payments more difficult. This may act as a disincentive for licensors to enter into licensing agreements.
255. Second, non-compete obligations, possibly combined with an exclusive territory, may be necessary to ensure that the licensee is incentivised to invest in and exploit the licensed technology effectively. Where the agreement falls within Article 101(1) of the Treaty, due to an appreciable foreclosure effect, it may be necessary for the parties to use a less restrictive alternative in order to meet the conditions of Article 101(3). Such alternatives could include the imposition of minimum output or royalty obligations, which typically have less potential to foreclose competing technologies.
256. Third, in cases where the licensor undertakes to make significant client-specific investments, for example, in training the licensee's personnel or adapting the licensed technology to the licensee's needs, non-compete obligations, or minimum output or minimum royalty obligations may be necessary to induce the licensor to make the investment and to avoid hold-up problems. However, in most cases, the licensor will be able to recover the costs of such investments through a lump-sum payment. This implies that less restrictive alternatives are available.

4.3. Settlement agreements

257. Settlement agreements are, in principle a legitimate means to resolve *bona fide* legal disputes relating to technology rights. On the other hand, challenges to the validity and scope of intellectual property rights are part of normal competition in sectors where there exist exclusive rights in relation to technology⁽¹²⁵⁾. Also, it is in the general public interest to eliminate invalid intellectual property rights, as they constitute an unmerited barrier to innovation and economic activity⁽¹²⁶⁾.
258. Licensing of technology rights in settlement agreements may serve as a means to settle disputes or to avoid situations where one party exercises its intellectual property rights to prevent the other party from exploiting its own intellectual property rights.
259. Subject to an assessment of its specific content and economic context, licensing, including cross-licensing, in the context of settlement agreements may be compatible with Article 101 of the Treaty where, in the absence of the licence, the licensee would be excluded from the market⁽¹²⁷⁾.

⁽¹²⁵⁾ See the judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, ECLI:EU:C:2020:52, paragraph 81; judgment of 27 June 2024, *Commission v Krka*, C-151/19 P, ECLI:EU:C:2024:546, paragraph 72, and judgment of 27 June 2024, *Commission v Servier and Others*, C-176/19 P, ECLI:EU:C:2024:549, paragraph 105.

⁽¹²⁶⁾ See judgment of 25 February 1986, *Windsurfing v Commission*, C-193/83, ECLI:EU:C:1986:75, paragraph 92.

⁽¹²⁷⁾ See, for example, the judgment of 27 June 2024, *Commission v Krka*, C-151/19 P, ECLI:EU:C:2024:546, paragraph 398, which clarifies that this does not apply if the agreements between the parties also prohibit the licensee from entering other markets. For example, subject to an assessment of the factors mentioned in paragraph 259, a settlement agreement under which the alleged patent infringer agrees to pay royalties for a licence of the infringed patent, thereby allowing the infringer to enter the market, is unlikely to raise concerns under Article 101 of the Treaty.

260. However, settlement agreements can also restrict competition within the meaning of Article 101(1) of the Treaty, depending on their terms and the terms of other agreements between the parties, as well as their legal and economic context ⁽¹²⁸⁾. To assess settlement agreements under Article 101 of the Treaty, it is necessary to determine whether the parties are actual or potential competitors.

Pay-for-restriction in settlement agreements

261. 'Pay-for-restriction' or 'pay-for-delay' type settlement agreements often do not involve the transfer of technology rights, but are based on a value transfer from one party in return for a limitation on the entry and/or expansion on the market of the other party. Such agreements may fall within Article 101(1) of the Treaty ⁽¹²⁹⁾. For example, in the pharmaceutical sector, a company holding one or more patents (the originator) might make payments to a potential competitor (a manufacturer of generic medicines) in order to delay that competitor's entry to the market.
262. 'Pay-for-restriction' or 'pay-for-delay' type settlement agreements between actual or potential competitors restrict competition by object where it is evident from examining the agreement that the value transfers involved have no explanation other than the commercial interest of the technology holder and the other parties involved not to engage in competition on the merits ⁽¹³⁰⁾. This applies, for example, where a technology holder makes value transfers to one or more other parties resulting in a net gain for those parties that is sufficiently significant to disincentivise them from entering or expanding in the market independently ⁽¹³¹⁾.

Cross-licensing in settlement agreements

263. Settlement agreements whereby the parties cross-license each other and impose restrictions on the use of their technologies, including restrictions on licensing to third parties, may fall within Article 101(1) of the Treaty. Such agreements are unlikely to raise competition concerns if the parties are not actual or potential competitors and the cross-licensing is limited to what is necessary to resolve a genuine two-way blocking position ⁽¹³²⁾. If, however, the parties are competitors and they share markets or fix reciprocal running royalties that have a significant impact on market prices, the agreement is very likely to fall within Article 101(1).
264. Where under the settlement agreement the parties are entitled to use each other's technology and the agreement extends to future developments of the technology, it is necessary to assess the impact of the agreement on the parties' incentive to innovate. In cases where the parties have significant market power, the agreement is likely to fall within Article 101(1) of the Treaty where it prevents the parties from gaining a competitive lead over each other. Agreements that eliminate or substantially reduce the possibility for one party to gain a competitive lead over the other reduce the incentive to innovate and thus adversely affect an essential parameter of competition. Such agreements are also unlikely to meet the conditions of Article 101(3). In particular, it is unlikely that the

⁽¹²⁸⁾ See, to that effect, the judgment of 27 June 2024, *Commission v Servier and Others*, C-176/19 P, ECLI:EU:C:2024:549, paragraphs 178-179.

