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THE INTERSECTION OF ANTITRUST AND
INTELLECTUAL PROPERTY: A COMPARATIVE
ANALYSIS OF TECHNOLOGY TRANSFER AGREEMENTS
IN THE EU AND IN THE U.S.

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*A mia madre,
che al momento di iscrivermi all'Università mi disse:
"fai tutto tranne Giurisprudenza."*

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INTRODUCTION

While the primary objective of antitrust law is to pursue and encourage competition, intellectual property (hereinafter 'IP') law provides incentives to innovation and human creativity by protecting the rights of IP owners. Nowadays, it is now commonly accepted that IP and competition laws are complementary, as they both are welfare-enhancing and they share the common purpose of promoting future innovation.¹ However, this has not always been the case and the two sectors were deemed to be largely incompatible for years. The conflict between the antitrust and IP laws arises in the methods they embrace that were designed to achieve reciprocal goals.² IP law aims to reward creative efforts by granting the creators exclusive or nearly-exclusive rights to the invention, to stimulate innovation, its dissemination and commercialization, thereby benefitting the consumers and society at large.³ On the other hand, antitrust laws aim to pursue innovation and economic progress by preventing monopolies and, more generally, anti-competitive behavior that distorts or threatens to distort competition to the detriment of consumers.⁴

This work analyzes the intersection between IP and antitrust laws in general and, more specifically, in the area of the technology transfer agreements. Technological innovation and the transfer of the resulting IP rights (hereinafter 'IPRs') enable the investors to optimize financial gains from their investments in research and developments (hereinafter 'R&D') activities and they grant access to technologies that cannot otherwise be used, thereby fostering the development of new or improved products.⁵ However, while IP licensing is generally considered pro-competitive, antitrust issues may nonetheless arise. Those issues are addressed by both the European (hereinafter 'EU') and United States (hereinafter 'U.S.') systems.

The European 2014 Technology Transfer Block Exemption Regulation, (hereinafter 'TTBER') and the U.S. Guidelines for the Licensing of Intellectual Property, (hereinafter 'U.S. *IP-Antitrust Guidelines*'), apparently adopt the same approach toward technology transfer agreements. Both systems tend to use an economics-based approach in the competitive analysis of such agreements.

* References: The Bluebook: A Uniform System of Citation.

¹ Oscar Borgogno, *Il Contratto di Patent Pooling: Tra Antitrust e Proprietà Intellettuale*, Università degli Studi di Torino (2014/2015), at 93; see also Maria Luisa Aranda, *Technology Licensing Agreements Comparative Study between the EU and the U.S.*, University of Lund, (2005), at 2.

² E.g., *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1203 (2d Cir. 1981) ([...] "While the antitrust laws proscribe unreasonable restraints of competition, the patent laws reward the inventor with a temporary monopoly that insulates him from competitive exploitation of his patented art.").

³ ABA Section of Antitrust Law, *Intellectual Property and Antitrust Handbook* ABA Book Publishing, Chicago, (2d ed.2015), at 1-3.

⁴ See Borgogno *supra* note 1, at 93-94; see also Aranda, *supra* note 1, at 2.

⁵ Anna Maria Baumgartner, *Antitrust Issues in Technology Transfer: A Comparative Legal Analysis of Patent Licenses in the EU and the U.S.*, Stanford-Vienna TTLF Working Papers No. 18, (2013), at 11.

Moreover, both Guidelines recognize that IP licensing arrangements are generally pro-competitive; the antitrust authorities should therefore protect and promote the dissemination of such agreements.⁶ Nevertheless, there are still substantial differences between the two regimes, that need to be explored to determine whether the EU approach is actually stricter than the U.S. one.⁷ To some extent, these disparities reflect the principles underlying the two systems: if the EU competition law is driven by the idea of developing a common and integrated market, the U.S. antitrust regime, by contrast, is motivated with the importance of efficiency and free trade policy.⁸

The purpose of this work is to demonstrate, through the analysis of the most common licensing practices that may raise antitrust concerns, that the U.S. approach toward technology transfer agreements and the related competition issues is more lenient than the European one. In this respect, this work discusses why the EU should be more tolerant in examining those licensing practices that may lead to substantial efficiencies pursuant to competition rules. The intent is to bring the U.S. and the EU systems closer and to achieve a greater level of convergence within the foreseeable future.

Part I introduces and discusses the shifting ground of the IP-antitrust relationship and its evolution over the years. While historically IP protection was viewed as an exception to antitrust law, in today's economy IP and antitrust are complementary and they both play a prominent role in the innovation process, as well as in the commercialization of ideas.⁹ Part II shows the existing similarities and marks the differences between the U.S. and EU legal frameworks, with main focus on the analysis of art. 101 and 102 TFEU and Section 1 of the Sherman Antitrust Act, to understand why the EU is generally stricter and sets more limits on the exploitation of IPRs than the U.S. antitrust competition system.¹⁰ Part III and IV, after describing the EU TTBER and *the U.S. IP-Antitrust Guidelines*, their characteristics, their approach toward licensing arrangements and the major changes made in recent years, analyzes the potential antitrust issues arising from IP licensing practices in the EU and U.S. jurisdictions. These two chapters further examine the potential limitations that IP holders may impose on licensees, distinguishing between 'horizontal restraints', i.e. agreements among actual or potential competitors and 'vertical restraints', i.e. agreements where the licensee and licensor operate at different levels of the production and distribution process. Finally, Part V analyzes those areas where the EU and U.S. enforcement

⁶ See Aranda, *supra* note 1, at 2.

⁷ *Id.*, at 3.

⁸ *Id.*

⁹ Jonathan M. Jacobson, *The "Patent Monopoly"*, ABA 2017 Annual Review of Antitrust Developments, Vol. 32, No. 3 (Summer 2018), https://www.americanbar.org/content/dam/aba/publishing/antitrust_magazine/anti-summer18.pdf.

¹⁰ See Aranda, *supra* note 1, at 2.

approaches toward IP licensing diverge, with particular regard to the patent standardization issue.

CHAPTER I

The Antitrust-Intellectual Property Interface

1.1. The Role of Antitrust and Intellectual Property Policy in a Dynamic Economy: The Importance of Innovation

We live in a dynamic economy characterized by a continuous and rapid technological innovation, that leads to the improvement of existing products and the creation of new ones. What is new about today's economy is its increased dependence on products and services that are embodiment of ideas, such as computer software, internet services or, more in general, any creation of the mind.¹¹ In this context of economic growth, antitrust law and IP enforcement go hand-in-hand.¹² IP is the engine of economic progress for both the EU and the U.S. economy: absent IP protection, incentives to innovate would largely decrease.¹³ IP not only protects innovators who contributed to build today's economy, but also encourages innovators who will build tomorrow's economy.¹⁴ On the other hand, antitrust law aims to protect consumers well-being by ensuring the firms compete, thereby promoting both price and innovation competition.¹⁵

From the outset, Austrian and Swedish scholars within economics, including Schumpeter, have shared a common theory according to which competitive markets are the most innovative and progressive.¹⁶ This is certainly true in the short-term period, but not in the longer term where competition may have a negative impact to innovation.¹⁷ While in highly competitive markets the access

¹¹ Robert Pitofsky, *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, 16 Berkeley Tech. L.J. 535-559 (2001), at 535.

¹² Richard G. Gilbert, *Intellectual Property and The Antitrust Laws: Protecting Innovators And Innovation*, The Annual Winter Meeting of the Licensing Executives Society, Phoenix, (Febr.17, 1995), <https://www.justice.gov/atr/file/519121/download>.

¹³ *Id*; see also WIPO, *The Economics of Intellectual Property*, (Jan. 2009), at §2, https://www.wipo.int/edocs/pubdocs/en/economics/1012/wipo_pub_1012.pdf.

¹⁴ See Gilbert, *supra* note 12; see also Giovanni B. Ramello, *Intellectual Property and the Markets of Ideas*, Review of Network Economics, Vol. 4, No. 2, pp. 68-87, (June 2005), at 1. ([...] "The traditional benefit associated with intellectual property rights, at least from the law and economics perspective, is that it provides an incentive for the creation and/or dissemination of new ideas.").

¹⁵ See Gilbert, *supra* note 12; see also Commissioner Noah Joshua Phillips, *IP and Antitrust Laws: Promoting Innovation in a High-Tech Economy*, Prepared Remarks of Commissioner Noah Joshua Phillips at the ACT | The App Association: 2019 Patents in Telecoms and the Internet of Things Public Workshop, Washington DC, (March 20, 2019), at 15, https://www.ftc.gov/system/files/documents/public_statements/1508165/app_association_keynote_final.pdf. ("Enforcing IP rights has an important role to play in maintaining these incentives. But so does enforcing antitrust laws. IP and antitrust laws work in tandem to promote competition and consumer welfare.").

¹⁶ *Id*; see also generally Bennet, M., S. Gloria-Palermo & A. Zouache, *Evolution of the Market Process. Austrian and Swedish Economics*. Oxon: Routledge (2005), <https://iris.unibs.it/retrieve/handle/11379/35573/49223/2004-routledge.pdf>.

¹⁷ Ehlermann & Atanasiu, I, *European Competition Law Annual 2005. The Interaction Between Competition Law and Intellectual Property Law*, Oxford: Hart, (2007), at 95.

to the market is restricted; by contrast, in the case of monopoly, firms have actually access to the full market.¹⁸ According to this argument, competition policy, by attacking monopolies and preventing market power concentration, may have substantial positive effects on the static allocation of resources.¹⁹ However, it may also substantially reduce dynamic efficiency, i.e. incentives to innovate.²⁰ Highly concentrated market structures, on the contrary, allow innovators to obtain significant returns to their investments and to use the retained earnings to finance and amortize R&D costs.²¹ However, the impact of market structures on innovation depends also on whether the idea is protected or not by an exclusive IPRs, such a patent.²² Indeed, in case of non-exclusive IPRs, the higher the competition the higher the risk that rival companies independently adopt and process the new technology, thereby reducing the value of innovation.²³

An opposite view, often associated with Kenneth Arrow, argues that competition may actually encourage innovation better than monopoly, by granting a way to escape competition and to gain more market shares through innovation.²⁴ Arrow contends that monopolies substantially reduce consumer choices and diminish or even eliminate future innovation.²⁵ Competition, by contrast, promotes innovation in the long run by assuring that innovators, having crossed the threshold of discovery, are not stopped in their tracks by a wall of

¹⁸ Fed. Trade Comm'n Hearing Session 4, Competition and Consumer Protection in the 21st Century, Washington DC, (Oct. 23, 2018), transcript available at https://www.ftc.gov/system/files/documents/public_events/1415062/ftc_hearings_session_4_transcript_day_1_10-23-18.pdf.

¹⁹ *Id.*; see also Ehlermann & Atanasiu, *supra* note 17, at 96. The Austrian political economist, Schumpeter, was one of the supporters of this theory. He affirmed that there is a close relationship between innovation and market structure and that innovation is spurred by monopoly. Accordingly, "only companies that have market power, at the best the monopolist, can support the costs related to innovation, indeed, is the innovation itself determines that a monopoly position, the defense of which brings further innovation a virtuous circle." For more information, see Antonella Laino, *Innovation and Monopoly: The Position of Schumpeter*, MPRA Paper, (2011), available at https://mpra.ub.uni-muenchen.de/35321/1/MPRA_paper_35321.pdf.

²⁰ *Id.*

²¹ David McGowan, *Innovation, Uncertainty, and Stability in Antitrust Law*, 16 Berkeley Tech. L.J. 729 (2001), at 732.

²² Richard Gilbert, *Looking for Mr. Schumpeter: Where Are We in the Competition--Innovation Debate*, Innovation Policy and the Economy, 6, pp. 159-215, (2006), at 159.

²³ *Id.*

²⁴ See Fed. Trade Comm'n, *supra* note 18, at 36; see also Ehlermann & Atanasiu, *supra* note 17, at 96. See also Jonathan B. Baker, *Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation*, Antitrust L.J., 74:575–602, (June 2007), at 578. ("Arrow observed that a monopolist bears a cost when innovating that an innovating competitor does not, as it gives up the opportunity to continue to earn monopoly profits without innovating. In consequence, the incremental gains from innovation to the monopolist may be less than those of a firm in a competitive setting that would expect to earn similar post-innovation profits.").

²⁵ Herbert Hovenkamp, Mark Janis, Mark Lemley & Christopher R. Leslie, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law*, Austin: Aspen Publishers, 3rd Edition, (2010), at §1; see also Pitofksy, *supra* note 11, at 539.

closed and anticompetitive markets.²⁶ In addition, firms under competitive pressure are aware that investing in the creation of a new product is the best strategy for maintaining and increasing their market share.²⁷ Whether we support the first or the second argument, what is certain is that both IPRs and competition law are the two essential ingredients of a rational legal response to the realities of a dynamic economy.²⁸

1.2. Intellectual Property Rights in the Developing World: Basic Principles

IP refers to a category of intangible rights protecting commercially valuable products of the human intellect.²⁹ The category comprises primarily trademark, copyright, and patent rights, but also includes trade secrets, know how, moral rights and rights against unfair competition.³⁰ Each right protects a different and independent aspect of the intangible property.³¹ Broadly speaking, patents cover inventions; copyright protects original work of authorship; trademarks cover words, name, symbol or device that indicate and distinguish the source of goods and services; finally, trade secrets protect confidential business information.³² IPRs have been created by each government with the intent to give owners the right to control the use and exploitation of their works and to encourage the inventors to invest in the development of new ideas and creations.³³ IP law attributes absolute protection to the intangible asset, by granting the owner of a patent, a trademark or any other IPRs an exclusive right to exploit such asset.³⁴

²⁶ Gilbert, *supra* note 12. (In addition, “in case of a product invention, the new product will not cannibalize the firm’s own market as it would under monopoly, and in case of a process invention, it will be applied to a higher output than under monopoly.”).

²⁷ Philip Lowe, *Competition and Innovation Policy*, DG Competition, European Commission, GPC, (July 2008), at 4. (“Good competition policy supports innovation, acting as a safety net when markets do not work as well as they should and do not deliver the innovative products or services it is reasonable to expect. The challenge for policymakers worldwide is to strike the right balance between government intervention and allowing markets to find their own equilibrium.”).

²⁸ See Pitofksy, *supra* note 11, at 542.

²⁹ Christopher R. Leslie, *Antitrust Law and Intellectual Property Rights- Cases and Materials*, Oxford, (2011), at 3. See also WIPO, *What is Intellectual Property?*, (last accessed March 28, 2019), https://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf.

³⁰ *Id.*

³¹ See ABA Section of Antitrust Law, *supra* note 3, at 1-3.

³² *Id.*; see also Uspto, *General information Concerning Patents*, (Oct. 2015), <https://www.uspto.gov/patents-getting-started/general-information-concerning-patents>.

³³ See Hovenkamp et al., *supra* note 25, at §1; see also WIPO, *Fields of Intellectual Property Protection*, (last accessed March 28, 2019), <https://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch2.pdf>.

³⁴ Christopher M. Kalanje, *Role of Intellectual Property in Innovation and New Product Development*, WIPO, (last accessed January 17, 2019), https://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip_innovation_development.pdf.

1.2.1. *The Protection of Intellectual Property Rights in the EU and in the U.S.*

The importance of IPRs was globally recognized first in the Paris Convention (1883) for the protection of industrial property and then in the Berne Convention (1886) for the protection of literary and artistic works.³⁵ The protection of IPRs aims to stimulate innovation and to safeguard the results of investment in the development of new products and technologies, thereby providing the incentives and means to finance new R&D activities.³⁶

To get patent protection, an invention (which may be a product, process, machine, or composition of matter) must be novel, nonobvious, useful, and sufficiently disclosed.³⁷ The first step in securing a patent is to file a patent application.³⁸ Patents are granted by national or regional offices, such as the European Patent Office (EPO) or the United States Patent and Trademark Office (USPTO).³⁹ Interestingly, all patent practices subject to antitrust scrutiny, such as licensing, pooling, price fixing and settlements, occur once the patent has been issued.⁴⁰

A copyright is a form of legal protection that creators have over their literary and artistic works, including paintings, sculpture and films, computer programs, databases or technical drawing.⁴¹ A copyright owner has the exclusive right to

³⁵ The Paris Convention was the first step to help innovators ensure that their creative works were protected in other countries. Now the convention counts 177 contracting members, which makes it one of the most widely adopted treaties worldwide. For more information, visit WIPO, *Summary of the Paris Convention for the Protection of Industrial Property*, (1883), https://www.wipo.int/treaties/en/ip/paris/summary_paris.html. The Berne Convention is an international agreement adopted in 1886 that deals with the protection of works and the rights of their authors. It also includes the definition of 'literary and artistic works' and counts 176 contracting parties. For more information, visit WIPO, *Summary of the Berne Convention for the Protection of Literary and Artistic Works* (1886), https://www.wipo.int/treaties/en/ip/berne/summary_berne.html.

³⁶ WTO, *What Are Intellectual Property Rights?*, (last accessed March 28, 2019), https://www.wto.org/english/tratop_e/trips_e/intel1_e.htm.

³⁷ U.S. Dep't of Justice & Fed. Trade Comm'n, *Antitrust Guidelines for the Licensing of Intellectual Property* (1995) [hereinafter *U.S. IP-Antitrust Guidelines*], at §2, <https://www.justice.gov/atr/archived-1995-antitrust-guidelines-licensing-intellectual-property>. See also WIPO, *What is a Patent?*, (last accessed March 28, 2019), <https://www.wipo.int/patents/en/> ("A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.").

³⁸ WIPO, *Frequently Asked Questions: Patents*, (last accessed May 20, 2019), https://www.wipo.int/patents/en/faq_patents.html.

³⁹ *Id.*

⁴⁰ Hovenkamp, Herbert J., *The Rule of Reason and the Scope of the Patent* (2015). Faculty Scholarship. 1817, (2015), at 519. It is important to highlight that, because the application process to obtain patent protection and the prosecution process are characterized by intense government supervision, whereas there is almost no supervision once the patent has been granted.

⁴¹ WIPO, *Copyright*, (last accessed Jan. 29, 2019), <https://www.wipo.int/copyright/en/>. See also 17 U.S.C. §102(a). ("Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the

reproduce, distribute, prepare derivative works and, in case of literary and musical works, perform and display its copyrighted materials.⁴² Moreover, copyright holders, as any other IP owner, have the right to license their rights and to allow the licensee to copy, sell and distribute copies of the copyrighted work and/or to incorporate the copyrighted work into derivative works.

A trademark is any sign, design or expression capable of distinguishing the goods or services of one enterprise from those of the others. A trademark owner has the right to enter into agreement with third parties to use the trademark on mutually agreed terms and conditions.⁴³ Such an arrangement is advantageous to both parties. By licensing its mark, a company may team up with another strategic company and benefit from its marketing, sales, distributing or manufacturing abilities.⁴⁴ On the other hand, a party acquiring the use of the mark gains the advantage of a symbol known to the public which has already generated considerable consumer demand.⁴⁵ Competition issues in trademark licensing may nonetheless arise, due to the licensors need to control the licensees' business operations of their marks by third parties to ensure that such use does not conflict with the licensor's own business.⁴⁶

Finally, the term 'know-how' refers to a package of identified and practical information, resulting from experience and testing, which meets a series of requirements, including secrecy and substantiality.⁴⁷ This last condition is particularly important in case of licensing or transfer of ownership and it is satisfied where the licensed know-how is described in manuals or other written form.⁴⁸ However, the licensing agreement must include protections for the know-

aid of a machine or device. Works of authorship include the following categories: (1) literary works; (2) musical works, including any accompanying words; (3) dramatic works, including any accompanying music; (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works.”).

⁴² *Id*; see also 17 U.S.C §106.

⁴³ WIPO, *Trademark Licensing*, (last accessed Jan. 29, 2019), https://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip_panorama_12_learning_points.pdf.

⁴⁴ *Id* at 3. In addition, trademark owners may increase consumer recognition of the brand, or share the advertising costs with the licensee.

⁴⁵ See generally, Note, *Trademark Licensing: The Problem of Adequate Control*, Duke L.J. 875, (1986).

⁴⁶ See WIPO, *supra* note 33.

⁴⁷ European Comm'n, Guidelines on the Application of Article 101 of the Treaty on the Functioning of the European Union to Technology Transfer Agreements (2014) [hereinafter 'TTBER'], at § 3.2. See also U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §1. In other words, “know-how” involves expertise, skill, and/or other body of knowledge that is not generally known that helps in the manufacture of products or the process of goods and materials. Such information may involve business information, technical information or other non-public information of the holder that it wishes to keep confidential.

⁴⁸ *Id*; see also Hans Verhulst, *International Trade in Technology – Licensing of Know-How and Trade Secrets*, (last accessed March 28, 2019), https://www.wipo.int/export/sites/www/sme/en/documents/pdf/trade_technology.pdf.

(“Companies that want to increase their share in emerging markets may opt to transfer their

how.⁴⁹ Accordingly, confidentiality, security, and equitable relief provisions are integral to a know-how license.⁵⁰

IPRs provide their owners the right to exclude, for a limited time, all others from using, making or selling the invention, as well as the right to license to third parties. Those rights are discussed in detail in the next section.

1.2.2. *The Right to Exclude*

IP, as any other form of property, confers the owner of a patent, a trademark or any other IPRs, the ability to partially or completely exclude third parties from using, making or exploiting the asset.⁵¹ The right to exclude constitutes the very essence of IP and pursues the dual objective of rewarding creators for their efforts and encouraging the production of new ideas and works of authorship.⁵²

However, the assistant Attorney General Hewitt Pate during an EU competition workshop noted that “the fact that IP should be treated in essentially the same way as other forms of property, is not to say that it is in all respects the same as other forms of property.”⁵³ Accordingly, the idea of IP as a form of monopoly comes from a misconception of the definition of ‘property’, as it used when we talk specifically about IP.⁵⁴ IP does not confer, like property rights to land, the right to exclude others from their subjects, but are rather rights that

marketing secrets and support know how to local companies in those markets in return for a royalty on sales volumes.”).

⁴⁹ Michelle Tyde, *7 Key Takeaways: Important Considerations in Licensing Know-How with Patents*, (March 25, 2019), https://www.kilpatricktownsend.com/-/media/2017-Takeaways/TakeawayLicensing-Know-How-With-Patents_08-2017_v5.ashx.

⁵⁰ *Id.*

⁵¹ Lorenzo F. Pace, *Dizionario Sistematico del Diritto della Concorrenza*, Jovene Editore, Napoli, (2013), at 129.

⁵² *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 1-3. Apparently, the legal protection granted by IPRs collides with the antitrust law’s aversion to monopoly. However, IPRs are not by their nature a form of monopoly: it is in fact now commonly accepted that merely owning a patent or any other IP, does not automatically confer market power. Indeed, the U.S. *IP-Antitrust Guidelines* explicitly excludes the presumption that IP creates market power within the antitrust framework. See Matthew G. Jacobs & Michael S. Mireles, *The Intersection of Intellectual Property and Antitrust Law: In re Independent Service Organizations Antitrust Litigation*, Transnat’l Law. 293 (2002), at 296. See also Bryan Cwik, *Intellectual Property or Intellectual Monopoly?*, Rock Ethics Institute, Penn. State University, at 2. See also the U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §2.0. (“The Agencies do not presume that intellectual property creates market power in the antitrust context”).

⁵³ Hewitt R. Pate, Assistant Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, Competition And Intellectual Property In The U.S.: Licensing Freedom And The Limits Of Antitrust, 2005 EU Competition Workshop, Florence, Italy, (June 3, 2005), <https://www.justice.gov/atr/speech/competition-and-intellectual-property-us-licensing-freedom-and-limits-antitrust>. He further noted that “the contention that IP should be treated essentially like other forms of property at that time was meant as a call to curtail hostility toward IP rights, a call for the end of disfavored status for IP.”

⁵⁴ See Cwik, *supra* note 52, at 2.

restrict certain uses in order to give their holders the chance to internalize value from these uses and to reward their creative efforts.⁵⁵ To this extent, the exclusive right granted by IP policy constitutes somewhat an opportunity for the owners to prevent third parties from copying, imitating or free riding the invention.⁵⁶ IP can be seen as a tool for enterprises to exclude other competitors from the marketplace and create entry barriers to a specific market.⁵⁷ At the same time, the exclusive right granted by IP protection provides an avenue for enterprises to enhance their ability to cooperate with others so as to enhance their competitiveness.⁵⁸

The right to exclude is not the solely tool in the hands of inventors to obtain higher returns on their investments: there are many other strategies that go further the creation of obstacles to the markets.⁵⁹ Licensing, for example, gives the enterprises an opportunity to access the market and recover the R&D costs and allows the circulation of ideas as well.⁶⁰

1.2.3. *The Right to License to Third Parties*

IP gives the holder the right to sell or transfer via license the resulting rights for his profit.⁶¹ 'Property' means that is the owner who decides what it can or cannot be done with the asset and so whether to transfer the IPRs.⁶² However, if tangible properties are generally recognized as absolute, IP is different and should actually have multiple users, whether ten, a thousand or million can use a given item of IP at the same time.⁶³ An IP licensing agreement occurs between two parts: the IP owner (licensor) retains the ownership over the invention, whether a patent, a trademark or a copyright, but allows a third party (licensee) to use some or all of the IPRs in exchange for an agreed payment in the form of a fee or a royalty (i.e. a percentage or part of the profit resulting from the use of

⁵⁵ *Id.*, at 2.

⁵⁶ Christopher Kalanje, *Leveraging Intellectual Property: Beyond the 'Right to Exclude'*, WIPO, https://www.wipo.int/sme/en/documents/leveraging_ip_fulltext.html, (last accessed Nov. 25, 2018).

⁵⁷ *Id.*

⁵⁸ *Id.*; see also generally Kazunari Sugimitsu, *Intellectual Property as a Marketing Tool*, Vol.13, No.3 (2017).

⁵⁹ *Id.*; see also Christopher M. Kalanje, *Role of Intellectual Property in Innovation and New Product Development*, WIPO, (last accessed Jan. 24, 2019), https://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip_innovation_development.pdf.

⁶⁰ *Id.*

⁶¹ See ABA Section of Antitrust Law, *supra* note 3, at 1.

⁶² Robert P. Merges, *What Kind of Rights Are Intellectual Property Rights?*, Oxford Handbook of IP Law, R. Dreyfuss and J. Pila, eds., (March 17, 2017), at §1.2.2.

⁶³ See ABA Section of Antitrust Law, *supra* note 3, at 1.

the invention).⁶⁴ In substance, a license agreement basically grants the licensee rights in property without transferring ownership of the property.⁶⁵

As previously mentioned, there is a variety of IP licenses, such as technology license agreements, copyright license agreements, and trademark and merchandising licenses.⁶⁶ All these agreements may entail advantages for both the licensor and the licensee. Licensing may represent an effective strategy that allows companies to commercialize their inventions, or to enter into new markets that they could not otherwise access.⁶⁷ A firm that for example owns IPRs in a technology but does not want or doesn't have the resources or experience to develop and manufacture the products embodying the technology, should benefit from the licensing of such assets by relying on the better capacities, expertise and resources of the licensees.⁶⁸ On the other side, licensees can benefit from the agreement by splitting the costs and risks in creating the licensor's invention, or by obtaining the access to a technology that he cannot otherwise use.⁶⁹ Moreover, small companies often do not have the resources and funds to support research costs; by taking the license from others they can benefit from the creation of new and better products without supporting the R&D costs.⁷⁰ For all the above mentioned reasons, IP licensing agreements may result in a successful commercial relationship for both parties. However, problems and risk may arise for both the licensor and the licensee if they are considered to be anti-competitive or collusive in nature.⁷¹

⁶⁴ *Intellectual Property Assignment Agreements & Licenses*, PRIORILEGAL, ((last accessed Nov.27, 2018), <https://www.priorilegal.com/intellectual-property/intellectual-property-assignment-agreements-and-licenses>; see also WIPO, *Licensing of Intellectual Property Rights; a Vital Component of the Business Strategy of Your SME*, (last accessed Nov.27, 2018), https://www.wipo.int/sme/en/ip_business/licensing/licensing.htm.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.* See also European IPR Desk, Fact Sheet Commercialising Intellectual Property: License Agreements, (Nov. 2015), at § 1.2., <https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-Commercialising-IP-Licence-Agreements.pdf>.

⁶⁸ See *The Ins and Outs of Licensing and IP*, AUSTRALIAN GOVERNMENT, (April 2, 2017), <https://www.ipaustralia.gov.au/about-us/news-and-community/blog/ins-and-outs-licensing-and-ip>.

⁶⁹ See generally Kennedy KS Wong & The Law Society of Hong Kong *Intellectual Property Licensing*, (2017), https://www.ipd.gov.hk/eng/pub_press/publications/IP_Licensing_Final_artwork_ENG.pdf.

⁷⁰ The Law Firm of Williams Mullen & The University of Virginia Patent Foundation, *Technology Licensing Guidebook -A Look at Licensing Intellectual Property From Both Sides of the Table*, (last accessed Dec.1, 2018), <https://www.umass.edu/tto/sites/default/files/Technology%20Licensing%20Guidebook.pdf>.

⁷¹ WIPO, *Licensing of Intellectual Property Assets*, (last accessed Nov. 28, 2018), at 5, <https://www.wipo.int/export/sites/www/sme/en/documents/pdf/licensing.pdf>; see also Fiona Nicolson et al., *IP Licensing Handbook*, Bristows LLP, (Febr. 2011), at 13-14, <https://www.bristows.com/assets/documents/IP%20Licensing%20Handbook.pdf>.

1.3. Market Definition in Intellectual Property and Antitrust

As already discussed, markets characterized by interaction between antitrust enforcement and IP field are subjected to a continuous and dynamic evolution.⁷² Investments in R&D play a substantial role within the creation of new technologies.⁷³ Therefore, issues arise from the licensing of IPRs, that strongly influence the competition strategies in the marketplace.⁷⁴ Before determining those effects on the marketplace, it is necessary to define the relevant market in order to draw and define the boundaries of competition among firms.⁷⁵ Under antitrust law, there are different definitions of relevant market: it can be understood as 'product market', which refers to the product identification of the relevant market, 'geographic market', which identifies the geographical area of the relevant market and finally as 'market power', i.e. the ability to raise price above the competitive level. The concept of market, as defined by antitrust law, has to be compared with the technology and innovative market definition in the IP realm.

1.3.1. *Relevant Product and Relevant Geographical Market Definition*

A relevant market consists of the combination of two elements: the product market and the geographic market.⁷⁶ A product market consists of all goods and services that buyers would consider interchangeable or substitutable due to their characteristics, their prices and their intended use, given a reasonable change in price.⁷⁷ That is, if an increase of the price of one product leads to an increase in consumer demand for another, those two products may be included in the same product market as consumers will likely switch from one good to another as a consequence of a relative price increase.⁷⁸

In determining whether groups of product are interchangeable or substitutable by consumers, the FTC and the DOJ apply the so called

⁷² Kim Kwangkug, *Competition Law in the New Economy Industries: Is the Current Competition Analysis Adequate to Protect Consumers in the New Economy Industries*, The University of Manchester (2012), at §2.1.

⁷³ *Id.*, at §2.2.

⁷⁴ *Id.*

⁷⁵ Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law, C 372 / 5, (Dec. 9, 1997), at §1.

⁷⁶ See ABA Section of Antitrust Laws *supra* note 3, at 20.

⁷⁷ *Id.*; see also *Markets*, FEDERAL TRADE COMMISSION, (last accessed Dec. 15, 2018), <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/mergers/markets>.

⁷⁸ *Id.*; see also Francesco Russo, & Maria Luisa Stasi, *Defining the Relevant Market in the Sharing Economy*, Internet Policy Review 5 (2) (2006), at 6. ("The relevant product market is the so-called "Small-but-Significant- Non-Transitory-Increase-in-Price-Test" (SSNIP test) [which] analyses whether that increase in price would be profitable or if, instead, it would just induce substitution, making it unprofitable for the firm.").

'hypothetical monopolist test.'⁷⁹ The objective of such test is to identify the relevant product market as a prerequisite to establish whether a firm has monopoly power in such a market and thus violates antitrust law.⁸⁰ According to the *U.S. Horizontal Merger Guidelines* (hereinafter '*HM Guidelines*'), for the purpose of analyzing this issue the question must be raised of whether a hypothetical monopolist "likely would impose at least a small but significant and non-transitory increase in price on at least one product in the market, including at least one product sold by one of the merging firms."⁸¹ If the answer is affirmative, then the relevant market is properly defined and the analysis goes further in defining whether the firm at issue has too much market power and thus distorts competition.⁸²

Also the European Commission (hereinafter 'EC') has identified over the years a series of criteria to identify the features of the relevant product market, that take into account all the characteristics of the consumer demand of goods and services included in the same market.⁸³ More specifically, they must be analyzed consumer preferences and habits -as it may happen that similar goods are perceived by consumers as different or vice versa- the specific features of the same products and their prices, including the consequences of their variations.⁸⁴

The concept of relevant market also includes the geographic market, i.e. the area in which two or more firms are involved in the supply or purchase of products or services under competitive conditions that are sufficiently homogenous.⁸⁵ According to the *HM Guidelines*, both suppliers and consumers can affect the delineation of the relevant geographic market.⁸⁶ To this extent, elements to be taken into consideration when examining the relevant geographic market include

⁷⁹ *Definition of Relevant Market*, EURLEX, (last accessed Dec. 16, 2018), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3A26073>.

⁸⁰ *Hypothetical Monopolist Test*, LEGAL INFORMATION INSTITUTE, (last accessed Dec. 16, 2018), https://www.law.cornell.edu/wex/hypothetical_monopolist_test.

⁸¹ *Id.*; see also U.S. Dep't of Justice & Fed. Trade Comm'n, *Horizontal Merger Guidelines* (2010) [hereinafter '*HM Guidelines*'], at §4.1. ("The hypothetical monopolist test requires that a product market contain enough substitute products so that it could be subject to post-merger exercise of market power significantly exceeding that existing absent the merger. Specifically, the test requires that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products 'hypothetical monopolist' likely would impose at least a small but significant and non-transitory increase in price on at least one product in the market, including at least one product sold by one of the merging firms.").

⁸² *Id.*

⁸³ Federico Ghezzi & Gustavo Olivieri, *Diritto Antitrust*, Giappichelli, Torino, (Ottobre 2013), at §2.4.

⁸⁴ *Id.*

⁸⁵ *Id.*; see also EURLEX, *supra* note 79.

⁸⁶ See *HM Guidelines*, *supra* note 81, at §4.2; see also Robert G. Harris & Thomas M. Jorde, *Antitrust Market Definition: An Integrated Approach*, 72 Cal. L. Rev. 1 (1984), at 48. ("In defining a geographic market from the perspective of the relevant buyer or seller groups, the plaintiff must identify the area to which the buyers readily turn for supply and to which the sellers turn for supply or customers.").

transportation costs, language differences, entry-barriers, consumer preferences and regulation and national procurement policies.⁸⁷ Similarly to the relevant product market, the geographic market is defined on the basis of the substitutability and interchangeability test: it is the area in which purchasers can practically turn for alternative source of the product in response to a small but permanent price increase.⁸⁸

In the European system, the definition of relevant geographic market may be more restricted than the whole of the common market.⁸⁹ This is particularly true when the features and the nature of a specific good (e.g. high transportation cost compared to the value of the product), or barriers to the entry of a national market (e.g. climatic or cultural differences), limit the mobility of the product itself.⁹⁰

In both the European and U.S. systems, the definition of relevant market represents, *inter alia*, an important tool to determine the market shares for the purpose of measuring the monopoly power of a firm and thus evaluating its anti-competitive effects on the marketplace.⁹¹

1.3.2. Market Power Definition

Once the relevant market is established, in order to prevail in a civil case under antitrust law a plaintiff must demonstrate that defendant has a monopoly power over a properly defined relevant market.⁹² Market power is a key concept in antitrust law.⁹³ The *U.S. IP-Antitrust Guidelines* defines market power as the “ability profitably to maintain prices above, or output below, competitive levels for a significant period of time.”⁹⁴ In *Jefferson Parish*⁹⁵, the U.S. Supreme Court held that “[a]s an economic matter, market power exists whenever prices can be raised above the levels that would be charged in a competitive market.”⁹⁶

⁸⁷ *Id.*

⁸⁸ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 21.