⁽¹²⁹⁾ See, for example, the judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, ECLI:EU:C:2020:52, paragraphs 60 *et seq.* See also the judgment of 27 June 2024, *Commission v Servier and Others*, C-176/19 P, ECLI:EU:C:2024:549, paragraph 104 and the judgment of 23 October 2025, *Teva Pharmaceutical Industries and Cephalon v Commission*, C-2/24 P, EU:C:2025:825, paragraph 63. These judgments clarify that, in the specific context of the pharmaceutical industry and patent settlements between an originator medicine manufacturer and a generic medicine manufacturer, a value transfer may be considered legitimate if it is fully justified by the need to compensate for costs or disruptions caused by the settled litigation – such as expenses and fees of the generic manufacturer's advisers – or by the need to remunerate the actual and proven supply of goods or services provided by the generic manufacturer to the originator manufacturer.

⁽¹³⁰⁾ See, for example, the judgment of 25 March 2021, *Lundbeck v Commission*, C-591/16 P, ECLI:EU:C:2021:243, paragraph 114.

⁽¹³¹⁾ There is no requirement for that net gain to necessarily be greater than the profits which the competitor would have made if it had been successful in the patent proceedings. See, for example, the judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, ECLI:EU:C:2020:52, paragraphs 87-94.

⁽¹³²⁾ A two-way blocking position exists where neither technology right can be exploited without infringing the other valid technology right or where neither party can be active in a commercially viable way on the relevant market without infringing the other party's valid technology right and where the parties thus need to obtain a licence or a waiver from each other.

restriction is indispensable within the meaning of the third condition of Article 101(3). The achievement of the objective of the agreement, namely to ensure that the parties can continue to exploit their own technology without being blocked by the other party, does not require that the parties agree to share future innovations. However, where the purpose of the agreement is to allow the parties to develop their respective technologies and the agreement does not lead them to use the same technological solutions, it is unlikely to prevent one party from gaining a competitive lead over the other. Such agreements merely create design freedom by preventing future infringement claims by the other party.

No-challenge clauses in settlement agreements

265. In the context of a settlement agreement, no-challenge clauses – including termination upon challenge clauses – frequently fall outside Article 101(1) of the Treaty.
266. However, in certain circumstances no-challenge clauses in settlement agreements can restrict competition within the meaning of Article 101(1) of the Treaty ⁽¹³³⁾. For instance, a no-challenge clause may be used to eliminate a competitor which, absent the clause, would likely have posed a competitive threat ⁽¹³⁴⁾. In addition, a no-challenge clause may infringe Article 101(1) where an intellectual property right was granted following the provision of incorrect or misleading information ⁽¹³⁵⁾. Scrutiny of such clauses may also be necessary if the technology rights are a necessary input for the licensee's production (see also paragraph 163).

4.4. Technology pools

267. Technology pools are arrangements whereby two or more parties assemble a package of technology which is licensed to contributors to the pool and third parties. In terms of their structure, technology pools can take the form of simple agreements between a limited number of parties or more complex arrangements whereby the organisation of the licensing of the pooled technologies is entrusted to a separate entity including, for example, an intermediary platform ⁽¹³⁶⁾. In both cases, the pool may allow licensees to access the technology covered by the pool on the basis of a single licence.
268. There is no inherent link between technology pools and standards, but pools often support, in whole or in part, a *de facto* or *de jure* industry standard ⁽¹³⁷⁾. Different technology pools may support competing standards ⁽¹³⁸⁾. Technology pools can produce pro-competitive effects, in particular by reducing transaction costs and setting a limit on cumulative royalties to prevent double marginalisation. They enable one-stop licensing of the technologies covered by the pool. This is particularly valuable in sectors where intellectual property rights are prevalent and licences need to be obtained from a significant number of licensors to operate on the market. In cases where licensees receive on-going services concerning the application of the licensed technology, joint licensing and service provision through the pool can lead to further cost reductions. Patent pools can also play a beneficial role in the implementation of pro-competitive standards.

⁽¹³³⁾ See, for example, the judgment of 30 January 2020, *Generics (UK) and Others*, C-307/18, ECLI:EU:C:2020:52, paragraph 82.

⁽¹³⁴⁾ See, to that effect, the judgment of 18 October 2023, *Teva Pharmaceutical Industries and Cephalon v Commission*, T-74/21, ECLI:EU:T:2023:651, paragraph 242, upheld by the judgment of 23 October 2025, *Teva Pharmaceutical Industries and Cephalon v Commission*, C-2/24 P, EU:C:2025:825.

⁽¹³⁵⁾ See, to that effect, the Commission Decision of 26 November 2020 in case in AT.39686 – *Cephalon*, paragraph 1208.

⁽¹³⁶⁾ Where the licensing-out of the pooled technologies is entrusted to a separate entity, references in this Section to technology pools include that separate entity.

⁽¹³⁷⁾ See the guidance on standardisation agreements provided in Chapter 7 of the Horizontal Guidelines. Technology pools typically operate licensing programmes that are structured around specific industry standards.

⁽¹³⁸⁾ See, in this respect, the Commission press release IP/02/1651 concerning the licensing of patents for third generation (3G) mobile services. That case involved five technology pools creating five different technologies, each of which could be used to produce 3G equipment.