⁸⁹ Adriano Vanzetti & Vincenzo di Cataldo, *Manuale di Diritto Industriale*, Giuffrè Editore, Ottava Edizione, (2018), at §11.

⁹⁰ *Id.*

⁹¹ See HM Guidelines, *supra* note 10, at §4.

⁹² See ABA Section of Antitrust Law, *supra* note 3, at 21.

⁹³ Richard A. Posner & William M. Landes, *Market Power in Antitrust Cases*, 94 Harvard Law Review 937 (1980), at 937.

⁹⁴ See *IP-Antitrust Guidelines*, *supra* note 37, at §2.2.

⁹⁵ *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 27 n.46 (1984); see also Richard G. Price, *Market Power and Monopoly Power in Antitrust Analysis*, 75 Cornell L. Rev. 189,193 (1989), at 193-194.

⁹⁶ *Id.*; E.g., *Consul, Ltd. v. Transco Energy Co.*, 805 F.2d 490,495 (4th Cir. 1986), cert. denied, 481 U.S. 1050 (1987) (Holding that "market power [is] the ability to raise prices above levels that would exist in a perfectly competitive market"); *Morrison v. Murray Biscuit Co.*, 797 F.2d 1430, 1435 (7th Cir. 1986) (Holding that "market power... [is the] power to raise price above the competitive level without losing so many sales that the price increase would be un- profitable").

Some jurisdictions, including Europe, use the concept of ‘dominant position’ to describe the dominance of a firm or a licensor over a particular market.⁹⁷ The European Court of Justice (hereinafter ‘ECJ’) in *United Brands*⁹⁸ established that:

[the dominant position of a firm relates to] a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers.⁹⁹

Moreover, the EC in the *Significant Market Power Guidelines* (hereinafter ‘*SMP Guidelines*’) states that an undertaking has significant market power whether it “enjoys a position of economic strength affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately consumers.”¹⁰⁰

Approximately, the U.S. antitrust rules, in absence of other relevant factors, require a market share at least 50% to 60% to create an inference of monopoly power.¹⁰¹ On the other side, under European competition law, a market share over 70% is itself a *prima facie* evidence of a dominant position, while a market share of between 50% and 70% could presume dominance.¹⁰² However, the undertaking can still demonstrate that in the case at issue there is actual and

⁹⁷ Safinaz Mohd Hussein, Nazura Abdul Manap & Mahmud Zuhdi Mohd Nor, *Market Definition and Market Power as Tools for the Assessment of Competition*, International Journal of Business and Society, Vol. 13 No. 2, 163 – 182, (2012), at 166.

⁹⁸ Case 27/76 *United Brands Company v. Commission of the European Communities*, 1978, E.C.R. 207.

⁹⁹ *Id.*, at 2; see also European Comm’n, Guidelines on Market Analysis and the Assessment of Significant Market Power Under the EU Regulatory Framework for Electronic Communications Networks and Services, C/2018/2374, (2018). See also Case 85/76 *Hoffman-La Roche & Co. AG v. Commission of the European Communities*, 1979, E.C.R. 461. (Holding that “[the dominant position] does not preclude some competition, which it does where there is a monopoly or a quasi-monopoly, but enables the undertaking which profits by it, if not to determine, at least to have an appreciable influence on the conditions under which that competition will develop, and in any case to act largely in disregard of it so long as such conduct does not operate to its detriment.”) (*Id.* at 39).

¹⁰⁰ *Id.*; see also Article 26 of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on the Regulatory Framework for Electronic Communications Networks and Services, O.J. (L 108), (2001). (“Two or more undertakings can be found to enjoy a joint dominant position not only where there exist structural or other links between them but also where the structure of the relevant market is conducive to coordinated effects, that is, it encourages parallel or aligned anti-competitive behaviour on the market.”).

¹⁰¹ See Aba Section of Antitrust Law, *supra* note 3, at 21.

¹⁰² See Vanzetti & Di Cataldo, *supra* note 89, at §27.

effective competition on the relevant market.¹⁰³ In any case, high market share often is not enough to prove the existence of a monopoly or a dominant position over the marketplace: a series of criteria should be nevertheless applied and combined to address the existence of a significant market power.¹⁰⁴ Among these, the *SMP Guidelines* mention barriers to entry (which are less relevant in markets characterized by technological progress and innovation), size of the undertakings, commercial and technological advantages and superiority, network effects, absence of potential competition, vertical integrations and so forth¹⁰⁵

Once established that a firm has monopoly power or a dominant position, courts have to establish whether a restraint of competition may result in the relevant market and whether the alleged anti-competitive conduct may harm consumer welfare; if yes, the firm at issue can be subjected to liability under antitrust laws.¹⁰⁶ However, courts' analysis of the extension of market power may be more difficult in cases involving IP assets.

As previously mentioned, in the past often courts spoke of IPRs, especially patents, improperly defining them as 'monopolies' or 'temporary monopolies' in the hand of their owners.¹⁰⁷ Indeed, IPRs laws do not purport to confer any monopoly, but merely give the holder the right to exclude others from producing goods, expressions or symbols covered by the IP.¹⁰⁸ To this extent, the *U.S. IP Guidelines* establish that:

The Agencies will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner. Although the intellectual property right confers the power to exclude with respect to the specific product, process, or work in question, there will often be sufficient actual or potential close substitutes for such product, process, or work to prevent the exercise of market power.¹⁰⁹

¹⁰³ *Id.*; see also Communication from the Commission — Guidance on the Commission's Enforcement Priorities in Applying Article 82 of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings, C 45/02, (2009).

¹⁰⁴ Neelie Kroes, Preliminary Thoughts on Policy Review of Article 82, Speech at the Fordham Corporate Law Institute, New York, (Sept, 23, 2005). ("High market shares are not – on their own – sufficient to conclude that a dominant position exists. Market share presumptions can result in an excessive focus on establishing the exact market shares of the various market participants. A pure market share focus risks failing to take proper account of the degree to which competitors can constrain the behaviour of the allegedly dominant company. This is not to say that market shares have no significance. They may provide an indication of dominance – and sometimes a very strong indication – but in the end a full economic analysis of the overall situation is necessary.").

¹⁰⁵ *Id.*

¹⁰⁶ See Price, *supra* note 95, at 195.

¹⁰⁷ See Hovenkamp et al. *supra* note 25, at 4-7.

¹⁰⁸ *Id.*

¹⁰⁹ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §2.2

In line with the *U.S. IP-Antitrust Guidelines*, in 2006 the U.S. Supreme Court in the case *Illinois Tool Works v. Independent Ink*¹¹⁰ established a ‘virtual consensus’ among antitrust commentators in affirming the principle that, as a matter of antitrust law, no presumption of market power should exist in cases involving a patent or any other IPRs.¹¹¹ To obtain a patent, the holder must prove that his/her invention is useful, inventive (i.e. non obvious), shows elements of novelty and is described in the application in a manner sufficiently clear for adequate public disclosure.¹¹² In *Asashi Glass Co. v. Pentech Pharm, Inc.*,¹¹³ Judge Richard Posner explained that “a patent confers a monopoly in the sense of a right to exclude others from selling the patented product. But if there are close substitutes for the patented product, the patent ‘monopoly’ is not a monopoly in a sense relevant to antitrust law.”¹¹⁴ Similarly, in *Sirena S.r.l. v. Eda S.r.l. and Others*, the ECJ ruled that mere ownership of a trademark, without proof of impediment of effective competition over a consistent part of the relevant market, does not establish dominance.¹¹⁵

In general, both the U.S. and the EU systems share a common legal approach in avoiding rigid tests and in exploring the economic effects of an alleged anticompetitive conduct involving IPRs to the marketplace.¹¹⁶ The increased risk of antitrust liability may discourage IP right owners from enforcing their rights and investing in the creation of new or better products.¹¹⁷ Consequently, in some degree both jurisdictions underline the importance of seeking a balance between the goal of maintaining a dynamic and innovative market at heart of competition laws and a sort of tolerance towards a degree of private reward and market power in the present day.¹¹⁸

¹¹⁰ *Ill. Tool Works Inc. v. Indep. Ink, Inc. (ITW)*, 547 U.S. 28 (2006) (holding that “the patent tying cases do not create any presumption that market power over the tying product confers the degree of market power over the tied product necessary to establish a monopolization or attempted monopolization claim.”).

¹¹¹ *Id.*; see also Ariel Katz, *Making Sense of Nonsense: Intellectual Property, Antitrust, and Market Power*, 49 *Ariz. L. Rev.* 837, 873 (2007), at 837.

¹¹² Puneet V. Kakkar, *Still Tied Up: Illinois Tool Works v. Independent Ink*, 22 *Berkeley Tech. L.J.* 47 (2007), at 57. (“A patentee who has overcome these hurdles has not automatically achieved market power.”).

¹¹³ F.Supp.2d 986, 995 (N.D. Ill. 2003) (Posner., J.).

¹¹⁴ *Id.*

¹¹⁵ Case 40-70 *Sirena S.r.l. v Eda S.r.l. and others*, 1971, E.C.R. 00069. (Holding that “the proprietor of a trade-mark does not enjoy a dominant position within the meaning of Article 86 of the Treaty merely because he is in a position to prevent third parties from putting into circulation, on the territory of a Member State, products bearing the same trade mark. He must also have power to impede the maintenance of effective competition over a considerable part of the relevant market, having regard in particular to the existence and position of any producers or distributors who may be marketing similar goods or goods which may be substituted for them.”).

¹¹⁶ Haris Apostolopoulos, *Refusal-to-Deal Cases of IP Rights in the Aftermarket of US and EU Law: Convergence of Both Law Systems Through Speaking the Same Language of Law and Economics*, 5 *DePaul Bus. & Com. L.J.* 237 (2007), at 262.

¹¹⁷ *Id.*, at 242,

¹¹⁸ *Id.*, at 248.

1.3.3. Technology Market Definition

Technological innovation is the product of human creativity and plays a vital role in the modern economy.¹¹⁹ The importance of IP as a tool to protect and enforce innovation has increased over the years, together with the relevance of markets for the sale and licensing of these rights.¹²⁰ Moreover, the growing significance of technology licensing in recent cases constitutes an important trend for the technology market analysis.¹²¹ However, the speed at which innovation moves forward raises a series of new problems about market definitions.¹²² For all these reasons, the definition of technology market plays a vital role in helping the courts and antitrust agencies in examining those markets different and not limited to goods and services.¹²³ The *U.S. IP-Antitrust Guidelines* take into account the innovative and unique aspects of technology markets and establishes that:

Technology markets consist of the intellectual property that is licensed (the 'licensed technology') and its close substitutes—that is, the technologies or goods that are close enough substitutes to constrain significantly the exercise of market power with respect to the intellectual property that is licensed.¹²⁴

The *U.S. IP-Antitrust Guidelines* further determine that such market definition may be necessary for the federal Agencies in addressing the competitive effects of a licensing arrangement when “IP are marketed separately from the products in which they are used.”¹²⁵ For instance, when a patented product is marketed with an implied license permitting its use, there is no need to define a separate technology market to capture relevant competitive effects.¹²⁶

¹¹⁹ Aziz Azam H., *Defining Technology and Innovation Markets: The DOJ's Antitrust Guidelines for the Licensing of Intellectual Property*, Hofstra Law Review: Vol. 24: Iss. 2, Article 10, (1995), at 2.

¹²⁰ *Id.*

¹²¹ Joshua A. Newberg, *Antitrust for the Economy of Ideas: The Logic of Technology Markets*, Harvard Journal of Law & Technology, Vol. 14, No. 1 (Fall 2000), at 86.

¹²² Meg Buckley, *Licensing Intellectual Property: Competition and Definitions of Abuse of a Dominant Position in the United States and the European Union*, 29 Brook. J. Int'l L. (2004), at 82. ([A]ntitrust economists and enforcers have long struggled with the policy articulations appropriate to deal with perceived or actual potential competition — particularly in the technology age where products and markets change so quickly, new competitors may spring up overnight and innovation plays such a critical competitive role.”).

¹²³ See Newberg, *supra* note 121, at 86; see also Aziz, *supra* note 106, at 476 (Indeed, “those involved in the sale and licensing of IP are not -unlike their counterparts involved in the sale of tangible goods - concerned with the effect that antitrust principles may have on their businesses.”)

¹²⁴ *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §3.2.2

¹²⁵ *Id.*; see also Bradford P. Lyerla, *Antitrust Issues in Intellectual Property Law*, ABA Book Publishing, Chicago, (2016), at 8; see also Hovenkamp et al., *supra* note 25, at 4-46.

¹²⁶ *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §3.2.2.

Similarly to the process followed by the antitrust Agencies in defining relevant markets for goods and services for the purpose of merger analysis, the first step when examining IP licensing agreements is to identify all technologies with which the technologies covered by the license compete.¹²⁷

The *EU 2014 Technology Transfer Block Exemption Regulation* (hereinafter 'TTBER'), describes the technology market as follows:

'Relevant technology market' means the market for the licensed technology rights and their substitutes, that is to say all those technology rights which are regarded as interchangeable or substitutable by the licensee, by reason of the technology rights' characteristics, the royalties payable in respect of those rights and their intended use.¹²⁸

Both systems substantially transpose to IP the traditional product market analysis.¹²⁹ The inquiry focuses on the functional substitutability and interchangeability of the licensed technology and the technologies that are likely to be included in the relevant technology market.¹³⁰ Once established the relevant technology market, the next step is to determine whether a firm or a group of firms might succeed in the marketplace by exercising market power, for example through the imposition of a small but significant and non-transitory increase in relative prices, (i.e. royalties).¹³¹ Alternatively, to determine the degree of market power the market for products incorporating the licensed technology may still be used.¹³²

¹²⁷ See Newberg, *supra* note 121, at 100- 101; see also U.S. Dep't of Justice & Fed. Trade Comm'n, *Antitrust Enforcement Guidelines for International Operations*, (2017), at §1.

¹²⁸ See TTBER, *supra* note 47, at §2.3., recital 22.

¹²⁹ *Id.*

¹³⁰ See Newberg, *supra* note 121, at 103; see also *Hynix Semiconductor Inc. v. Rambus Inc.*, 2008 U.S. Dist. LEXIS 777 (N.D.Cal., Jan. 5, 2008) ("In the context of technology markets, the DOJ and FTC recognize that data on technology licensing is less likely to be available or quantifiable because licensing terms are often secret or because licenses are granted in exchange for a cross-license, not a sum of money. The lack of such financial data is not fatal to a technology market definition. On the contrary, where such data cannot be obtained, the agencies recommend defining a technology market by including 'other technologies and goods which buyers would substitute at a cost comparable to that of using the licensed technology' if the hypothetical monopolist attempted to raise the price of its technology. For example, the IP Guidelines illustrate the technology market definition process using Alpha and Beta, two pharmaceutical process developers. The two firms have invented competing methods for manufacturing an unpatented drug. To evaluate a possible joint venture between Alpha and Beta, the Guidelines suggest that the agencies would examine a technology market comprised of manufacturing processes that make the drug. Such a market would include "other technologies that can be used to make the drug with levels of effectiveness and cost per dose comparable to that of the technologies owned by Alpha and Beta.").

¹³¹ See Hovenkamp et al., *supra* note 25; see also U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §3.2.2.

¹³² Calvin S. Goldman, Q.C., Richard F.D. Corley & Michael E. Piaskoski, *Proceed with Caution: The Application of Antitrust to Innovation-Intensive Markets*, *The Journal of Information, Law and Technology* (JILT), (2004), at 19.

1.3.4. Innovative Market Definition

As Hoverkamp noted, “while a ‘technology market’ is the market for the results of innovative efforts, an ‘innovative market’ is the market for research and development directed toward producing innovations.”¹³³ Indeed, a licensing agreement may have an anticompetitive impact also on R&D, i.e. the ability to develop and create new or improved products or processes.¹³⁴ The antitrust Agencies cannot evaluate such negative effects through an analysis of goods and technology markets; for this reason the *U.S. IP-Antitrust Guidelines* turned to innovative markets.¹³⁵ The innovation market is the up-stream market from technology market and anti-competitive effects may arise for example when an arrangement affects innovation that is related to the development of goods that do not yet exist.¹³⁶ Alternatively, the *U.S. IP-Antitrust Guidelines* highlight that “the arrangement may [also] affect the development of new or improved goods or processes in geographic markets where there is no actual or potential competition in the relevant goods.”¹³⁷ In all these cases, the competitive effects on innovation cannot be addressed without an adequate analysis of the separate R&D market.

In determining whether to challenge a proposed licensing agreement, The *U.S. IP-Antitrust Guidelines* use the definition of innovative market, described as follows:¹³⁸

An innovative market consists of the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development efforts [...]. The close substitutes may include research and development efforts, technologies, and goods that significantly constrain the exercise of market power with respect to the relevant research and development [...].¹³⁹

Again, the concept of ‘substitutability’ is fundamental in determining the boundaries of the relevant innovation market. The FTC goes further in establishing that “innovation market analysis should be used only where the

¹³³ See Hovenkamp et al, *supra* note 25, §4.3.

¹³⁴ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §3.2.3.

¹³⁵ *Id.*

¹³⁶ See Aziz, *supra* note 119, at 501; see also Ela Skorupska, *Definition of the Relevant Market according to the Technology Transfer Block Exemption Regulation 772/2004 -A Hypothetical Case Study*, University of Lund, (Spring 2005), at §6.

¹³⁷ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §3.2.3.

¹³⁸ See Aziz, *supra* note 119, at 500.

¹³⁹ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §3.2.3.

innovation is directed towards a particular good and where the innovation can be associated with specialized assets or characteristics of specific firms.”¹⁴⁰

However, innovation is most notably a dynamic concept, that is the result of human capital or skilled employees.¹⁴¹ The concept of innovative market has always been accompanied by a great uncertainty since it requires an *ex ante* analysis about the potential anticompetitive effects on the range of products that will be likely affected by a restraint of innovation.¹⁴² For these reasons, several scholars reject the concept of innovative market, claiming that defining R&D efforts for the purpose of the antitrust enforcement decisions is beyond the capacity of courts and the Agencies.¹⁴³

The EC does not define the ‘innovative market’. However, the TTBER recognize that some license arrangements “may affect competition in innovation,” but specify that there will be a “limited number of cases” where it is “useful and necessary to also analyze the effects on competition in innovation separately.”¹⁴⁴ In substance, the EC treats innovation as a source of potential competition only when innovation may be deemed to be affected by a license agreement.¹⁴⁵

When there is specific evidence of competing line of R&D between two firms, the ultimate question is whether, through a merger or a cartel, they are likely to substantially restrict competition in R&D.¹⁴⁶ Licensed IP can be part of R&D efforts, which can be used in the creation of future goods and may therefore affect the downstream good markets.¹⁴⁷ For instance, markets for patent rights come into existence before the creation of the resulting goods.¹⁴⁸ In these cases, the Agencies and courts may evaluate how IP is likely to be used in the creation of future goods, for which IP constitutes an essential input.¹⁴⁹ In particular, they may find factual basis upon which to assess whether a given licensing

¹⁴⁰ John Temple Lang, *European Community Antitrust Law: Innovation Markets and High Technology Industries*, 20 Fordh. Int. L. J. 717 (1996), at 160. See also U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §3.2.3. (“The Agencies will delineate a research and development market only when the capabilities to engage in the relevant research and development can be associated with specialized assets or characteristics of specific firms.”).

¹⁴¹ See Hovenkamp et al, *supra* note 25, at §4.3.

¹⁴² *Id.*

¹⁴³ See Newberg, *supra* note 121, at 127; see also Richard T. Rapp, *The Misapplication of the Innovation Market Approach to Merger Analysis*, 64 Antitrust L.J. 19, 20 (1995) at 45. (“The problem, simply put, is that R&D competition is more complicated than price competition, and the incentives, path of progress and outcomes are much harder to predict.”).

¹⁴⁴ See Lang, *supra* note 140, at 761; see also Hartmut Schneider, Sarah Licht & Nicole Callan, *A Hitchhiker’s Guide to Antitrust and Intellectual Property Guidelines*, Antitrust, Vol. 31, No. 2, (Spring 2017), at 65.

¹⁴⁵ See Skorupska, *supra* note 105, at §5.1.3.

¹⁴⁶ See Hovenkamp et al, *supra* note 14, at §4.3.

¹⁴⁷ See Newberg, *supra* note 121; see also Aziz, *supra* note 119, at 514.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

arrangement may actually allow a hypothetical IP monopolist to exercise market power in market for the technology and/or for future goods.¹⁵⁰

1.4. Intellectual Property Rights and Antitrust Law: Intersection or Crossroad?

Both IP and antitrust legal regimes are essential to competition in a market-driven society.¹⁵¹ IP law seeks to encourage innovation by granting the inventor limited term monopolies in ideas or expressions of ideas.¹⁵² The basic rationale of providing such a monopoly-like right is to encourage innovation and avoid exploitation and free riding by imitators.¹⁵³ On the other hand, antitrust law aims to pursue innovation and economic progress by preventing monopolies and, more in general, any anti-competitive behaviors.¹⁵⁴ Given the differences between the two regimes, the following question then arises: is there an inherent conflict between antitrust and IP laws?¹⁵⁵ Many scholars and courts answer yes, but the more historically accurate account disagrees.¹⁵⁶ The first part of this paragraph explores in general terms the shifting ground of the IP-antitrust relationship, through an explanation of the main controversial issues involving the two sectors. The second part of the paragraph, dives even more deeply into the IP-antitrust debate, through an analysis of the most important theories and judicial decisions of the EU and U.S. courts.

1.4.1. *The Shifting Ground of the IP-Antitrust Relationship*

As previously discussed, “in an economy increasingly driven by innovation and the commercialization of ideas, the relationship between antitrust and intellectual property laws plays a prominent role in competition policy and enforcement.”¹⁵⁷ However, the intersection between the two regimes has always been unstable and problematic.¹⁵⁸ At first blush IP and antitrust seem to collide: IPRs provide barriers to entry, whereas antitrust laws aim to create a free market competition.¹⁵⁹

¹⁵⁰ *Id.*

¹⁵¹ E. T. Sullivan, *The Confluence of Antitrust and Intellectual Property at the New Century*, 1 Minn. Intell. Prop. Rev. 1 (2000), at 1.

¹⁵² Keith Hylton, *Antitrust and Intellectual Property: A Brief Introduction*, No. 16-32 Boston University School of Law, Law and Economics Research Paper, (2016), at 1.

¹⁵³ See Sullivan, *supra* note 151, at 2; see also Jacobs, Mireles, *supra* note 41, at 295.

¹⁵⁴ See Jacobs and Mireles, *supra* note 41, at 295.

¹⁵⁵ See Sullivan, *supra* note 151, at 2.

¹⁵⁶ *Id.*

¹⁵⁷ Jonathan M. Jacobson, *The “Patent Monopoly”*, ABA 2017 Annual Review of Antitrust Developments, Vol. 32, No. 3 (Summer 2018), at 3.

¹⁵⁸ See Hovenkamp et al., *supra* note 25, at §1.3.

¹⁵⁹ Daniel E. Lazaroff, *Entry Barriers and Contemporary Antitrust Litigation*, 7 U.C. Davis Bus. L.J. 1 (2006), <https://blj.ucdavis.edu/archives/vol-7-no-1/Entry-Barriers-and-Contemporary-Antitrust-Litigation.html>.

The policy of IP law is to encourage innovation by granting the inventors or authors the right to exclude others from using their inventions, thus preventing people from benefitting from them.¹⁶⁰ Without the right of exclusivity, there would be no incentives to innovate, because the returns on the investments for the development of a new technology, system or device would be minimal.¹⁶¹ Moreover, without the exclusive opportunity to exploit the invention, the IP holders would have no tools to defend themselves against free riders taking advantage from the innovator's R&D efforts.¹⁶²

In economic terms, IPRs encourage innovation by granting the inventors some sort of power over the price.¹⁶³ Indeed, IPRs may allow firms to earn monopoly profits through an increase of the price of the protected work above the marginal costs of reproducing it.¹⁶⁴ For instance, a patent allows the holder to exclude competition for a period of twenty years and to raise the price above the competitive level, thereby allowing him to recover the investment costs.¹⁶⁵ As a result, part of the consumer welfare is directly transferred to the patentee, as fewer people will buy the work than if it were distributed on a competitive basis and they will be willing to pay more to use and exploit the invention.¹⁶⁶

However, as previously discussed in section 1.2.1., IPRs do not *ipso facto* confer monopoly power.¹⁶⁷ Accordingly, while they are designed to confer upon their owners a sort of power over price to recoup their investment, there is a vast difference between an exclusive right and monopoly that is the concern of antitrust law.¹⁶⁸ Absent horizontal coordination, anti-competitive effects usually

¹⁶⁰ *Id.*; see also Hovenkamp, Herbert J., *The Intellectual Property-Antitrust Interface*, Faculty Scholarship. 1789, (2008), at 1979.

¹⁶¹ See Buckley, *supra* note 122, at 799. In his speech of June 17, 2013, entitled "Recent Developments in Intellectual Property and Antitrust Laws in the United States", Maureen K. Olhausen, recalling the words of the Federal Circuit, evidenced that "the express purpose of the Constitution and Congress, to promote the progress of the useful arts, would be seriously undermined" and that, however, "there is an obvious tension between offering an inventor the right to exclude competitors from practicing an invention and fostering free and open competition in the market." For more information, the speech is available at https://www.ftc.gov/sites/default/files/documents/public_statements/recent-developments-intellectual-property-and-antitrust-laws-united-states/130617intellectualpropertyantitrust.pdf.

¹⁶² *Id.*

¹⁶³ See Hovenkamp et al., *supra* note 25, at §1.3.

¹⁶⁴ *Id.*

¹⁶⁵ See Hylton, *supra* note 151, at §2.1.; see also Michael A. Carrier, *Untraveling the Patent-Antitrust Paradox*, 150 U. Pa. L. Rev. 761, 826-27 (2002), at 767.

¹⁶⁶ *Id.*; see also Hovenkamp et al., *supra* note 25, at §1.3.

¹⁶⁷ See Katz, *supra* note 111, at 839.

¹⁶⁸ *Id.*, at 140, see also Hylton, *supra* note 151, at §2.1 and Buckley, *supra* note 122, at 802 (Arguing that "if a patent or other form of intellectual property does confer market power, that market power does not by itself offend antitrust law. As with any other tangible or intangible asset that enables its owner to obtain significant supracompetitive profits, market power (or even monopoly) that is solely a consequence of a superior product, business acumen, or historic accident does not violate the antitrust laws. Nor does such market power impose on the intellectual property owner an obligation to license the use of that property to others. As in other antitrust contexts, however, market power could be illegally acquired or maintained, or even if

arise only when the IP owner has market power, i.e. there are no substitutes available in the relevant reference market.¹⁶⁹ Further, while it is true that antitrust law serves the goal of promoting competition, the law has never made monopoly itself illegal.¹⁷⁰

Interestingly, the U.S. position is that market power does not *per se* offend antitrust law.¹⁷¹ Even when an IP holder collects huge profits and establishes a near monopoly on the market, this does not conflict with antitrust laws where results from the legitimate use of an IP right.¹⁷² The challenge for antitrust law is to seek competitive and efficient markets without unreasonably undermining incentives to innovate.¹⁷³

European courts, instead, when it comes to enforcing antitrust rules, have traditionally shown less tolerance towards IPRs than the US.¹⁷⁴ The typical approach of the ECJ consists of distinguishing between the existence of IPRs and their exploitation.¹⁷⁵ Accordingly, conditions for granting IP protection cannot be, in general, challenged by antitrust laws; whereas, the “way such rights are exercised can indeed give rise to abusive exploitation of market power or exclusionary forms of unilateral conducts” contrary to European laws.¹⁷⁶ As a result, this dichotomy was firstly addressed in *Consten Grunding v Commission*, where the ECJ was invited to pass the judgement on the IP-antitrust relationship.¹⁷⁷ In this case, Grundig, a manufacturer of radio receivers, recorders, dictaphones and television sets, contracted to distribute its electronic goods in France, appointing Consten as its exclusive distributor.¹⁷⁸ Moreover, Grundig authorized Consten to register the international mark in France under its own name GINT (i.e. ‘Grunding International’), in order to block parallel imports of GINT labelled products coming from other countries.¹⁷⁹ The ECJ found this agreement unlawful under Article 85 (now Article 101 the TFEU), because it reinforced the exclusive territorial protection afforded to the retailer.¹⁸⁰ Thus,

lawfully acquired and maintained, would be relevant to the ability of an intellectual property owner to harm competition through unreasonable conduct in connection with such property.”).

¹⁶⁹ Thorsten Käseberg, *Intellectual Property, Antitrust and Cumulative Innovation in the EU and the US*, Hart Pub Ltd, United Kingdom, First Edition (June 2012), at 19.

¹⁷⁰ See Hovenkamp et al, *supra* note 25, at §1.3.

¹⁷¹ See Buckley, *supra* note 122, at 803.

¹⁷² *Id.*

¹⁷³ See Pitofksy, *supra* note, 11 at 593.

¹⁷⁴ Maria Todino, *Antitrust Rules and Intellectual Property Rights in the EU and in the US- Towards Convergence?*, Italian Antitrust L. Rev., Vol. 1, No. 2 (2014), at 26.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ Case 56/64, *Grunding-Verkaufs-GmbH v Commission*, 1966, E.C.R. 299.; see also Nicolas Petit, *The Antitrust and Intellectual Property Intersection in European Union Law* (June 17, 2016). Handbook of Antitrust, Intellectual Property and High Tech, Roger D. Blair & D. Daniel Sokol editors, Cambridge University, (2017), at 4.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*, at 5.

¹⁸⁰ *Id.* Under Article 101, “(...) All agreements between undertakings, decisions by associations

interestingly the ECJ did not affect the grant of IPRs, but merely limits their exercise in harmony with EU competition law, thereby evidencing the dichotomy existence v exercise in relation to almost all forms of IPRs.¹⁸¹

Finally, the right to exclude granted by IP rights is in line with the EU ‘theory of exhaustion’, according to which once a product incorporating an IP right has been put on the market within the European economic area, directly by the owner or under his consent, the latter has no longer the right to control the sale of such product.¹⁸² As a consequence, the IP holder has no right to prevent sales by licenses or buyers of the product incorporating the IP right.¹⁸³

1.4.2. *Historical vs Modern View: on the Way to Achieving Common Goals*

Traditionally, IPRs have been seen as an exception to antitrust law.¹⁸⁴ According to the modern view, instead, even if tensions between IP and antitrust laws still exist, they are nonetheless complementary and pursue the common goal of promoting innovation.¹⁸⁵

Despite their parallel histories and similar goals, for almost the entire 20th century, antitrust and IP were considered to be absolutely incompatible.¹⁸⁶ Indeed, in the period immediately after the enactment of the Sherman Act in 1890, practices falling within the terms of a patent grant were deemed to be immune from antitrust scrutiny.¹⁸⁷ Courts continuously dismissed antitrust challenges

of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market (...) shall be prohibited as incompatible with the internal market (...).” See also Case 28/77 *Tepea v Commission*, 1947, E.C.R. 837 (holding that “according to the Commission these exclusive right to use the watts trademarks were in fact designed to ensure that the theal had absolute territorial protection excluding all parallel imports of authentic products and for this reason they are subject to Article 85 (1) of the Treaty.”).

¹⁸¹ See Petit, *supra* note 177, at 5.

¹⁸² See TTBER, *supra* note 47, at §1.

¹⁸³ *Id.*

¹⁸⁴ See Jacobson, *supra* note 157, at 3.

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*; see also Sullivan, *supra* note 151, at 8.

¹⁸⁷ *Id.*; see also Pitofksy, *supra* note 11, at 775. A detailed description of the U.S. legal framework, including the Sherman Antitrust Act, is contained in the next chapter. For now it is enough to know that the Sherman Act was enacted in 1890 from the United State of Congress and it represents the oldest antitrust law of the U.S to prohibit monopolies and cartels. The Sherman Act was signed by President Benjamin Harrison and it was name for the Republican Senator John Sherman of Ohio, a chairman of the Senate finance committee and the Secretary of the Treasury under President Hayes. For years after its passage the law remained unused. During the mandate of President Theodore Roosevelt (1901-1909), the Sherman Act was largely enforced during his antitrust campaign to split the Northern Securities Company. Thereafter also President William Howard Taft used it to hit the monopoly of the American Tobacco Company. The Sherman Act was amended by the Clayton Act in 1914. Its biggest success was the dismemberment of Standard Oil.

against patents holders, considering patents as a form of property that owners could use as they wished.¹⁸⁸

In *E. Bement & Sons v. National Harrow Co.*, the U.S. Supreme Court held that a patent pool, that fixes the price product within a licensing agreement and required members to use technology licensed to the pool, does not violate the Sherman Act, as “the general rule is absolute freedom in the use or sale of rights under the patent laws.”¹⁸⁹ In essence, at the beginning of the 90s, under the courts’ view the very purpose of patent law was to create a government-endorsed monopoly power, “so that even the hardest of the hard core antitrust violations, price-fixing, had to fall before the expansive rights given to the patent holder.”¹⁹⁰ In 1912, in *Henry v. A.B. Dick Co.*, the U.S. Supreme Court confirms its previous orientation by holding that “tying of unpatented articles (mimeograph paper) to a patented product (mimeograph machines) could not be challenged under the Sherman Act.”¹⁹¹

With the adoption of the Clayton Act in 1914, tying arrangements that substantially restricted competition were condemned, whether the goods involved were patented or unpatented.¹⁹² For the first time the Congress made clear that antitrust law plays a substantial role, even in those practices where IPRs are involved.¹⁹³ Afterwards, the U.S. Supreme Court in the well-known case *Motion Picture Patents Co. v. Universal Film Manufacturing Co.*, expressly overruled its decision in *A.B. Dick Co.*¹⁹⁴ In *Motion Picture* the patentee held a

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*; see also *E. Bement & Sons v. Nat’l Harrow Co.*, 186 U.S. 70, 91 (1902). (Holding that “the general rule is absolute freedom in the use or sale of rights under the patent laws of the United States. The very object of these laws is monopoly, and the rule is, with few exceptions, that any conditions which are not by their very nature illegal with regard to this kind of property, imposed by the patentee and agreed to by the licensee for the right to manufacture or use or sell the article, will be upheld by the courts. The fact that the conditions in the contracts keep up the monopoly or fix prices does not render them illegal.”). See also *Heaton-Peninsular Button-Fastener Co. v. Eureka Speciality Co.*, 77 F.288, 291 (6th Cir. 1896) (“The patentee has the exclusive right of use, except in so far as he has parted with it by his license. The essence of the monopoly conferred by the grant of letters patent is the exclusive right to use the invention or discovery described in the patent. This exclusive right of use is a true and absolute monopoly and is granted in derogation of the common right, and this right to monopolize the use of the invention or discovery is the substantial property right conferred by law, and which the public is under obligation to respect and protect.”).

¹⁹⁰ *Id.*; see also Willard K. Tom, Former General Counsel of the Fed. Trade Comm’n, Licensing and Antitrust: Common Goals and Uncommon Problems, The American Conference Institute 9th National Conference on Licensing Intellectual Property, (Oct. 12, 1998), https://www.ftc.gov/es/public-statements/1998/10/licensing-and-antitrust-common-goals-and-uncommon-problems#N_2_.

¹⁹¹ *Henry v. A.B. Dick Co.*, 224 U.S. 1 (1912); see also Leslie, *supra* note 29, at 33 (“A tying arrangement exists when a seller will provide or sell one product (the “tying product”) only on the condition that the buyer agrees to also purchase another separate product (the “tied product.”)

¹⁹² See Leslie, *supra* note 29, at 40; see also §3 Clayton Act, 15 U.S.C. § 14.

¹⁹³ See Jacobson, *supra* note 157, at 3.