269. Technology pools may also restrict competition. The creation of a technology pool necessarily implies joint selling of the pooled technologies, which in the case of pools composed solely or predominantly of substitute technologies amounts to a price fixing cartel. Technology pools may also foreclose alternative technologies, for example, where the pool establishes a *de facto* industry standard. The existence of the standard, combined with the pool may make it more difficult for new technologies to enter the market or foreclose competing technologies already in the market.
270. Agreements establishing technology pools and setting out their operating rules are not covered by the TTBER, irrespective of the number of parties involved. This is because the agreement to establish the pool does not permit a particular licensee to produce contract products (see Section 3.2.4 of these Guidelines). Such agreements should therefore be assessed using the guidance provided in this Section 4.4.
271. Technology pools give rise to a number of issues that do not arise in the context of other types of technology licensing, in particular regarding the selection of the included technologies and the operation of the pool. Licensing out from the pool generally constitutes a multi-party agreement, as the contributors to the pool commonly determine the terms of the licence. For this reason, licensing out from a pool is also not covered by the TTBER. It is addressed separately in paragraph 286 and Section 4.4.2 of these Guidelines.

4.4.1. *The assessment of the creation and operation of technology pools*

272. The way in which a technology pool is created, organised and operated can reduce the risk of it having the object or effect of restricting competition and help to ensure that the arrangement is pro-competitive. In assessing the possible competitive risks and efficiencies, the Commission will consider, among other factors, the transparency of the pool creation process, the selection and nature of the pooled technologies, including the extent to which independent experts are involved in the creation and operation of the pool and whether safeguards against exchange of sensitive information and independent dispute resolution mechanisms have been put in place.

Open participation

273. When participation in the creation of the pool and of any *de facto* or *de jure* standard supported by the pool is open to all interested parties, it is more likely that the technologies included in the pool will be selected on the basis of price and quality considerations than when the pool is set up by a limited group of technology holders.

Selection and nature of the pooled technologies

274. The competitive risks and the efficiency-enhancing potential of technology pools depend to a large extent on the relationship between the pooled technologies and the technologies outside the pool. Two basic distinctions must be made between: (a) technological complements and substitutes, and (b) essential and non-essential technologies.
275. Two technologies are complements as opposed to substitutes when they are both required to produce the product or carry out the process to which the technologies relate. Conversely, two technologies are substitutes when either technology allows the holder to produce the product or carry out the process to which the technologies relate.
276. A technology can be essential in two situations:
- (a) where the technology is essential to produce a particular product or carry out a particular process to which the pooled technologies relate;
 - (b) where the technology is essential to produce a product or carry out a process in accordance with a standard that incorporates the pooled technologies.

277. In the first case, a technology is essential (as opposed to non-essential) if there are no viable substitutes (both from a commercial and technical point of view) for that technology inside or outside the pool, and the technology constitutes a necessary part of the package of technologies required to produce the product(s) or carry out the process(es) to which the pooled technologies relate. In the second case, a technology is essential if its use is necessary (there are no viable substitutes) to comply with the standard supported by the pool (standard-essential technologies) ⁽¹³⁹⁾. Technologies that are essential are by definition also complements. The fact that a technology holder declares that a technology is essential does not in itself establish that such a technology is essential within the meaning of the criteria set out in this paragraph.
278. When technologies in a pool are substitutes, royalties are likely to be higher than they would otherwise be, because the inclusion in the pool is likely to reduce or eliminate competitive rivalry between them and prevent licensees from benefitting from such rivalry. When the technologies in the pool are complements, the technology pool reduces transaction costs and may lead to lower overall royalties. This is because the parties are in a position to set a common royalty for the package, rather than each licensor setting separate royalties for their own technology, without taking into account that increasing the royalty for one technology will usually decrease demand for complementary technologies. If royalties for complementary technologies are set individually, the total of those royalties may often exceed what would be collectively set by a pool for the package of the same complementary technologies.
279. The distinction between complementary and substitute technologies is not clear-cut in all cases, since technologies may be substitutes in part and complements in part. Where licensees are likely to demand both technologies due to efficiencies stemming from the integration of two technologies, the technologies are treated as complements, even if they are partly substitutable. In such cases, it is likely that, in the absence of the pool, licensees would want to licence both technologies due to the additional economic benefit of using both technologies as opposed to using only one of them.
280. The inclusion of substitute technologies in the pool is generally likely to restrict inter-technology competition since it involves price fixing between competitors. As a general rule, the Commission considers that the inclusion of significant substitute technologies in the pool is likely to restrict competition within the meaning of Article 101(1) of the Treaty. The Commission also considers that it is unlikely that the conditions of Article 101(3) will be fulfilled in such case. Given that the technologies in question are alternatives, no transaction cost savings accrue from including both technologies in the pool. In the absence of the pool, licensees would not have demanded both technologies. To alleviate the competition concerns, it is not sufficient that the parties remain free to license independently. This is because the parties are likely to have little incentive to license independently in order not to undermine the licensing activity of the pool, which allows them to jointly exercise market power.

Selection and function of independent experts and dispute resolution

281. The involvement of independent experts in the creation and operation of the pool can help to reduce the risk of competition concerns. For instance, the assessment of whether a technology is essential to a standard supported by a pool is often a complex matter that requires special expertise. The involvement of independent experts in such assessment can help to ensure that only essential technologies are included in the pool. The use of independent experts to select the technologies to be included in the pool can also help to ensure that competition between available technological solutions is not distorted.
282. The Commission will take into account how experts are selected and the functions that they are to perform. Experts should be independent from the undertakings that have formed the pool. If experts are connected to the licensors or the pool administrators, or depend on the licensors or the pool administrators in any other way, the involvement of the expert will be given less weight. Experts must also have the necessary technical expertise to perform the functions entrusted to them. These functions may include verifying whether the technology rights proposed for inclusion into the pool are valid and essential.

⁽¹³⁹⁾ In some cases, standard-compliant products may implement only part of a standard. In that case, essentiality is assessed by reference to the relevant part of the standard.