¹⁹⁴ *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 518-19 (1917); see also Leslie, *supra* note 29, at 40.

patent on a device for feeding film into motion picture projectors and attempted to limit whose films could be shown using its patented projector.¹⁹⁵ The Court established that the exclusive right granted in every patent is limited to the invention described in the claims.¹⁹⁶ In this case, the patent at issue covered only the projector and not even the films played with it.¹⁹⁷ The Court concluded that the patentee had sought to expand its market power beyond the legitimate scope of its patent by attempting to control the supplies used with its patented machine.¹⁹⁸ The decision in *Motion Picture* pointed out that the mere possession of a valid patent would no longer immunize patent holders from antitrust liability.¹⁹⁹ For the next several decades, federal courts sought to find a balance between the enforcement of exclusive IPRs and the congressional call to respect competition rules and to prevent unreasonable anticompetitive practices.²⁰⁰ Courts gradually began to bridge the isolation of IPRs from antitrust, provoking a larger expansion of antitrust law's reach.²⁰¹

On the other side, the EU has traditionally shown a negative approach towards IPRs, given their potential to cause market segmentation and frustration of the internal market.²⁰² Moreover, in accordance to the 'special responsibility' principle, the dominant firm has a duty to grant its competitors access to an essential input it controls, if its refusal to supply a rival results in a substantial elimination of competition in the downstream market.²⁰³ In *Independent Television Publications Ltd. v. Commission (Magill)* case and the *IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG* (IMS Health), the ECJ clarified when a refusal to grant IPRs licenses constitute and abuse of dominance.²⁰⁴ In these cases ECJ applied for the first time the referred principle of 'special

¹⁹⁵ *Id*; see also Daniel J. Gifford, *The Antitrust/Intellectual Property Interface: An Emerging Solution to an Intractable Problem*, 31 Hofstra L. Rev. 363 (2003), at 373.

¹⁹⁶ *Id*; see also *Motion Picture Patents Company v. Universal Film Manufacturing Company et al*, CASEBRIEF, (last accessed Jan. 23, 2018), <https://www.casebriefs.com/blog/law/intellectual-property-law/intellectual-property-keyed-to-merges/patent-law-intellectual-property-keyed-to-merges/motion-picture-patents-company-v-universal-film-manufacturing-company-et-al/>.

¹⁹⁷ See Leslie, *supra* note 29, at 40.

¹⁹⁸ *Id*. Justice Holmes in his dissenting opinion stated that: "I suppose that a patentee has no less property in his patented machine than any other owner, and that, in addition to keeping the machine to himself, the patent gives him the further right to forbid the rest of the world from making others like it. In short, for whatever motive, he may keep his device wholly out of use."

¹⁹⁹ See Leslie, *supra* note 29, at 40.

²⁰⁰ *Id*.

²⁰¹ *Id*; see also Jacobson, *supra* note 157. See also *Ethyl Gasoline Corp. v United States*, 309 U.S. 436 (1940) and *Int'l Salt Co. v. United States*, 332 U.S. 392 (1947) (Holding that "the Supreme Court condemned the resale price maintenance of gasoline containing a patented additive in Ethyl and the tying of salt to the licensing of a patented salt-injection machine in *International Salt*.").

²⁰² See Todino, *supra* note 174, at 27.

²⁰³ *Id*.

²⁰⁴ *Id*; see also Case C-418/01, *IMS Health GmbH & Co. OHG v NDC Health GmbH & Co. KG*, 2004 I, E.C.R. 5039.

responsibility' when the refusal to license involved IPRs.²⁰⁵ Accordingly, under the 'exceptional circumstances test', a refusal to license is abusive if:

- (a) the requested IP is indispensable to compete; (b) the undertaking which requested the license intends to offer products or services not offered by the IP owner and for which there is potential consumer demand; (c) the refusal is such as to reserve to the IP owner a secondary market by eliminating all competition on that market; and (d) the refusal is not justified by objective considerations.²⁰⁶

In other words, in these cases the ECJ established that "the refusal to deal may be considered as anti-competitive if it blocks the development of a new product from a competitor where there is demand for the product."²⁰⁷

The different approaches adopted by the two jurisdictions are evident. In the U.S. there is no general duty to deal: courts have, in fact, widely recognized that, in the absence of any indication of illegal tying, IP owners have no duty to license their IPRs to others.²⁰⁸ By contrast, the ECJ by adopting the responsibility test, poses a series of limitations to IPRs, including the unilateral refusal to license, with the aim of strengthening competition and enforcing competition laws.²⁰⁹

A point of convergence has been reached in 2006 with *Illinois Tool Works v. Independent Ink Co.*, where the U.S. Supreme Court, together with antitrust Agencies and most of the economists, came to the conclusion that there is no presumption that a patent necessarily confers market power.²¹⁰ This decision was critical for the harmonization of a century of antitrust and IP jurisprudence.²¹¹ Similarly, in 2004 the EU Commission introduced a novel idea that antitrust and IPR policies share common goals in a soft law instrument: the TTBER.²¹² The theory of the complementarity has been endorsed by the ECJ in 2005 with the

²⁰⁵ See Todino, *supra* note 174, at 27; see also Maximiliano Santa Cruz Scantlebury & Pilar Trivelli, *Interaction Between Intellectual Property and Competition Laws*. E15Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum, 2015., www.e15initiative.org.

²⁰⁶ Christian Ahlborn, David S. Evans & A. Jorge Padilla, *The Logic & Limits of the "Exceptional Circumstances Test" in Magill and IMS Health*, Fordh. Int. L. J, Vol. 28, No. 4 (2004), at 1109. The "exceptional circumstances test" will be substituted by the broader balancing approach in the well-known case *Microsoft Corp. v. Commission*, that will be analyzed in the next chapter.

²⁰⁷ See Scantlebury & Trivelli, *supra* note 205, at 4.

²⁰⁸ See ABA Section of Antitrust Law, *supra* note 3, at 42.

²⁰⁹ See Scantlebury & Trivelli, *supra* note 205, at 4.

²¹⁰ *Ill. Tool Works, Inc. v. Indep. Ink, Inc.* (Illinois Tool), 126 S.Ct. 1281, 1293 (2006) ("In this case, the alleged monopolization is over the tied product, the ink, not the tying product, the printhead technology. The patent tying cases do not create any presumption that market power over the tying product confers the degree of market power over the tied product necessary to establish a monopolization or attempted monopolization claim.").

²¹¹ *Id.*

²¹² See Petit, *supra* note 177, at 21.

case *Huawei v Zte*, where the Court held that that “courts must strike a balance between maintaining free competition- in respect of which primarily law and, in particular, Article 102 of the TFUE- and the requirement to safeguard that proprietor’s intellectual property rights and its rights to effectual judicial protection.”²¹³

Thus, ultimately, it is now generally accepted from both jurisdictions that IP and antitrust laws, far from being inevitably conflicting, are complementary.²¹⁴ Accordingly, at the highest level of analysis they both aim to promote innovation, competition and industry, in the context of a dynamic efficiency that encourages economic growth.²¹⁵ Antitrust laws support competition as a force that lead to increased efficiency, growth and economic welfare, while IP protection represents a fundamental component of creating incentives for technological evolution.²¹⁶ The purpose of IP limited-term monopolies, therefore, is not to pursue the individual innovator’s welfare, but rather to grant sufficient reward for the innovator’s creative and inventive efforts, without lessening follow-on innovation or leading to unreasonable long period of high prices for consumers.²¹⁷ The new challenge posed to courts and antitrust Agencies by the new economy is not to determine which of the two bodies of law could prevail, but rather to strike an appropriate balance between under- and over-protecting innovators’ efforts.²¹⁸

²¹³ *Id*; see Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH* (holding that “the exercise of an exclusive right linked to an intellectual-property right — in the case in the main proceedings, namely the right to bring an action for infringement — forms part of the rights of the proprietor of an intellectual-property right, with the result that the exercise of such a right, even if it is the act of an undertaking holding a dominant position, cannot in itself constitute an abuse of a dominant position.” [...] “However, it is also settled case-law that the exercise of an exclusive right linked to an intellectual-property right by the proprietor may, in exceptional circumstances, involve abusive conduct for the purposes of Article 102 TFEU.”).

²¹⁴ See ABA Section of Antitrust Law, *supra* note 3, at 41.

²¹⁵ *Id*.

²¹⁶ *Id*; see also Hovenkamp, Helbert, *Consumer Welfare In Competition And Intellectual Property Law*, Vol. 9, Number 2, (Autumn 2013), at 53. (“Both competition law and intellectual law are concerned with promoting economic welfare. Two fundamental questions for both are determining how welfare should be defined, and how these welfare goals should be implemented. Producer welfare rises as the amount producers receive exceeds the lowest amount they are willing to accept, which is generally their cost. Consumer welfare rises with the difference between the amount consumers must pay and the amount they are willing to pay.”).

²¹⁷ See Ehlermann & Atanasiu, *supra* note 17 at 92.

²¹⁸ *Id*.

CHAPTER II

Legislative Framework of Competition Law and Antitrust Law in the EU and in the U.S.

2.1. An Overview of the U.S. Legal Framework

Antitrust law is essentially the law of competition.²¹⁹ Some legal systems, including Europe, refer to their analogous legal systems as ‘competition law’.²²⁰ American antitrust law seeks to encourage competition by preventing certain types of conducts, such as mergers and cartels, which threaten the free markets and harm consumer welfare.²²¹ The guiding principles of antitrust law are stated in the Sherman Act, enacted in 1890.²²² In response to what it was perceived as lack judicial enforcement of the Sherman Act, in 1914 the Congress enacted two additional statutes: the Clayton Act and the Federal Trade Commission Act.²²³

2.1.1. *The Sherman Act*

The Sherman Act of 1890, was a political reaction to the profound economic and social problems raised by the restructuring process of the American economic system.²²⁴ The Sherman Act contains two main provisions: section 1, that delineates and prohibits anti-competitive agreements; section 2, that deals with unilateral conduct by firms seeking to acquire and maintain monopoly power in a relevant market.²²⁵ More specifically, they provide that:

Section 1 [15 U.S.C. §1]

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal [...] ²²⁶

²¹⁹ See Leslie, *supra* note 29, at 23.

²²⁰ *Id.*

²²¹ See Hovenkamp et al., *supra* note 25, at §1.2.

²²² *Id.*

²²³ *Id.*; see also Leslie, *supra* note 18, at 25.

²²⁴ See Ghezzi & Olivieri, *supra* note 83, at §1.2.

²²⁵ See Leslie, *supra* note 29, at 25.

²²⁶ [...] “Every person who shall make any contract or engage in any combination or conspiracy hereby declared to be illegal shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding \$100,000,000 if a corporation, or, if any other person, \$1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court.”

Section 2 [15 U.S.C. §2]

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony [...]²²⁷

Notably, section 1 is broad intended: basically, every contract restrains trade in some way.²²⁸ To prevent the Sherman Act from exceeding and condemning beneficial contract, the Supreme Court, in the well-known *Standard Oil*²²⁹ case, gave a more restrictive interpretation, holding that section 1 prohibits only *unreasonable* restraints of trade.²³⁰

Courts also restricted the scope of section 2, to ensure that successful businesses would not be punished because of their success.²³¹ To this extent, courts distinguish between having a monopoly and actively acquiring or maintaining monopoly through anticompetitive conduct that offend antitrust rules; section 2 prohibits only the latter.²³²

Finally, both sections are applicable to IPRs: section 1 is the primary antitrust law regulating IP licensing agreements; section 2, instead, regulates IP owners unilateral conduct who hold market power in a relevant market.²³³

2.1.2. *The Clayton Act*

An exclusive license or an outright sale of an IP owner of its rights are also subject to the analysis of antitrust Agencies under the mergers and acquisitions provisions of the Clayton Act.²³⁴ The Clayton Act is an amendment approved by the U.S. Congress in 1914 with the intent to expand the reach of the Sherman Act.²³⁵ It contains a number of specific provisions that prohibit certain conducts

²²⁷ [...] “and, on conviction thereof, shall be punished by fine not exceeding \$100,000,000 if a corporation, or, if any other person, \$1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court.”

²²⁸ See Baumgartner, *supra* note 5, at 25.

²²⁹ *Standard Oil Co. v. United States*, 221 U.S. 1, 58 (1911).

²³⁰ *Id.*; see also Leslie, *supra* note 29, at 25.

²³¹ See Hovenkamp et al., *supra* note 25 at §1.2. See also *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966); see also *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945) (“The Sherman Act is not violated by the attainment of market power solely through superior skill, foresight and industry.”).

²³² *Id.*

²³³ Paul Saint-Antoine, *Antitrust Law and Intellectual Property: Intersection or Crossroad?*, Drinker Biddle & Reath LLP, (March 25, 2011), at 3, <http://antitrustconnect.com/2011/03/25/antitrust-law-and-intellectual-property-intersection-or-crossroad/>.

²³⁴ *Id.*; see also U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.7.

²³⁵ Mark A. Lemley, *A New Balance Between IP and Antitrust*, Stanford Law and Economics Olin Working Paper Vol. 13, No. 340, (April 1, 2007), at 237.

that may be detrimental to fair competition, such as price discrimination, exclusive dealing contracts, tying agreements and mergers.²³⁶

More particularly, section 3 enumerates and prohibits certain types of agreements, such as exclusive dealing agreements that foreclose competitors, and tying arrangements where the effect may be to substantially lessen competition or tend to create a monopoly in any line of commerce.²³⁷ A tying arrangement exists when a seller agrees to sell a product or a service (the ‘tying product’) only on the condition that the buyer agrees to also purchase another different product from the seller (the ‘tied product’).²³⁸

Section 7 of the Clayton Act, instead, prohibits mergers “where the effect of [such] acquisition may be substantially to lessen competition, or to tend to create a monopoly.”²³⁹ In other words, if a merger is likely to lessen competition in a relevant market, the courts may prohibit it.²⁴⁰

2.1.3. *The Federal Trade Commission Act*

While the Clayton Act prohibits some specific conduct, in 1914 Congress also enacted the Federal Trade Commission Act (hereinafter ‘FTCA’), which created the FTC and empowered it to enforce the FTCA provisions.²⁴¹ Most notably, section 5 of the FTCA declares unlawful any “unfair methods of competition in or affecting commerce and unfair or deceptive acts or practice in or affecting commerce.”²⁴² The term “unfair methods of competition” is much broader than the Sherman Act’s section 1 and 2.²⁴³ However, the FTC does not have explicit statutory authority to enforce the Sherman Act, but only the provisions of the Clayton Act.²⁴⁴ The FTCA’s reach is broad: many conducts that violate the Sherman Act or the Clayton Act will necessarily violate also section 5 of the FTCA.²⁴⁵ Accordingly, the U.S. *IP-Antitrust Guidelines* establish that:

enforcement or attempted enforcement of a patent obtained by fraud

²³⁶ Patricia Gima, *What are the Sherman Antitrust and Clayton Acts?*, BUSINESS LAW, (last accessed Jan 26, 2019), https://business-law.freeadvice.com/business-law/trade_regulation/anti_trust_act.htm

²³⁷ See Hovenkamp et al., *supra* note 25 at §1.2; see also Baumgartner, *supra* note 5, at 19.

²³⁸ See Leslie, *supra* note 29, at 33.

²³⁹ §7 Clayton Act, 15 U.S.C. § 18.

²⁴⁰ See Hovenkamp et al., *supra* note 25, at §1.2; see also HM Guidelines, *supra* note 81, at §7.1. (“the Agencies are likely to challenge a merger if the following three conditions are all met: (1) the merger would significantly increase concentration and lead to a moderately or highly concentrated market; (2) that market shows signs of vulnerability to coordinated conduct and (3) the Agencies have a credible basis on which to conclude that the merger may enhance that vulnerability.”).

²⁴¹ See Leslie, *supra* note 29, at 35.

²⁴² Federal Trade Commission Act, 15 U.S.C § 45.

²⁴³ See Hovenkamp, *Herbert J., The Federal Trade Commission and the Sherman Act* Faculty Scholarship. 1813. (2010), at 2.

²⁴⁴ *Id.*

²⁴⁵ See Leslie, *supra* note 29, at 35.

on the Patent and Trademark Office may violate section 2 of the Sherman Act or section 5 of the Federal Trade Commission Act, if all the elements otherwise necessary to establish a charge are proved.²⁴⁶

2.1.4. *Per Se Rule and Rule of Reasons*

The U.S. Supreme Court has set forth three methods to analyze whether any particular restraint of trade is unreasonable under the federal antitrust laws: the *rule of reason*, the *per se* analysis and the *quick look* analysis.²⁴⁷ The *per se* doctrine generally applies to certain categories of restraints that are assumed to be illegal *per se* and devoid of procompetitive justifications or efficiency-enhancing effects.²⁴⁸ For instance, antitrust laws treat naked horizontal price fixing and market-division agreements among competitors as *per se* illegal, because they are likely to eliminate competition and have no plausible pro-competitive justification.²⁴⁹ These situations are rare and do not permit courts to consider the evidence given by the contracting parties to justify the alleged anti-competitive conduct.²⁵⁰ In such circumstances, most courts will find liability automatically and will not even evaluate its actual effect on competition.²⁵¹

The *rule of reason* represents the prevailing standard for determining restraint's effect upon competition in a relevant market.²⁵² This approach requires an evaluation of the potential benefits or threats to competition in a relevant market.²⁵³ The *rule of reason* standard should be used to challenge the other type of practices different from horizontal agreements, such as vertical arrangements.²⁵⁴ Under this effect-based test, courts will weight up the pro-competitive and anti-competitive effects of the conduct in question, examining a variety of factors including "specific information about the relevant business, its condition before and after the restraint was imposed, and the restraint's history, nature, and effect."²⁵⁵ Once claimant has proved that the restraint has harmed or is likely to harm competition, the burden shifts to the defendant to introduce

²⁴⁶ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §6.

²⁴⁷ *Craftsmen Limousine, Inc. v. Ford Motor Co.*, 363 F.3d 761 (8th Cir. 2004).

²⁴⁸ See Aba Section of Antitrust Law, *supra* note 3, at 25.

²⁴⁹ *Id.*; see also Robert H. Bork, *The Rule of Reason and the Per Se Concept: Price Fixing and Market Division*, Part II, 75 Yale Law Journal 373 (1966), at 385.

²⁵⁰ See Aranda, *supra* note 1, at 16.

²⁵¹ See Aba Section of Antitrust Law, *supra* note 3, at 26. ("Unlike the *rule of reason* analysis, *per se* analysis does not allow inquiry into the intent behind the restraint, its pro-competitive justifications, or its actual effect on competition").

²⁵² *State Oil Co. v. Khan*, 522 U.S. 3, 22, 118 S.Ct. 275, 139 L.Ed.2d 199 (1997) ("[T]he majority of commercial arrangements subject to the antitrust laws should be evaluated under the *rule of reason*").