283. Finally, any dispute resolution mechanisms foreseen in the instruments setting up the pool should be taken into account. The more dispute resolution is entrusted to bodies or persons that are independent from the pool and its members, the more likely it is that the dispute resolution will operate in a neutral way.

Safeguards against the exchange of commercially sensitive information

284. It is also relevant to consider the arrangements for handling commercially sensitive information. In particular, the Commission will take into account what safeguards have been put in place to ensure that commercially sensitive information is not exchanged between the parties ⁽¹⁴⁰⁾. For example, where output or sales data are used for the purpose of calculating or verifying royalties, an independent expert, licensing body or pool administrator may be employed to ensure that such data is not exchanged between members of the pool that compete on affected markets.
285. Safeguards should also be put in place to ensure that commercially sensitive information is not exchanged between competing pools, in particular where technology holders participate in (the creation of) competing pools.

Safe harbour

286. The creation and operation of the pool, including the licensing out, generally falls outside Article 101(1) of the Treaty, irrespective of the market position of the parties, if all the following conditions are fulfilled:
- (a) participation in the pool creation process is open to all interested technology rights holders;
 - (b) the technology rights included in the pool are disclosed in an effective manner to potential and existing licensees ⁽¹⁴¹⁾;
 - (c) sufficient safeguards are adopted to ensure that only essential technologies (which therefore necessarily are also complements) are pooled, and the methodology used to assess essentiality is disclosed in an effective manner to potential and existing licensees ⁽¹⁴²⁾;
 - (d) sufficient safeguards are adopted to ensure that exchanges of sensitive information (such as pricing and output data) are limited to what is necessary for the creation and operation of the pool;
 - (e) the pooled technologies are licensed into the pool on a non-exclusive basis;
 - (f) the pooled technologies are licensed out by the pool to all potential licensees on fair, reasonable and non-discriminatory terms (FRAND) ⁽¹⁴³⁾, including provisions that ensure that licensees are not charged more than once for the same technology rights;
 - (g) the parties contributing technology to the pool and the licensees are free to challenge the validity and the essentiality of the pooled technologies;
 - (h) the parties contributing technology to the pool and the licensees remain free to develop competing products and technology.

⁽¹⁴⁰⁾ See Chapter 6 of the Horizontal Guidelines on information exchange, cited in footnote 15.

⁽¹⁴¹⁾ Effective disclosure should include at least the patent number or the patent application number, where that information is publicly available, and the country of registration. Disclosures should be updated at reasonable intervals upon request.

⁽¹⁴²⁾ Effective disclosure should include at least an explanation of the scope of the essentiality checks (including any sampling technique), the content of the checks (for example, which elements are assessed) and the criteria used to select the assessors (for example, regarding expertise and independence). Disclosures should be updated at reasonable intervals upon request.

⁽¹⁴³⁾ For more detail on FRAND, see paragraph 458 of the Horizontal Guidelines, cited in footnote 15.

Outside the safe harbour

287. Where significant complementary but non-essential technologies are included in the pool, there is a risk of foreclosure of third-party technologies. In particular, once a technology is included in the pool and licensed as part of the package, licensees are likely to have little incentive to license a competing technology when the royalty paid for the package already covers a substitute technology. Moreover, the inclusion of technologies that are not necessary for the purposes of producing the products or carrying out the processes to which the technology pool relates or to comply with the standard that includes the pooled technology also forces licensees to pay for technology that they may not need. Where a pool encompasses non-essential technologies, the arrangement is likely to fall within Article 101(1) of the Treaty where the pool has a significant position on any relevant market.
288. Given that substitute and complementary technologies may be developed after the creation of the pool, the need to assess essentiality does not end with the creation of the pool. A technology included in a pool may become non-essential over time, for example due to the evolution of the standard or the emergence of third-party technologies. Where it is brought to the attention of the pool that such alternative technologies are offered to and demanded by licensees, foreclosure concerns may be avoided by offering to new and existing licensees a licence without the no-longer essential technology at a correspondingly reduced royalty rate. However, there may be other means to ensure that third-party technologies are not foreclosed.
289. In the assessment of technology pools comprising non-essential but complementary technologies, at least the following factors should be considered:
- (a) whether there are pro-competitive reasons for including the non-essential technologies in the pool;
 - (b) whether the licensors in the pool remain free to license their respective technologies independently: where the pool is composed of a limited number of technologies and there are substitute technologies outside the pool, licensees may want to assemble their own technology package composed partly of technology forming part of the pool and partly of technology owned by third parties;
 - (c) whether, in cases where the pooled technologies have different applications, some of which do not require use of all of the pooled technologies, the pool offers the technologies only as a single package or whether it offers separate packages for distinct applications, each comprising only those technologies that are relevant to the application in question. In the latter case, technologies which are not essential to a particular product or process are not tied to essential technologies;
 - (d) whether the pooled technologies are available only as a single package or whether licensees have the possibility of obtaining a licence for only part of the package with a corresponding reduction of royalties. The possibility to obtain a licence for only part of the package may reduce the risk of foreclosure of third-party technologies outside the pool, in particular where the licensee obtains a corresponding reduction in royalties. This requires that a share of the overall royalty has been assigned to each technology in the pool. Where the licence agreements concluded between the pool and individual licensees are of relatively long duration and the pooled technology supports a *de facto* industry standard, the fact that the pool may foreclose access to the market by new substitute technologies must also be taken into account. In assessing the risk of foreclosure in such cases, it is relevant to take into account whether licensees can terminate at reasonable notice part of the licence and obtain a corresponding reduction of royalties.
290. Technology pools that restrict competition within the meaning of Article 101(1) of the Treaty may give rise to pro-competitive efficiencies (see paragraph 268) which must be assessed under Article 101(3). For example, where the technology pool includes non-essential technologies but fulfils all the other conditions of the safe harbour set out in paragraph 286 and there are pro-competitive reasons for including non-essential technologies in the pool (see paragraph 289) and licensees have the possibility of obtaining a licence for only part of the package with a corresponding reduction of royalties (see paragraph 289), the conditions of Article 101(3) are likely to be fulfilled.

4.4.2. Assessment of restraints in agreements between the pool and its licensees

291. Where the agreement(s) to create and operate a technology pool do not infringe Article 101 of the Treaty, the next step is to assess under Article 101 the licensing agreements concluded by the pool with its licensees. This Section covers certain restraints that are commonly found in licensing agreements entered into by technology pools and which need to be assessed in the overall context of the pool. The TTBER does not apply to licence agreements concluded between the pool and third-party licensees (see paragraph 271).
292. The Commission will apply the following principles when assessing technology licensing agreements between a pool and its licensees:
 - (a) the stronger the market position of the pool, the greater the risk of anti-competitive effects;
 - (b) the stronger the market position of the pool, the more likely that agreeing not to license to all potential licensees or to license on discriminatory terms will infringe Article 101 of the Treaty;
 - (c) pools should not unduly foreclose third-party technologies or limit the creation of alternative pools;
 - (d) the agreements should not contain any of the hardcore restrictions listed in Article 4 of the TTBER (see Section 3.4 of these Guidelines).
293. Undertakings setting up a technology pool that is compatible with Article 101 of the Treaty are normally free to negotiate and set royalties for the technology package (subject to any existing commitment to license on FRAND terms), and each technology's share of the royalties, either before or after the standard is set. Such agreement is inherent in the establishment of the pool and does not in itself restrict competition. In certain circumstances, it may be more efficient if the royalties for the technology package are agreed before the standard is set, to avoid that the standard-setting process increases the royalty rate by conferring market power on one or more essential technologies. However, licensees must remain free to determine the price of products produced under the licence.
294. Where the pool has a dominant position on the market, royalties and other licensing terms should be non-excessive and non-discriminatory, and licences should be non-exclusive⁽¹⁴⁴⁾. Those requirements are necessary to ensure that the pool is open and does not lead to foreclosure or other anti-competitive effects on downstream markets. Those requirements, however, do not preclude the application of different royalty rates for different uses. In general, the application of different royalty rates to different product markets does not in itself restrict competition, however there should be no discrimination within product markets. In particular, the treatment of licensees of the pool should not depend on whether they are also licensors. The Commission will therefore take into account whether licensors and licensees are subject to the same royalty obligations.
295. Licensors and licensees should be free to develop competing products and standards. They should also be free to grant and obtain licences outside the pool. These requirements are necessary to limit the risk of foreclosure of third-party technologies and ensure that the pool does not limit innovation and preclude the creation of competing technological solutions. Where pooled technology is included in a *de facto* industry standard and where the parties are subject to non-compete obligations, there is a risk that the pool will prevent the development of new and improved technologies and standards.
296. Grant-back obligations should be non-exclusive and limited to developments that are essential or important to the use of the pooled technology. That allows the pool to feed on and benefit from improvements to the pooled technology. It is legitimate for the parties to the pool to ensure that the exploitation of the pooled technology cannot be held up by licensees, including subcontractors working under the licence of the licensee, that hold or obtain essential technologies.

⁽¹⁴⁴⁾ However, if a technology pool has no market power, licensing out from the pool will normally not restrict competition within the meaning of Article 101(1) of the Treaty even if those conditions are not fulfilled.

297. One of the risks is that technology pools may shield invalid technology rights. Pooling can disincentivise challenges to the rights included in the pool, because, where royalties are set for the pool as a whole, a successful challenge against individual rights in the pool is less likely to result in a reduction of the royalties payable for a pool licence. The shielding of invalid patents in the pool can result in licensees paying higher royalties and prevent innovation in the field covered by the invalid patent. In that context, non-challenge clauses, including termination upon challenge clauses ⁽¹⁴⁵⁾, in technology licensing agreements between the pool and licensees are likely to fall within Article 101(1) of the Treaty.

4.5. Licensing negotiation groups

4.5.1. Introduction

298. Licensing negotiation groups ('LNGs') are arrangements whereby technology implementers agree to negotiate the terms of technology licences jointly. The guidance in this Section applies irrespective of:
- (a) the legal form of the LNG (for example, whether it consists of a simple agreement or a distinct legal entity);
 - (b) whether or not the members of the LNG compete in downstream markets;
 - (c) whether the counterparty of the LNG is an individual technology holder, a technology pool or an intermediary licensing platform ⁽¹⁴⁶⁾.
299. Where negotiations between an LNG and a technology holder lead to agreed licensing terms, any resulting technology licensing agreements concluded between the right holder and the individual members of the LNG must be assessed, as appropriate, under the TTBER or Chapter 4 of these Guidelines.
300. Chapter 4 of the Horizontal Guidelines (Joint Purchasing) does not apply to the assessment of LNGs that are covered by this guidance. This guidance is without prejudice to the application of Article 102 of the Treaty.

Possible pro-competitive effects of LNGs

301. LNGs can facilitate technology licensing by:
- (a) reducing the number of individual negotiations between technology holders and technology implementers, thereby reducing licensing transaction costs ⁽¹⁴⁷⁾, and
 - (b) pooling the expertise of technology implementers, for example concerning the validity, essentiality and value of technology rights, thereby promoting more informed and balanced licensing negotiations.