²⁵³ See Aranda, *supra* note 1, at 17.

²⁵⁴ *Id.*

²⁵⁵ *Id.*; see also *State Oil Co.*, *supra* note 252, at 10.

evidence that the alleged infringing conduct serves legitimate and pro-competitive purposes.²⁵⁶

Because of the strength of the *per se* doctrine's presumption, the Supreme Court, in the late 1970s, started to exercise caution in applying this approach in cases where the anti-competitive effects of the practice were not immediately clear.²⁵⁷ Indeed, in the 1970s the Deputy Assistant Attorney General of the Antitrust Division of the DOJ announced in a speech a 'watch list', known as the 'Nine No-No's', of nine specified patent licensing practices that the division viewed as anticompetitive *per se*.²⁵⁸ Briefly, most of the practices involve attempts by patent holders to extend their monopolies beyond the scope of the patents to unpatented products, "to gain control over improvements of their innovations, to determine prices for resale of their patented products, or to engage in market allocations."²⁵⁹ However, in early 1980's the Antitrust Division started to question the Nine 'No-No's' doctrine on the assumption that unconstrained patent licensing increases patent value and, more importantly, encourages innovation.²⁶⁰ Soon after, courts began to apply the *rule of reason* approach to patent licensing, thereby balancing the pro-competitive effects of licensing and possible anti-competitive effects in related markets.²⁶¹ Along this line, in the mid-'90s, the EC's approach was to consider exclusive patent licensing agreements as non-restrictive of competition, as long as the contents of the license remained within the scope of the patent.²⁶²

²⁵⁶ See *Aba Section of Antitrust Law*, *supra* note 3, at 26.

²⁵⁷ *Id.*, at 27.

²⁵⁸ Richard Gilbert & Carl Shapiro, (1998), "*Antitrust Issues in the Licensing of Intellectual Property: The Nine No-Nos Meet the Nineties*", *Brookings Papers on Economic Activity, Microeconomics*: 283–336, (1997), at 286; see also Yamane, Hiroko, *Competition Analyses of Licensing Agreements- Considerations for Developing Countries under TRIPS*, ICTSD, (June 2014), at 20. The blacklist contained:

1. Royalties not reasonably related to sales of the patented products;
2. Restraints on licensees' commerce outside the scope of the patent (tie-outs);
3. Requiring the licensee to purchase unpatented materials from the licensor (tie-ins);
4. Mandatory package licensing;
5. Requiring the licensee to assign to the patentee patents that may be issued to the licensee after the licensing arrangement is executed (exclusive grant-backs);
6. Licensee veto power over grants of further licenses;
7. Restraints on sales of unpatented products made with a patented process;
8. Post-sale restraints on resale; and 9. Setting minimum prices on resale of the patent products.

²⁵⁹ See Gilbert & Shapiro, *supra* note 258, at 285.

²⁶⁰ *Id.*

²⁶¹ *Id.*, at 286.

²⁶² Steven D. Anderman, *EC Competition Law and Intellectual Property Rights- The Regulation of Innovation*, Oxford University Press, (1998), at 34.

Finally, in all those cases where the repercussions of a suspicious restraint are unclear and it is unnecessary to go through the full analysis, the Court might apply a truncated *rule of reason* test, known as *quick-look*.²⁶³

2.2. An Overview of The EU Legal Framework

The European competition law developed mainly after the Second World and much later compared to U.S.²⁶⁴ The competition rules were introduced in the European Community in 1958, and induced many of the Member States, including Italy, to introduce laws against restraints of competition for the first time.²⁶⁵ The European Treaties, in the light of the arm's length principle, provide a set of articulate rules in the field of competition.²⁶⁶ Under an economic point of view, the European competition law, from one hand, enacts obligations and prohibitions directly to undertakings; on the other hand, it obliges Member States not to introduce any potential anti-competitive legislation and to eliminate them, if any.²⁶⁷ The main antitrust provisions are contained in Article 101, that prohibits anti-competitive agreements in general, and in Article 102, that prohibits the abuse of a dominant position.²⁶⁸

2.2.1. Art. 101 and The Anti-Competitive Business Practices

The aim of Article 101 is to promote consumer welfare and an efficient allocation of resources.²⁶⁹ Article 101 comprised two parts and each part contributes in determining whether any form of collaboration between two or more undertakings is pro- or anti-competitive.²⁷⁰ More specifically, Article 101(1) prohibits "all agreements between undertakings, decisions by association of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or

²⁶³ *Id*; see also *Craftsmen Limousine*, *supra* note 247, at 773 ([“the] *quick look* approach is reserved for circumstances in which the restraint is sufficiently threatening to place it presumptively in the *per se* class, but lack of judicial experience requires at least some consideration of proffered defenses or justifications.”).

²⁶⁴ See Vanzetti & Di Cataldo, *supra* note 89, at 589.; see also Wernhard Möschel Tübingen, *US versus EU Antitrust Law*, (last accessed Jan.25, 2019), at 1, <ftp://ftp.zew.de/pub/zew-docs/veranstaltungen/rnic/papers/WernhardMoeschel.pdf>.

²⁶⁵ *Id*.

²⁶⁶ See Vanzetti & Di Cataldo, *supra* note 89, at 589.

²⁶⁷ *Id*.

²⁶⁸ Slaughter & May, *The EU Competition Rules on Intellectual Property Licensing- A Guide to the European Commission's Technology Transfer Block Exemption Regulation and Competition Issues Relating to IP Licensing and Enforcement*, (June 2016), at 1, available at <https://www.slaughterandmay.com/media/2536585/the-eu-competition-rules-on-intellectual-property-licensing.pdf>.

²⁶⁹ See TTBER, *supra* note 47, at §1.

²⁷⁰ See Anderman, *supra* note 262, at 34.

distortion of competition within the internal market.”²⁷¹ Article 101(1) has been largely applied within the IP sector, in particular to licensing arrangements such as concerted practices involving licensing agreements, assignment of IPRs to third parties and trademark delimitation agreements.²⁷²

However, to fall within the application of this Article, the agreement must comply with three conditions. Firstly, the agreement must be concluded between two independent undertakings.²⁷³ The term ‘undertaking’ is interpreted broadly and includes any entity carrying out economic activity, whether an individual inventor or a company.²⁷⁴ The second condition requires the agreement or practice at issue to affect the trade between two or more Member States.²⁷⁵ Finally, the third condition asks whether the arrangement has the purpose or the effect of preventing or substantially distorting competition.²⁷⁶ The ECJ, repeatedly held over the years that an IP licensing agreement may not *per se* restrict competition, but it may fall within the scope of Article 101(1), “whenever it is the subject, the means or the consequence of Article 101(1), or serves to give effect to it.”²⁷⁷

An agreement or a practice that meets all these requirements shall be automatically prohibited, unless the process of exception under Article 101(3) applied.²⁷⁸ Accordingly, Article 101(3) states that the provision of paragraph 1 may be, however, declared inapplicable when the agreement, the decision or the concerted practice in question contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit.²⁷⁹ Apparently, the

²⁷¹ Consolidated Version of the Treaty on the Functioning of the European Union, OJ C115/47, (2008), par. 1. Article 101(1) TFEU also lists typical anticompetitive agreements, for instance, those that (a) directly or indirectly fix purchase or selling prices or any other trading conditions; (b) limit or control production, markets, technical development, or investment; (c) share markets or sources of supply; (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage; or (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

²⁷² See Anderman, *supra* note 262, at 34.

²⁷³ *Id.* “(Article 101 does not apply to the unilateral conduct of a single undertaking. Indeed, the Court’s view that the mere ownership of an intellectual property right is not caught by Article 85 (now Article 101) is partly a reflection of the fact that the unilateral enforcement of an intellectual property right is not an agreement or a concerted practice under Article 85 (1).”).

²⁷⁴ See Baumgartner, *supra* note 5, at 15.

²⁷⁵ *Id.*

²⁷⁶ See Anderman, *supra* note 262, at 35.

²⁷⁷ *Id.*; see also Case 78/70, *Deutsche Grammophon Gesellschaft mbH v Metro-SB-Großmärkte GmbH & Co. KG*, 1971, E.C.R. 487.

²⁷⁸ Article 101(2) (“Any agreements or decisions prohibited pursuant to this Article shall be automatically void.”).

²⁷⁹ Article 101(3) TFEU (“The provisions of paragraph 1 may, however, be declared inapplicable in the case of:

- any agreement or category of agreements between undertakings,
- any decision or category of decisions by associations of undertakings,
- any concerted practice or category of concerted practices,

exemption seems to foster IPRs licensing because of its contribution to the promotion of technical progress and the circulation of ideas.²⁸⁰

2.2.2. Art. 102 and The Abuse of Dominance

Article 102 (ex Article 82 TCE) prohibits the abuse of a dominant position within the internal market, to the extent that it can be considered prejudicial to trade between Member States.²⁸¹ Article 102 also contains a non-exhaustive list of typical anticompetitive practices, that may consist in:

- (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions; (b) limiting production, markets or technical development to the prejudice of consumers; (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage; (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.²⁸²

Usually, any undertaking, even if it has a dominant position over the marketplace, is free to choose its commercial counterparts and may therefore unilaterally refuse to contract.²⁸³ This is certainly true also for those undertakings that enforce their IPRs.²⁸⁴ The ECJ on a number of occasions hold that, given that the exclusive use belongs to the prerogatives of the IP owner, even a refusal to license of an undertaking in a dominant position may not *per se* constitutes an abuse of its position.²⁸⁵ This means that IPRs are not equated to dominance.²⁸⁶ Indeed, if a dominant undertaking had the obligation to license its IPRs to third parties, it would not be incentivized to allocate considerable resources in R&D, while competitors might be tempted to exploit its efforts instead of investing

which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not: (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives; (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.”).

²⁸⁰ See Anderman, *supra* note 262, at 35.

²⁸¹ “Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.”; see also Pace, *supra* note 51, at 59.

²⁸² *Id.*

²⁸³ See Pace, *supra* note 51, at 132.

²⁸⁴ *Id.*

²⁸⁵ *Id.*; see also Case 238/87, *Volvo AB - Erik Veng Ltd.*, 1988, E.C.R. 6211. (Holding that “the refusal by the proprietor of a registered design in respect of body panels to grant to third parties, even in return for reasonable royalties, a licence for the supply of parts incorporating the design cannot in itself be regarded as an abuse of a dominant position within the meaning of Article 86.”).

²⁸⁶ See Anderman, *supra* note 262, at 169.

independently (so-called 'free-dating').²⁸⁷ However, as previously mentioned, an undertaking in a dominant position is burdened by a special responsibility, which prevents it from affecting the trade between Member States, as well as abusing its economic power to the detriment of competitors and consumers.²⁸⁸ Thus, in exceptional circumstances a refusal to license IPRs is abusive.²⁸⁹

Article 102 has, therefore, served as a base for some of the most relevant case involving refusals to license or standard settings.²⁹⁰ To this extent, in 2005 the EC published a competition discussion paper on the application of Article 82 – now, article 102 TFEU - to exclusionary abuse.²⁹¹ These provisions, together with the EC 2014 revised competition regime for technology transfer agreements, represent the basis for the interaction between competition and IP law in the EU.²⁹²

2.2.3. Regulation 1/2003

To conclude the overview of the European competition system, a reference to the EU Council Regulation 1/2003 is necessary.²⁹³ The Regulation 1/2003 was enacted with the purpose of implementing competition rules laid down in article 81 (now Article 101) and 82 (now Article 102) of the ECT. The regulation has simplified the system to apply exemptions provided by former Article 81 (3), abandoning the old requirement of notification and establishing a new system of direct applicability.²⁹⁴ The adoption of the Regulation 1/2003, represents an important step towards strengthening and reinforcing the European competition policy.²⁹⁵ Today, the competition authorities and courts of the Member States have the power to apply not only Article 101 (1) and Article 102, which have direct applicability by virtue of the case-law of the ECJ, but also Article 102(3).²⁹⁶ Thus, the national competition authorities have become the primary public enforcers of

²⁸⁷ *Id.*

²⁸⁸ See Ghezzi & Olivieri, *supra* note 83, at §4.1.

²⁸⁹ Joined Cases C-241/91 P and C-242/91 P *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission (Magill)*, 1995, E.C.R. 743.

²⁹⁰ See Scantlebury & Trivelli, *supra* note 205, at 7.

²⁹¹ *Id.*; see also Communication from the Commission, *supra* note 103, at §4(D), ("The concept of refusal to supply covers a broad range of practices, such as a refusal to supply products to existing or new customers, refusal to license intellectual property rights, including when the licence is necessary to provide interface information, or refusal to grant access to an essential facility or a network.").

²⁹² *Id.*

²⁹³ 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, O.J. (L 1), (2003).

²⁹⁴ Felix Müller, *The New Council Regulation (EC) No. 1/2003 on the Implementation of the Rules on Competition*, German L. J., Vol.05 No.06, (2004), at 725.

²⁹⁵ *Id.*

²⁹⁶ *Id.*

2.3. Key Differences Between EU and U.S. Antitrust Principles

Apparently, both the EU and U.S. legal systems seem to converge and share the common objective of preventing unreasonable restraints of trade that may harm competition, respectively through Article 101 and section 1 of the Sherman Act. Each jurisdiction accepts the broad proposition that the central aim of competition law is to benefit consumers.²⁹⁸ Consistently with this objective, both the EU and U.S. discourage any application of competition laws to safeguard individual competitors as an end in itself.²⁹⁹ Moreover, both systems look at undertakings in a dominant position with mistrust.³⁰⁰ However, as many commentators noted, in interpreting Article 102 national courts and the ECJ “have tended to create a wider zone of liability for dominant firms than the decisions of the U.S. courts under section 2 of the Sherman Act.”³⁰¹ Indeed, as largely discussed, the European jurisdiction has always maintained a more restrictive approach than U.S. Notably, while a finding of dominance may occur in EU at somewhat below a 40% market share, usually in the U.S., a share below 50% is considered to be inadequate to establish evidence of a substantial market power.³⁰²

Discussions on the U.S. and the European antitrust systems, have encouraged the proliferation of theories in order to explain the reasons for the differences between the two jurisdictions.³⁰³ It is often said that “the EU protects competitors, the US protects competition.”³⁰⁴ Perhaps it is an explanation a bit too broad and superficial. Certainly, the divergences between the two systems stem from their historical origin. Accordingly, historically speaking, the biggest concern of the European Community law was to prohibit any restraints of trade of any form on a person’s economic freedom to choose how to act in the relevant market.³⁰⁵ By contrast, the U.S. system seems to view competition as a goal itself: the U.S. policy is to let markets free to correct themselves and the

²⁹⁷ See generally Wouter P.J. Wils, *Ten Years of Regulation 1/2003 - A Retrospective*, Journal of European Competition & Law Practice, (June 7, 2013).

²⁹⁸ William E. Kovacic, Chairman of the Fed. Trade Comm’n, Competition Policy in the European Union and the United States: Convergence or Divergence?, Bates White Fifth Annual Antitrust Conference, Washington, D.C., (June 2, 2008), at 8, https://www.ftc.gov/sites/default/files/documents/public_statements/competition-policy-european-union-and-united-states-convergence-or-divergence/080602bateswhite.pdf.

²⁹⁹ *Id.*

³⁰⁰ See Baumgartner, *supra* note 5, at 20.

³⁰¹ See Kovacic, *supra* note 298, at 11.

³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ *Id.*

³⁰⁵ See Buckley, *supra* note 122, at 805.

competitors to compete, based on the strength of their products and the resulting consumer demand.³⁰⁶

The discrepancies between the U.S. and EU on competition system is also reflected on IP policy. In the U.S., the antitrust law and IPRs have their roots in the common foundation of federal law.³⁰⁷ The U.S. have always adopted a liberal approach towards IP holders, letting them the total discretion regarding the exploitation and licensing of their IPRs.³⁰⁸ This is particularly true in case of patent rights, where usually a large capital investment is committed by the firms to R&D.³⁰⁹ By contrast, in the European system the IPRs stem from the domestic laws of member states, while competition law is rooted in the Treaty of Rome.³¹⁰ Perhaps this fragmented and varied system is one of the reasons why the EU has always been so reluctant even in the field of IPRs licensing.

³⁰⁶ *Id.*

³⁰⁷ *Id.*, at 807.

³⁰⁸ *Id.*, at 805; see also see also Robert Anderson & William E. Kovacic, *The Application of Competition Policy Vis-à-Vis Intellectual Property Rights: The Evolution of Thought Underlying Policy Change*, WTO Staff Working Paper, No. ERSD-2017-13, (Sept. 6, 2017), at 19. ("EU doctrine governing abuse of dominance sets more stringent limits upon companies than prevailing judicial interpretations of the Sherman, Clayton, and FTC Acts.").

³⁰⁹ *Id.*

³¹⁰ *Id.* ("[...] at this stage, there are only community-wide IPRs in the realm of trademarks, biotechnological inventions, and plant variety rights."); see also Jessica Hayashi, *An Overview of the Evolution and Enforcement of Antitrust Laws in the European Union and United States*, ABA, (last accessed April 9, 2019), https://www.americanbar.org/groups/young_lawyers/publications/tyl/topics/antitrust/an-overview-the-evolution-and-enforcement-antitrust-laws-the-european-union-and-united-states/. ("The European Union has a stronger socialist tradition that puts more faith in the state to care for its citizens, who in turn, enjoy greater protection from its governments. This model of freedom limits its citizens' choices so you, as a citizen, and other fellow citizens, are free from potential mistakes that may negatively impact not only yourself but also society at large.").

CHAPTER III

The EU Regime on Technology Transfer Agreements and Anti-Competitive Practices

3.1. Technology Transfer Agreements: Definition and Application in the EU

In the new economy, characterized by high-growth industries that are on the cutting edge of technology, market participants' incentives and opportunities to innovate are increasingly important.³¹¹ In this IP-intensive new economy, we are seeing the growing importance of the circulation of ideas and innovation: today, transfers of technology are essential to remain globally competitive and to market the products that are the result of R&D efforts.³¹²

Technology transfer is the process of transferring and disseminating technology from a target organization to a secondary user, for the production and exploitation of goods or services.³¹³ It includes "any activity where technology is created and/or made available by one organization to another."³¹⁴ Technology transfers could involve a technology licensing, as well as a know-how agreement.³¹⁵ Indeed, as discussed in the first chapter of this work, all types of businesses and individuals, can - and actually do- use licensing as a mean to grant third parties access to innovative creations of technologies protected by IPRs.³¹⁶ Accordingly, the TTBER defines technology transfer as:

the licensing of technology rights where the licensor permits the licensee to exploit the licensed technology rights for the production of goods or services.³¹⁷

The purpose of the TTBER is to set out principles for the assessment of technology transfer agreements, as well as on the application of Article 101.³¹⁸ This chapter firstly analyzes the major changes made to the TTBER, its scope of application and the main clauses. In the second part, instead, will be discussed

³¹¹ See Pitofsky, *supra* note 11, at 540.

³¹² *Id.*; see also Gilbert & Shapiro, *supra* note 258, at 284.

³¹³ See TTBER, *supra* note 47, at §1.

³¹⁴ Mark Anderson, *Technology Transfer: Law, Practice, and Precedents*, Bloomsbury Professional; 2nd edition (Jan. 1, 2003), at 2.

³¹⁵ Majmudar & CO Int. Lawyers, *Technology Transfer Agreements*, (last accessed Jan. 29, 2019), at <https://www.majmudarindia.com/pdf/Legal%20aspects%20of%20technology%20transfer%20agreements.pdf>, 1.

³¹⁶ See Ehlermann & Atanasiu, *supra* note 17, at 106; see also Morton & Associates, *IP Licensing*, (Febr. 2011), <https://moas.com/article-10/>.

³¹⁷ See TTBER, *supra* note 47, at §1.

³¹⁸ *Id.* (The TTBER further provide that "the TTBER and the guidelines are without prejudice to the possible parallel application of Article 102 of the Treaty to technology transfer agreements.") (*Id.*, at recital 2).

the main licensing practices that could raise potential anti-competitive issues, such as exclusive licensing arrangements, field of use restrictions, tying and bundling and so forth.

The basic U.S. approach is discussed in the fourth chapter of this work and is reflected in the *U.S. IP Guidelines*, that call for flexible application of economic analysis to licensing practices.³¹⁹ For both systems, the general recent trend has been one of increasing convergence to IP licensing agreements.³²⁰ The scope of IPRs that are covered by the TTBER includes patents, know-how and some copyright rights. The TTBER does not cover, by contrast, trademark rights, which are governed by the Reg. 330/2010.

3.1.1. *Intellectual Property Rights Included*

The TTBER in §3 establish that:

The TTBER and these guidelines cover agreements for the transfer of technology. According to Article 1(1)(b) of the TTBER the concept of 'technology rights' covers know-how as well as patents, utility models, design rights [...] and software copyrights or a combination thereof as well as applications for these rights and for registration of these rights.³²¹

Thus, the TTBER covers, among others, patent licensing agreements. To this extent, the TTBER further recognize that "the essence of a pure patent license 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 and settlement agreements whereby the licensor permits the licensee to produce within the scope of the patent."³²²

According to the TTBER, the concept of technology transfer agreements covers also copyright rights.³²³ The TTBER further establishes that its provision

³¹⁹ See Ehlermann & Atanasiu, *supra* note 7, at 49; see also R. Hewitt Pate, Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Competition And Intellectual Property In The U.S.: Licensing Freedom And The Limits Of Antitrust, 2005 EU Competition Workshop, Florence, Italy, (June 3, 2005), <https://www.justice.gov/atr/file/517816/download>.

³²⁰ *Id.*

³²¹ See TTBER, *supra* note 47, at §3, recital 44.

³²² *Id.*, at recital 53; see also Daniel P. Homiller, *Patent Misuse in Patent Pool Licensing: From National Harrow to "The Nine No-Nos" to Not Likely*, 5 Duke Law & Technology Review 1-21 (2006), at 267. ("The patent laws confer on a patentee power to exclude all others from making, using or selling his invention.' In furtherance of a constitutionally recognized goal- 'To promote the Progress of Science and the useful Arts' [...] Congress has thus adopted a constitutionally authorized means-- securing... to Inventors the exclusive Right to their respective ...Discoveries.").

³²³ See TTBER, *supra* note 47, at §3.2.

do not cover licensing of copyright other than software copyright.³²⁴ However, the TTBER provides an exception for those agreements involving the licensing of copyright rights other than software “to the extent that, they are directly related to the production or sale of the contract products.”³²⁵ In such circumstances, the EC will apply as a general rule the principles set out in the TTBER.

Finally, within the concept of technology agreements, the TTBER also includes know-how.³²⁶ Know-how is defined in Article 1(1)(i) of the TTBER as a package of practical information, resulting from experience and testing, which meets all of the following requirements.³²⁷ In particular, according to the abovesaid definition, the know-how must be: (i) ‘secret’, i.e. not generally known or easily accessible; (ii) ‘substantial’, meaning that it is meant to be of significance to the production process or to a product or service; ‘identified’, i.e. described or established in such a way that it is possible to verify whether licensed know-how fulfils the criteria of secrecy and substantiality.³²⁸ This condition is particularly important in case of licensing or transfer of ownership and it is satisfied where the licensed know-how is described in manuals or other written form.³²⁹

The protection of know-how is also regulated by the EU Directive 2016/943, which highlights that businesses usually invest in developing, acquiring and applying know-how and information, thereby providing a substantial competitive advantage in emerging markets.³³⁰ Companies or enterprises that want to increase their share over the marketplace may transfer their marketing secrets and know-how in local companies active in those market in return for a royalty on

³²⁴ *Id.* (Accordingly, “this condition ensures that provisions covering other types of intellectual property rights are block exempted to the extent that these other intellectual property rights serve to enable the licensee to better exploit the licensed technology rights.”).

³²⁵ *Id.*

³²⁶ *Id.*

³²⁷ *Id.*

³²⁸ *Id.* (“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.”).

³²⁹ *Id.*; see also Srijit Mukherje, Sudipta Bhattacharjee, *Technology Transfer and the Intellectual Property Issues Emerging from It – An Analysis from a Developing Country Perspective*, Journal of Intellectual Property Rights, Vol. 9, pp. 260-274, (May, 2004), at 261.

³³⁰ Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the Protection of Undisclosed Know-How and Business Information (Trade Secrets) Against their Unlawful Acquisition, Use and Disclosure, O.J. (L 157), (2016); see also Chiara Morbidi, *Brief Introduction to the EU Directive 2016/943 on the Protection of Trade Secrets and Definition of Know-How*, BREVETTI NEWS, (Jan. 9, 2018), <http://brevettinews.it/en/patents/brief-introduction-eu-directive-2016943-protection-trade-secrets-definition-know/>. (“The aim of the directive is to develop a real culture of trade secrets protection, in order to increase the competitiveness and innovative ability of enterprises.”).

sales on sales volumes.³³¹ However, in practice, small-medium undertakings are reluctant to use the licensing instrument.³³² That because licensors are generally afraid of uncertainties about the protection of their IPRs, since there are not good systems in place to protect confidentiality.³³³ On the other hand, licensees are reluctant to accept the severe restrictions coming with license agreements.³³⁴

3.1.2. *Trademarks Licensing and the Application of the Reg. 330/2010*

As already mentioned, both the EU and the U.S. Guidelines decided not to cover trademarks. The TTBER explicitly states that when an agreement is concluded merely for the purpose of transferring IPRs other than those covered by the Guidelines, such as trademarks and other copyrights rights, it would be out of the scope of application of the regulation, unless such IPRs are directly related to the production or sale of the contract products.³³⁵ This condition ensure that the TTBER provisions apply to other types of IPRs only to the extent that such rights help the licensee to better exploit the licensed technology.³³⁶ The licensor may for instance authorize the licensee to use his trademark on the products incorporating the licensed technology.³³⁷ For instance, according to the TTBER, “[the] trademark 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.”³³⁸

In all the other circumstances where a trademark license is directly related to the use, distribution, sale or resale of goods and services, and does not constitute the main objective of the agreements, the TTBER does not apply. The license agreement is instead covered by EC Regulation No. 330/2010 on the application of Article 101(3) of the TFUE to categories of vertical agreements and

³³¹ Hans Verhulst, *International Trade in Technology – Licensing of Know-How and Trade Secrets*, WIPO, (last accessed Jan. 29, 2019), https://www.wipo.int/export/sites/www/sme/en/documents/pdf/trade_technology.pdf.

³³² *Id.*

³³³ *Id.*

³³⁴ *Id.*

³³⁵ See TTBER, *supra* note 47, at §3.1.

³³⁶ *Id.* (“For instance, where a licensor authorises a licensee to use its trademark on the products incorporating the licensed technology, this trademark 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.”).

³³⁷ *Id.*, see also Michael A. Epstein & Frank L. Politano, *Drafting License Agreements*, Aspen Publishers; 4th edition (Sept. 19, 2002), at 5-172.

³³⁸ *Id.*

concerted practices.³³⁹ The Regulation provides that trademark license terms must be carefully drafted as not to risk violating Article 101(3).³⁴⁰

3.2. The EU Regime: The Revised EU Block Exemption Regulation No. 316/2014

In March, 2014, the TTBER entered into force. In general, the TTBER, which replaces the previous legal regime contained in the Regulation 772/2004 (hereinafter '2004 TTBER'), recognizes the pro-competitive nature of the vast majority of technology transfer agreements, as they promote innovation and the dissemination of technology.³⁴¹ Nevertheless, under certain circumstances, those agreements may have anti-competitive effects. For instance they can lead to price increase, exclusion of competing technologies or market allocation.³⁴² In all those cases, such agreements are prohibited and fall within the application of Article 101.

As on the 2004 TTBER, the new regime provides two separate instruments: the TTBER and the accompanying *Technology Transfer Guidelines* (hereinafter 'TTBER Guidelines'), which set out a series of criteria on the application of the TTBER, as well as on the EU competition law to non-exempt agreements.³⁴³ The TTBER further confirms the presence of a 'safe harbour' based on market share threshold for agreements deemed not to have anti-competitive effects or to have positive effects that outweigh the negative ones.³⁴⁴ The market-share threshold has been however simplified: today, according to Article 3, the safe harbour only applies where either parties of the agreement do not have a combined market

³³⁹ *Id*; see also Commission Regulation (EU) No 330/2010 of 20 April 2010 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, [hereinafter 'VBER'], O.J. (L 102), (2010). ("The benefit of the block exemption established by this Regulation should be limited to vertical agreements for which it can be assumed with sufficient certainty that they satisfy the conditions of Article 101(3) of the Treaty.")

³⁴⁰ Thomas Vinje, Clifford Chance, *The Intellectual Property and Antitrust Law Review*, 3rd Edition, (July 2018), at 53, https://thelawreviews.co.uk/digital_assets/8a4ae5b7-52ad-4d5a-ace1-3394692cf34a/The-Intellectual-Property-and-Antitrust-Review-Edition-3.pdf.

³⁴¹ Commission Regulation (EU) No 772/2004 of 27 April 2004 on the Application of Article 81(3) of the Treaty to Categories of Technology Transfer Agreements [hereinafter '2004 TTBER'], O.J. (L 123), (2004); see also TTBER, *supra* note 47, at §2.1.

³⁴² *Id*, at §2.2; see also Gomez-Acebo, Pombo, *New Rules for Technology Transfer Agreements*, (Apr. 2014), <https://www.ga-p.com/wp-content/uploads/2018/07/new-rules-for-technology-transfer-agreements.pdf>; see also Communication from the Commission - Guidelines on the Application of Article 101(1) of the Treaty on the Functioning of the European Union to Technology Transfer Agreements, [hereinafter 'TTBER Guidelines'], C 89/03, (2014).

³⁴³ Maria Gaia Pazzi, *Revised Technology Transfer Block Exemptions Rules*, Italian Antitrust Review, No. 2 (2014), at 153.

³⁴⁴ *Id*, at 155.

share exceeding 20%, in case of competing undertakings, or 30% in the case of non-competing undertakings.³⁴⁵

Moreover, the revised TTBER still contains a blacklist of 'hardcore restrictions', which include those provisions the presence of which cause the entire agreement to be excluded from the safe harbour.³⁴⁶ Those restrictions usually involve price-fixing practices, or any other restrictions of a party's ability to determine its prices when selling to third parties, as well as provisions which allocate markets or customers.³⁴⁷ As far as hardcore restrictions, the most significant changes consist in reformulating the 'black- list' of exemptions.³⁴⁸ In particular, passive sales restrictions between licensees have been added to the list of 'hardcore restrictions' and can never be exempted by the TTBER.³⁴⁹

The TTBER also retains the concept of 'excluded restrictions' which are not *per se* block exempted but, unlike in the case of hardcore restrictions, their inclusion within an agreement does not prevent the rest of the agreement from benefitting from the safe harbour.³⁵⁰ However, the scope of such restrictions has been expanded in two aspects. One concerns grant-back provisions, i.e. exclusive licenses back to the licensor of the licensee's improvement.³⁵¹ The old 2004 TTBER merely forbade such a contractual obligation when the improvements or applications were severable from the original licensed technology and were thus capable of being use and exploited separately, without the licensor's background IP.³⁵² Conversely, an improvement or an application that is non-severable, should only be used with the permission of the licensor.³⁵³ The new TTBER eliminates the distinction between severable and non-severable improvements. Today, all exclusive grant-back obligations fall outside the TTBER safe harbour, whereas non-exclusive grant-back obligations remain covered.³⁵⁴

The other main change deals with 'termination on challenge' clauses, allowing the licensor to terminate the agreement when the other party disputes the validity of any licensed IPRs.³⁵⁵ Under the previous regime, no-challenge provisions, which prevent the parties from challenging the validity of their IPRs,

³⁴⁵ See TTBER, *supra* note 47, at §3.3.

³⁴⁶ Trevor Cook, *The New EU Guidelines on Technology Transfer Agreements*, Journal of Intellectual Property Rights, Vol. 19, (May 2014), at 230.

³⁴⁷ *Id.*

³⁴⁸ See Pazzi, *supra* note 343, at 153.

³⁴⁹ *Ensuring Technology Transfer Agreements Respect Competition Rules*, (last accessed Jan. 30, 2019), EURLEX, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3A08010104_1.

³⁵⁰ See Ehlermann & Atanasiu, *supra* note 17, at 183.

³⁵¹ See EURLEX, *supra* note 349.

³⁵² Hiroshi J. Sheraton et al., *EU Tightens Antitrust Rules for Licensing Agreements from 1 May 2014*, LEXOLOGY, (Apr. 30, 2014), <https://www.lexology.com/library/detail.aspx?g=89971c89-6c32-48ea-9855-a3f2468bc9b3>.

³⁵³ See Ehlermann, Atanasiu, *supra* note 7, at 184.

³⁵⁴ See EURLEX, *supra* note 349.

³⁵⁵ *Id.*; see also Cook, *supra* note 346, at 230.

were treated as 'excluded restrictions'³⁵⁶ However, the 2004 TTBER did exempt agreements which allowed the licensor to legitimately provide for the termination of the agreement if the licensee contested the validity of the IPRs specifically covered by the license agreement ('termination-on-challenge' clause).³⁵⁷ Today, under the new TTBER, 'termination-on- challenge' provisions benefit from the exemption of the application of Article 101 TFEU merely in the context of exclusive licensing agreements which fulfil the TTBER markets share threshold.³⁵⁸

A last notable change concerns the TTBER Guidelines, which finally recognize the pro-competitive qualities of technology pools and further develop safe harbour rules to protect them.³⁵⁹

3.2.1. *Scope of Application*

The 2014 TTBER establishes the core principles for the assessment of technology transfer agreements under Article 101.³⁶⁰ In substance, the TTBER gives an automatic exemptions from EU competition rules to licensing agreements that fulfil the conditions set out in it, on the presumption that such agreements are compatible with Article 101(3).³⁶¹ Indeed, as discussed in the second chapter of this work, Article 101(3) provides that under certain conditions the prohibition contained in Article 101(1) may be declared inapplicable. For example, the prohibition does not apply when an agreement between two or more undertakings create objective economic benefits to consumers.³⁶² Indeed, in such instances, pro-competitive effects of the agreement outweigh the negative effects on competition.³⁶³ The standards set forth in the TTBER must be applied under a case-by-case approach, evaluating all the specific circumstances of each arrangement.³⁶⁴ Moreover, in the assessment of license agreements under

³⁵⁶ Sophie Lawrance, *The Competition Law Treatment of No-Challenge Clauses in Licence Agreements: an Unfortunate Revolution?*, Journal of Intellectual Property Law & Practice, (2014), Vol. 0, No. 0, (Sept.12, 2014), at 2.

³⁵⁷ *Id.*

³⁵⁸ See Cook, *supra* note 333, at 230.

³⁵⁹ See *generally* Commission Staff Working Document Impact Assessment Accompanying the Document Commission Regulation on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of technology transfer agreements, Brussels, (May 31, 2017), <https://www.sipotra.it/old/wp-content/uploads/2017/06/Report-on-Competition-Policy-2016-Accompanying-the-document.pdf>.

³⁶⁰ See TTBER, *supra* note 47, at §1.

³⁶¹ See Commission Staff Working Document, *supra* note 359, at 9.

³⁶² See Pazzi, *supra* note 343, at 153.

³⁶³ See TTBER, *supra* note 47, at §1; see also Commission Staff Working Document, *supra* note 359, at 9.

³⁶⁴ *Id.*

Article 101, it must be considered all *ex ante* investments in the licensed technology made by the parties and the risks relating thereto.³⁶⁵

The TTBER further provides that when an agreement does not *per se* restrict competition, it is necessary to examine if it actually has restrictive effect on competition.³⁶⁶ In determining that, one has to wonder whether the license agreement restricts actual or potential competition that would have existed without the contemplated agreement.³⁶⁷ If so, the agreement may be caught by Article 101(1). More specifically, the TTBER provides two steps of analysis. The first step relates to the evaluation of the agreement impact on inter-technology competition, while the second one relates to the anticompetitive impact on intra-technology competition.³⁶⁸ Moreover, the anti-competitive effects on competition must be substantial appreciable.³⁶⁹ In other words, according to the EC, at least one of the party has or obtains a significant market power over the marketplace and the agreement at issue contributes “to the creation, maintenance or strengthening of that market power or allows the parties to exploit such market power.”³⁷⁰

As previously discussed, the TTBER includes within the term ‘technology’ patents, know-how, utility models, software copyright and design and certain neighbouring types of IP, or any combination of these.³⁷¹ Moreover, the TTBER covers only licensing agreements entered into between two undertakings; by contrast, arrangements concluded by more than two undertaking are not covered by the TTBER.³⁷²

In the light of the foregoing, agreements may thus relate to the subscription of contract products or to the assignment of technology rights between two

³⁶⁵ *Id*; see also Christina Karlia-Palomäki, *The Block Exemption Regulation Concerning the Transfer of Technology from the Viewpoint of Small and Medium Size Enterprises*, University of Helsinki (2016), at §1.