Possible anti-competitive effects of LNGs

302. The possible anti-competitive effects of LNGs include:
- (a) the conferral of excessive bargaining power on participating technology implementers, enabling them to force technology holders to accept sub-competitive licensing terms (below FRAND in the case of standard-essential patents), which may disincentivise investment in innovation by technology holders;
 - (b) coordination between participating implementers in downstream markets ⁽¹⁴⁸⁾, resulting from the exchange of commercially sensitive information or increased commonality of costs ⁽¹⁴⁹⁾;
 - (c) foreclosure of competing implementers in downstream markets ⁽¹⁵⁰⁾.

⁽¹⁴⁵⁾ See Section 3.5 of these Guidelines.

⁽¹⁴⁶⁾ Unless indicated otherwise, references in this Section to technology holders include individual technology holders, technology pools and intermediary licensing platforms.

⁽¹⁴⁷⁾ Where an LNG negotiates with a pool, rather than with individual technology holders, the LNG eliminates fewer individual negotiations than would be the case in the absence of the pool.

⁽¹⁴⁸⁾ See also paragraph 308.

⁽¹⁴⁹⁾ The proportion of costs that the participants have in common.

⁽¹⁵⁰⁾ See also paragraphs 309 and 323.

4.5.2. Assessment under Article 101(1) of the Treaty

Main competition concerns

303. LNGs comprising actual or potential competitors may lead to restrictions of competition on upstream markets for the licensing of technology and/or downstream markets for the supply of goods or services, resulting in reduced innovation, product quality, variety or output, increased prices, market allocation, or anti-competitive foreclosure of other technology implementers.

Restrictions of competition by object

304. LNGs that operate transparently vis-à-vis technology holders⁽¹⁵¹⁾ and whose activity is limited to the joint negotiation of the terms of technology licences generally do not restrict competition by object.
305. LNGs can be distinguished from buyer cartels, namely agreements or concerted practices between two or more purchasers⁽¹⁵²⁾ which, outside any joint purchasing arrangement that interacts collectively with suppliers on behalf of its members: (i) coordinate the purchasers' individual behaviour on the purchasing market⁽¹⁵³⁾; (ii) influence relevant parameters of competition between them, or (iii) involve the exchange of commercially sensitive information between the purchasers regarding their individual purchasing intentions or their individual negotiations with suppliers⁽¹⁵⁴⁾. Buyer cartels are a restriction of competition by object within the meaning of Article 101(1) of the Treaty, namely they reveal by their nature a sufficient degree of harm to competition, such that it is unnecessary to assess their effects on the market⁽¹⁵⁵⁾.
306. Accordingly, in the absence of an LNG that interacts collectively with a technology holder on behalf of its members, each technology implementer must decide its licensing strategy independently and must not, through agreements or concerted practices, remove strategic uncertainty between the implementers regarding their future behaviour on the market. In particular, in the absence of such collective interaction, technology implementers must not, before they engage in individual licensing negotiations with a technology holder, attempt to fix between themselves one or more of the terms of the technology licences that they wish to obtain (for example, the scope or field of use of the technology licence, the licence fee, the identity of the licensor or the duration of the licence).
307. The following factors make it less likely that an LNG will constitute a buyer cartel:
- (a) The LNG discloses the identity of its members to technology holders and informs them that it negotiates on behalf of its members, with a view to those members entering into technology licensing agreements subject to the terms agreed through the joint negotiations⁽¹⁵⁶⁾.
 - (b) The members of the LNG have defined the form, scope and functioning of their cooperation in a written agreement, such that its compliance with Article 101 of the Treaty can be verified *ex post* and checked against the actual operation of the LNG. However, a written agreement cannot in itself shield the LNG from competition law enforcement.

⁽¹⁵¹⁾ See paragraph 307.

⁽¹⁵²⁾ See also paragraphs 279 to 281 of the Horizontal Guidelines, cited in footnote 15. References in this paragraph to purchasers include by analogy potential licensees of technology.

⁽¹⁵³⁾ In the context of technology licensing, such coordinated behaviour could, for example, consist of a coordinated holdout, namely a refusal or unreasonable delay by technology implementers to take a licence.

⁽¹⁵⁴⁾ See Chapter 6 of the Horizontal Guidelines concerning information exchange and, in particular, Section 6.2.6, which also applies to exchanges of commercially sensitive information between purchasers.

⁽¹⁵⁵⁾ Judgment of 7 November 2019, *Campine*, T-240/17, ECLI:EU:T:2019:778, paragraph 297; see also judgment of 4 June 2009, *T-Mobile Netherlands and Others*, C-8/08, ECLI:EU:C:2009:343, paragraph 37, and judgment of 13 December 2006, *French Beef*, joined cases T-217/03 and T-245/03, ECLI:EU:T:2006:391, paragraph 83 *et seq.*

⁽¹⁵⁶⁾ It should, however, be noted that secrecy is not a requirement for establishing the existence of a buyer cartel. The Commission has sanctioned buyer cartels that at least began in a relatively transparent way. See Commission Decision 2003/600/EC of 2 April 2003, relating to a proceeding pursuant to Article 81 of the EC Treaty (Case COMP/C.38.279/F3 *French beef*) (OJ L 209, 19.8.2003, p. 12, ELI: <http://data.europa.eu/eli/dec/2003/600/oj>).

308. LNGs can also contribute to or serve as a means to engage in a seller cartel, namely an agreement between undertakings that compete on downstream markets to fix sale prices, limit output or share markets or customers. In that case, the LNG may be assessed together with the cartel on the downstream market. To avoid this concern, the LNG members should ensure that the activity of the LNG is limited to the negotiation of the terms of technology licensing agreements to be concluded between members of the LNG and technology holders.
309. An LNG that has the objective of excluding actual or potential competitors of the LNG members from downstream markets may constitute a restriction of competition by object.
310. An LNG may involve the exchange of commercially sensitive information between competitors. Where such exchanges are not objectively necessary for the implementation of the LNG and proportionate to the objectives thereof ⁽¹⁵⁷⁾ and are capable of removing uncertainty between the members regarding the timing, extent and details of modifications to be adopted by them in their conduct on the market, the exchanges may constitute a restriction of competition by object ⁽¹⁵⁸⁾.

Restrictive effects on competition

311. LNGs that do not restrict competition by object must be assessed in their legal and economic context to establish whether they have actual or likely effects on competition. The assessment should cover the possible restrictive effects on relevant technology markets, where the LNG interacts with technology holders, and relevant downstream markets, where the members of the LNG may compete as suppliers. In that assessment, the Commission will compare the actual or likely effects of the LNG on those markets to the situation that would occur in the absence of the LNG.
312. In general, LNGs are less likely to raise competition concerns where the members do not have market power on relevant technology licensing markets or on relevant downstream markets.
313. Certain restrictions agreed by the members of an LNG may fall outside the scope of Article 101(1) of the Treaty where they are objectively necessary for the implementation of the LNG and proportionate to its objectives ⁽¹⁵⁹⁾.

Relevant markets

314. LNGs may affect competition on upstream technology licensing markets, namely the markets where the LNG members jointly negotiate with technology holders, and on downstream markets, namely the markets where the LNG members are active as suppliers.
315. The definition of relevant technology markets follows the principles set out in the Market Definition Notice and relies on the concept of substitutability to identify competitive constraints. As the negotiation of technology licences by implementers is a form of purchasing, the assessment of substitutability focuses on the alternatives available to the licensors of the technology, rather than on the alternatives available to the implementers ⁽¹⁶⁰⁾. In other words, the alternatives available to the technology holders are decisive in identifying the competitive constraints on the members of the LNG. Those alternatives may be analysed, for example, by examining the technology holders' likely reaction to a small but non-transitory decrease of the price offered for their technologies. Once the relevant technology market has been defined, the market share of the members of the LNG can be calculated based on the value or volume of their purchases of licences of the relevant technology as a share of the total sales in the relevant technology licensing market.

⁽¹⁵⁷⁾ See, in this respect, paragraph 327.

⁽¹⁵⁸⁾ Judgment of 12 January 2023, *HSBC Holdings and Others v Commission*, C-883/19, EU:C:2023:11, paragraphs 115-116 and case law cited.

⁽¹⁵⁹⁾ See paragraph 19 regarding the concept of ancillary restraints and paragraph 327 regarding information exchange that may be objectively necessary for the implementation of an LNG.

⁽¹⁶⁰⁾ See paragraph 7 of the Market Definition Notice, cited in footnote 26, and footnote 12 of that Notice.

316. Where the members of the LNG are actual or potential competitors on downstream markets for the supply of goods or services, it is also necessary to assess the effects of the LNG on competition on those markets. The relevant downstream markets are defined using the methodology described in the Market Definition Notice.

Market power

317. There is no absolute threshold above which it can be presumed that the members of an LNG have market power such that the LNG is likely to lead to restrictive effects on competition within the meaning of Article 101(1) of the Treaty. However, in most cases, market power is unlikely to exist if the members' combined share of demand on relevant technology markets does not exceed 15 % and their combined share of supply on relevant downstream markets does not exceed 15 %.
318. A combined market share above those thresholds does not in itself indicate that the LNG is likely to have restrictive effects on competition. In such cases, it is necessary to conduct a detailed effects assessment, taking into account factors such as the characteristics and market position of the LNG members on all relevant markets, market concentration, closeness of competition, the possible existence of contractual or other links between the LNG members and other implementers of the technologies concerned, the nature of the technologies concerned, the statutes and operating rules of the LNG (including whether the LNG members remain free to negotiate bilaterally with technology holders outside the LNG), and possible countervailing power of technology holders and downstream customers.

Effects on technology markets

319. Where the members of the LNG have a high combined share of demand on relevant technology markets, the LNG may enable them to exercise joint buying power. The exercise of joint buying power may restrict competition in the relevant technology markets, for example by reducing the incentives of technology holders to invest in research and development.
320. It is less likely that LNG members will be able to exercise joint buying power where they face technology holders that have countervailing bargaining power. That may be the case, for example, where there are a small number of licensors on the relevant technology market, or where the technologies concerned are essential to a standard for which there is no substitute or which is widely adopted in relevant downstream markets.
321. Concerns relating to the exercise of joint buying power are less likely to arise where technology holders remain effectively free to decide whether to enter into negotiations with the LNG and to terminate such negotiations at any time. This is unlikely to be the case where the members of the LNG engage in coordinated action aimed at coercing the technology holder to negotiate with the LNG or where the LNG restricts the ability of its members to engage in bilateral negotiations with the technology holder. However, this is without prejudice to the possibility for an LNG to agree with a technology holder: (i) that the technology holder will not engage in bilateral negotiations with the individual members of the LNG for a limited period not exceeding the expected duration of the joint negotiations between the holder and the LNG, and/or (ii) that the LNG members will be bound to accept any licensing terms that are agreed between the technology holder and the LNG.
322. An LNG may exercise joint buying power by engaging in coordinated delays during negotiations with a technology holder⁽¹⁶¹⁾. Where such delays are temporary in nature and are objectively linked to the pursuit of the joint negotiations, the Commission will, in general, assess them as an integral part of the LNG. Accordingly, where the LNG is assessed as a restriction by effect, the impact of the coordinated delays will be assessed in the light of the

⁽¹⁶¹⁾ See paragraph 305 regarding the assessment of coordinated hold-outs outside the context of a genuine LNG.

overall effects of the LNG, taking into account the market position of the LNG members that engage in the delays. It should however be noted that the members of an LNG that engage in delays during negotiations may be prevented from invoking Article 102 of the Treaty as a defence to a claim for a prohibitory injunction by a standard-essential technology holder that has committed to grant licences on FRAND terms ⁽¹⁶²⁾.

323. LNGs may also foreclose competing technology implementers from technology markets and thereby restrict competition in downstream markets. For example, an LNG may seek to restrict the ability of technology holders to enter into technology transfer agreements with implementers that are not members of the LNG, or restrict the terms of such agreements ⁽¹⁶³⁾. Concerns relating to anti-competitive foreclosure are less likely to arise where (i) participation in the LNG is open to all technology implementers that fulfil objective and non-discriminatory criteria, (ii) the operating rules of the LNG do not discriminate between the LNG members, and (iii) the LNG and the licensing terms that it negotiates with technology holders do not have the objective of restricting the ability of technology holders to enter into technology transfer agreements with competing implementers or restricting the terms of such agreements.

Effects on downstream markets

324. Where the members of an LNG are not actual or potential competitors on downstream markets or they do not have market power on those markets ⁽¹⁶⁴⁾, the LNG is unlikely to restrict competition in such downstream markets.
325. Where the members of an LNG are actual or potential competitors on downstream markets, the LNG may facilitate coordination of the members' behaviour on those markets ⁽¹⁶⁵⁾. The risk of such coordination is higher where: (i) the characteristics of the relevant downstream market are conducive to coordination (for example, the market is concentrated and displays a significant degree of transparency), or (ii) the members of the LNG have a high combined market share on the downstream market.
326. In particular, LNGs can facilitate coordination between the members on downstream markets where the LNG leads to a high degree of commonality of costs between the members (in particular variable costs), provided the LNG members have market power on the relevant downstream market and the characteristics of the market are conducive to coordination.
327. LNGs can also facilitate coordination between the members on downstream markets where the implementation of the LNG involves the exchange of commercially sensitive information between the members. However, where an LNG does not itself restrict competition within the meaning of Article 101(1) of the Treaty because it has neutral or positive effects on competition, an exchange of information that is objectively necessary to implement the LNG and proportionate to the objectives thereof does not fall within that prohibition either ⁽¹⁶⁶⁾. For example, it may be objectively necessary and proportionate for the LNG members to exchange information about the terms upon which they would be willing to enter into technology licensing agreements with a technology holder that has agreed to negotiate with the LNG.
328. To reduce the risk of unnecessary exchanges of commercially sensitive information, LNGs can communicate through an independent manager or third party, or implement clean teams or other safeguards ⁽¹⁶⁷⁾, for example, to ensure that commercially sensitive information is only shared between the LNG members in anonymised and/or aggregated form. Safeguards can also be implemented to ensure that commercially sensitive information is not shared with other LNGs, for example in cases where members participate in more than one LNG.

⁽¹⁶²⁾ Judgment of 16 July 2015 in Case C-170/13 *Huawei Technologies v ZTE*, ECLI:EU:C:2015:477, paragraphs 65 and 66.

⁽¹⁶³⁾ See also paragraph 309.

⁽¹⁶⁴⁾ See also paragraph 317.

⁽¹⁶⁵⁾ See also paragraph 308 regarding the possibility that LNGs may be used as a means to engage in a seller cartel on downstream markets.

⁽¹⁶⁶⁾ Judgment of 11 September 2014, *MasterCard v Commission*, C-382/12 P, ECLI:EU:C:2014:2201, paragraph 89. See also paragraph 369 of the Horizontal Guidelines.

⁽¹⁶⁷⁾ See Section 6.2.4.4 of the Horizontal Guidelines.

4.5.3. Assessment under Article 101(3) of the Treaty

329. Where an LNG restricts competition within the meaning of Article 101(1) of the Treaty, it is necessary to assess whether it generates efficiencies that fulfil the conditions of Article 101(3).

Efficiency gains

330. LNGs can generate efficiency gains. In particular, they can reduce licensing transaction costs for both technology implementers and technology holders, notably by eliminating the need for a technology holder to engage in bilateral licensing negotiations with each member of the LNG. By pooling the expertise of technology implementers, LNGs can also reduce information asymmetries between technology implementers and holders, leading to more informed and balanced negotiations, including on whether proposed licensing terms are FRAND. These efficiencies may result in the conclusion of more technology licences and thus a wider dissemination of technology.

Indispensability

331. Restrictions that go beyond what is necessary to achieve the efficiency gains generated by an LNG do not meet the conditions of Article 101(3) of the Treaty. For example, for the purpose of reducing licensing transaction costs, it will, in general, not be indispensable for an LNG to require that a technology holder does not grant more favourable licensing terms to third-party licensees.

Pass-on to consumers

332. Efficiency gains that are attained by means of indispensable restrictions must be passed on to consumers to an extent that outweighs any restrictive effects on competition caused by the LNG. For example, reductions in technology licensing costs may be passed on in the form of lower sale prices on downstream markets. Reductions in variable costs (such as licence royalties that are payable per unit of output) are, in general, more likely to be passed on than reductions in fixed costs, because the higher profit margin resulting from reductions in variable costs creates an incentive to expand output through price reductions. Consumer pass-on is more likely where the members of the LNG do not have market power in downstream markets.

No elimination of competition

333. The conditions of Article 101(3) of the Treaty will not be fulfilled if the LNG enables the parties to eliminate competition in respect of a substantial part of the technologies or products concerned. This condition applies both to relevant technology markets and relevant downstream markets. High combined market shares are one indication that this condition is not fulfilled.