³⁶⁶ Commission Staff Working Document Guidance on restrictions of competition “by object” for the purpose of defining which agreements may benefit from the De Minimis Notice Accompanying the document Communication from 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 (De Minimis Notice), Brussels, (June 25, 2014), at 9, http://ec.europa.eu/competition/antitrust/legislation/de_minimis_notice_annex.pdf. (Accordingly, restrictions of competition by object are those that by their very nature restrict competition. More specifically, “these are restrictions which in the light of the objectives pursued by the Union competition rules have such a high potential for negative effects on competition that it is not necessary for the purposes of applying Article 101(1) to demonstrate any effects on the market (15). Moreover, the conditions of Article 101(3) are unlikely to be fulfilled in the case of restrictions by object.”) (*Id* at 3).

³⁶⁷ *Id*.

³⁶⁸ *Id*.

³⁶⁹ *Id*.

³⁷⁰ *Id*.

³⁷¹ See Nicolson et al., *supra* 71 note, at 13; see also Richard Eccles, *The New EC Technology Transfer Agreements Block Exemption Regulation*, ICLG, Bird & Bird LLP, (2005), at 1, <https://www.twobirds.com/~media/pdfs/news/articles/2014/the-new-ec-technology-transfer-agreements-block-exemption-regulation.pdf?la=en>.

³⁷² See TTBER, *supra* note 47, at §1.

undertakings for the purpose of such products, where part of the risk of exploitation remains with the licensor.³⁷³ In addition, licensing sometimes occurs within the context of other categories of agreements such as R&D agreements.³⁷⁴ However, it is now clarified that the TTBER will apply only if the block exemption regulation on R&D agreements and the block exemption regulation on specialization agreements are not applicable.³⁷⁵

Finally, with regard to vertical agreements, the TTBER establishes that “agreement(s) between licensor and licensee is subject to the TTBER whereas agreements concluded between a licensee and buyers of the contract products are subject to Regulation (EU) No 330/2010 and the Guidelines on Vertical Restraints.”³⁷⁶ Vertical agreements are agreements entered into two or more undertakings at different levels of the production and distribution process. Given that a licensee, selling products incorporating the licensed technology, is a supplier for the purposes of Regulation the TTBER and the Vertical Block Exemption Regulation (hereinafter ‘VBER’) are closely related.³⁷⁷ For instance, the TTBER further establishes that does not longer cover copyright right on software for mere reproduction and distribution of the copyrighted work.³⁷⁸ Indeed, “such agreements do not concern the licensing of a technology to produce but are more akin to distribution agreements”, thus falling within the application of the VBER.³⁷⁹

3.2.2. Market Share Threshold: The Extension of ‘Safe Harbour’

Only agreements between parties with market share that satisfy the market share threshold provided by the TTBER can be automatically excepted.³⁸⁰ Accordingly, the TTBER establishes that:

[...] the safe harbour of the TTBER, is subject to market share thresholds, confining the scope of the block exemption to agreements that although they may be restrictive of competition can generally be presumed to fulfil the conditions of Article 101(3) of the Treaty.³⁸¹

³⁷³ See Eccles, *supra* note 371, at 1.

³⁷⁴ European Comm’n Press Release No 24/208, Antitrust: Commission Adopts Revised Competition Regime for Technology Transfer Agreements – Frequently Asked Questions, Brussels, (March 21, 2014), http://europa.eu/rapid/press-release_MEMO-14-208_en.htm.

³⁷⁵ *Id.* Otherwise it will be applied Regulation (EU) No 1218/2010 for R&D agreements and Regulation (EU) No 1217/2010 for specialization agreements.

³⁷⁶ See TTBER, *supra* note 47, at § 3.2.6.2.

³⁷⁷ *Id.*; see also Commission Regulation (EU) No 330/2010 of 20 April 2010 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, O.J. (L 102), (2010).

³⁷⁸ See Pazzi, *supra* note 343, at 156.

³⁷⁹ See TTBER *supra* note 47, at §3.3.2.

³⁸⁰ Ehlermann & Atanasiu, *supra* note 17, at 152.

³⁸¹ See TTBER *supra* note 47, at §3.3., recital 79.

All other agreements are subject to individual scrutiny under Article 101.³⁸² In particular, agreements that do not satisfy the market share threshold cannot be presumed to be incompatible with Article 101.³⁸³ In those circumstances, a market share analysis is a necessary premise for a proper analysis of the competition issues that may arise.³⁸⁴

The TTBER further provide that the application of the market share threshold for the purpose of the safe harbour depends also on whether the agreement is concluded between competitors or non-competitors.³⁸⁵ The threshold are set at 20% combined market share of the parties for agreements between competitors and at 30% for each party on the relevant market(s) in the case of agreements between non-competitors.³⁸⁶ The latter normally impose lower risk to competition.³⁸⁷ In determining the market for licensed product, both actual and potential competition have to be taken into account.³⁸⁸ Moreover, if the agreement involves the license technology only actual competition will be evaluated.³⁸⁹

In case of technology markets, the relevant market share is the licensed technology's footprint on downstream products produced with the licensed technology.³⁹⁰ With regard to products market, the licensee's market share is calculated on the basis of the licensee's sales of products incorporating the licensor's competing products, i.e. the total sales of licensee on the product market in question.³⁹¹

³⁸² *Id*; see also Ehlermann & Atanasiu, *supra* note 17, at 152.

³⁸³ *Id*; see also Alexandra Kamerli et al., DLA Piper, *Proposed Amendments to EU Law on Technology Transfer Agreements*, (March 2013), at 1. ("The current TTBER states that the parties' shares on the downstream market must be assessed as it is a proxy for their power on the technology market.").

³⁸⁴ See TTBER, *supra* note 47, at §3.3., recital 79; see also Renato Nazzini, *Online Platforms and Antitrust: Where Do We Go From There*, Italian Antitrust Law Review, Vol.2, No.1, (2018), at 5.

³⁸⁵ *Id* at §3.3., recital 80.

³⁸⁶ *Id*, at recital 84-85. ("An agreement between non-competitors is covered if the market share of each party does not exceed 30 % on the affected relevant technology and product markets. [...] here the parties become competitors within the meaning of Article 3(1) TTBER [...]; the 20% market share threshold will apply from the point in time when they became competitors."); see also Eccles, *supra* note 371, at 1.

³⁸⁷ Ehlermann & Atanasiu, *supra* note 17, at 152.

³⁸⁸ *Id*.

³⁸⁹ *Id*.

³⁹⁰ *Id* at 186; see also TTBER, recital 88. ("Where the parties are competitors on the technology market, sales of products incorporating the licensee's own technology must be combined with the sales of the products incorporating the licensed technology").

³⁹¹ *Id*, at recital 91. ("Where the licensor is also a supplier of products on the relevant market, the licensor's sales on the product market in question must also be taken into account." Moreover, "in the calculation of market shares for product markets, however, sales made by other licensees are not taken into account."). See also Example 3 ("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, with A's technology.").

3.2.3. Hardcore Restrictions and Clauses on Passive Sales Between Licensees

The hardcore restrictions have been drafted on presumption that they are almost always anticompetitive.³⁹² As previously stated, the hardcore restrictions are a black list of conducts restrictive of competition whose presence in a licensing arrangement would cause the entire agreement to be excluded from the safe harbour.³⁹³ The TTBER distinguish between license agreements occurred between competitors (i.e. horizontal) and non-competitors (i.e. vertical).

As for licensing between competitors, the first hardcore restrictions provided by Article 4 (1) are (i) price fixing practices, (ii) reciprocal output limitations and (iii) market allocation clauses. Price fixing conducts refer to restrictions on either party's ability to determine the products price when selling to third parties.³⁹⁴ Accordingly, price coordination on a product market may be occurred through a cross licensing agreement between competitors who run royalties on the licensed product.³⁹⁵ An output restriction is a limitation on how much a party may produce and sell, thereby reducing output in the market.³⁹⁶ Finally, according to the TTBER, hardcore restrictions of market and costumer allocation between competitors refer to agreements "whereby competitors share market and costumers have as their object restriction of competition."³⁹⁷ For instance, competitors may reciprocally agree not to produce or to sell in certain territories or to certain costumers reserved for the other party.³⁹⁸

Notably, the TTBER creates a special category of non-reciprocal agreements for licensing between competitors.³⁹⁹ The TTBER treats non-reciprocal agreements more favorably (or less strictly) from a competitive point of view than reciprocal agreement.⁴⁰⁰ To this extent, the TTBER provides an

³⁹² *Id* at §3.4., recital 94. ("Article 4 of the TTBER contains a list of hardcore restrictions of competition. The classification of a restraint as a hardcore restriction of competition is based on the nature of the restriction and experience showing that such restrictions are almost always anti-competitive.").

³⁹³ *Id*. (Accordingly, "when a technology transfer agreement contains a hardcore restriction of competition, the agreement as a whole falls outside the scope of the block exemption."); *see also* Ehlermann & Atanasiu, *supra* note 17, at 222.

³⁹⁴ *See* Eccles, *supra* note 371, at 3.

³⁹⁵ Gonca Gülfem Bozdog, *Technology Transfer Block Exemption Regulation (240/96) and Guidelines in Terms of Hardcore Restrictions and Excluded Restrictions*, Gazi Üniversitesi Hukuk Fakültesi Dergisi, (2014), at 82.

³⁹⁶ *See* TTBER, *supra* note 47, at §3.4., recital 103.

³⁹⁷ *Id*, at recital 105.

³⁹⁸ *Id*.

³⁹⁹ *See* Ehlermann & Atanasiu, *supra* note 17, at 223.

⁴⁰⁰ *Id*; *see also* Maurits Dolmans & Anu Piilola, *The Proposed New Technology Transfer Block Exemption-Is Europe really better off than with the current regulation?*, World Competition 26(4), 54-565, (2003), at 549, ("The clauses listed in Article 5 such as non-reciprocal output limitations on a competing licensee, are neither blacklisted nor block exempted. There is no presumption for or against illegality and they require an individual assessment of their pro- and anti-competitive effects.").

exception to Article 4(1) (c), whereby the licensor in a non-reciprocal agreement is allowed to offer the licensee an exclusive license. On the basis of such agreement, the licensee can produce and sell the contract products in a particular territory on the basis of the licensed technology “without the licensor himself producing goods in that territory or selling the contract goods from that territory.”⁴⁰¹ Such exclusive license will almost always fall outside Article 101(1), or will satisfy the conditions of Article 101(3).⁴⁰² Finally, the TTBER includes within hardcore restrictions between competitors a prohibition on licensors restricting the licensee’s ability to carry out R&D independently or to use their own technology.⁴⁰³

On the other hand, with regard to agreements between non-competitors, the general hardcore restrictions include price fixing and territorial restrictions on passive sale by the licensee. Under the TTBER, the latter refers to agreements and concerted practices “that have as their direct or indirect object the restriction of passive sales by licensees of products incorporating the licensed technology.”⁴⁰⁴

The 2004 TTBER old provision that allowed the licensor to restrict passive sales for a two-year period into an exclusive territory or exclusive customer group allocated by the licensor to another licensee, has been deleted in the new regime.⁴⁰⁵ However, the TTBER specifies that, exceptionally, it may be possible for such restrictions to be compatible with competition law requirements if they are objectively necessary for a licensee to do significant investments to develop a start-up and penetrate a new market.⁴⁰⁶ Given the importance of the passive sale, the new regime sets an important change and eliminates a fundamental exceptional permission for a restriction on passive sales within the territory of

⁴⁰¹ See Ehlermann & Atanasiu, *supra* note 17, at 223; see also TTBER, *supra* note 47, at § 3.4., recital 107.

⁴⁰² *Id*; see also Slaughter & May, *supra* note 268, at 14. (Indeed, “in such case the licensee will merely be doing what the licensor was entitled to do and hence that restriction, on its own, cannot be viewed as anticompetitive.”).

⁴⁰³ *Id*; see also TTBER, *supra* note 47, Article 4(1)(d), recital 115-116. (“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 research and development with third parties.” [...] “the licensee must also be unrestricted in the use of its own competing technology rights provided that in doing so it does not make use of the technology rights licensed from the licensor [...] 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 produces, how much it produces or sells and the price at which it sells [...]”).

⁴⁰⁴ *Id*, Article 4(2)(b), recital 119.

⁴⁰⁵ See 2004 TTBER, *supra* note 342, Article 4(2)(b)(ii).

⁴⁰⁶ See TTBER Guidelines, *supra* note 342, at §126 (“Where substantial investments by the licensee are necessary to start up and develop a new market, restrictions of passive sales by other licensees into such a territory fall outside Article 101(1) for the period necessary for the licensee to recoup those investments”. The Guidelines state that a period of two years would usually be enough for the licensee to recoup such investment, whilst also leaving the door open for the possibility of a longer protection period if it can be justified.”).

EU.⁴⁰⁷ Several stakeholders appreciate this last change of orientation, arguing that it would bring the TTBER in line with the VBER, thereby removing those structural disparities that constituted an obstacle for the harmonization of the two guidelines.⁴⁰⁸ By contrast, others claim that the new provision might be act as a disincentive to license out and that the TTBER and VBER don't need to be aligned, as the agreements they are covered by their reciprocal and different block exemption regulations.⁴⁰⁹

3.2.4. *Excluded Restrictions: Grant-Back Provisions and Non-Challenge Clauses*

The EC also created in Article 5 a short list of *prima facie* 'excluded restrictions' which, unlike the hardcore restrictions, do not prevent the application of the block exemption to the remainder of the agreement.⁴¹⁰ Thus Article 5 is based on the assumption of severability of the excluded restrictions from the rest of the agreement.⁴¹¹ The *ratio* of such provision is to avoid to block exempt agreements that may have negative impacts on innovation, thereby reducing incentives to innovate.⁴¹² In this regard, two important changes has been made as compared with the 2004 TTBER.

The first main change deals with the exclusive grant-back obligations, under which the license is obligated to assign or to license back to the licensor on an exclusive basis the improvements of the licensed technology.⁴¹³ The EC removed the distinction several vs non several improvements and adopted a stricter approach towards grant-back clauses in general.⁴¹⁴ Today all exclusive grant-back clauses are treated equally and are not covered by the block exemption.⁴¹⁵ As a consequence, they require an individual assessment by companies as to whether they are in compliance with competition law.⁴¹⁶ The rest of the agreement can however still benefit from the safe harbour.⁴¹⁷ The *ratio* of this change is to encourage the licensees to innovate and develop their own

⁴⁰⁷ See Eccles, *supra* note 371, at 2.

⁴⁰⁸ See Commission Staff Working Document, *supra* note 366, at 9.

⁴⁰⁹ *Id.*

⁴¹⁰ See Ehlermann & Atanasiu, *supra* note 17, at 224.

⁴¹¹ See Eccles, *supra* note 371, at 3.

⁴¹² See TTBER, *supra* note 47, Article (5), recital 128.

⁴¹³ *Id.*, at recital 129.

⁴¹⁴ Micaela Weije, *Grant Back Clauses Development from Regulation 772/2004 to 316/2014 Implications for the Industry*, Lund University, (Fall 2015) at 5. ("The motive to the change is not clearly expressed in the guidelines or by the Commission through other communication. There have been differing opinions whether or not the change will have a positive or negative impact on the market").

⁴¹⁵ See European Commission Press Release, *supra* note 374, at 4.

⁴¹⁶ See Commission Staff Working Document, *supra* note 366, at 17.

⁴¹⁷ *Id.*

technologies.⁴¹⁸ On the other hand, all non-exclusive grant back are still covered by the TTBER.⁴¹⁹ In fact, it is now generally accepted that grant-back clauses may have pro-competitive effects.⁴²⁰ For instance, Attorney Paul Lugard highlights that grant-back provisions “may reduce the threat that licensees use the technology to leapfrog the licensor's technology, thus enabling licensing agreements that would otherwise not have been entered into.”⁴²¹ In addition, grant-back provisions may also allow the licensors to collect all the improvements and disseminating them to all licensees.⁴²² However, all these positive effect are not sufficient to contrast the licensee' reduction of incentives to innovate.⁴²³ Accordingly, decrease in innovation may lead to negative effects on competition and, in the long run, to a reduction of consumer choice.⁴²⁴ However, it seems reasonable to ask whether the new regime carried out creates a fair balance between the interests of licensors and licensees.

The other main change has been made in relation to the ‘termination-on-challenge’ clauses, which allow the licensor to terminate the agreement if the licensee challenges the validity of the licensed IPRs.⁴²⁵ Licensors are often willing to include such provisions within agreements, to prevent situations in which the licensee prefers to try to knock out the licensed IPRs rather than continuing to pay royalties under the license agreement.⁴²⁶ In the previous Regulation the termination clauses, unlike the non-challenge clauses, were covered by the safe harbour.⁴²⁷ Subsequently, in the context of the recent competition cases, the question has been raised by the courts of the Member States as to whether this regime was still in line with the competition law system.⁴²⁸ The TTBER point out that “[s]uch a termination right can have the same effect as a non-challenge

⁴¹⁸ See TTBER, *supra* note 47, Article (5), recital 129 (“An obligation to grant the licensor an exclusive license to improvements of the licensed technology or to assign such improvements to the licensor is likely to reduce the licensee's incentive to innovate since it hinders the licensee in exploiting the improvements, including by way of licensing to third parties.” [...] “An exclusive grant back is defined as a grant back which prevents the licensee) from exploiting the improvement.”).

⁴¹⁹ See Commission Staff Working Document, *supra* note 366, at 18.

⁴²⁰ Paul Lugard, *The New EU Technology Transfer Regime Like a Rolling Stone?*, Digiworld Economic Journal, No. 95, (3rd Q. 2014), at 55. See also generally Pierre Regibeau & Katharine Rockett, *Assessment of Potential Anticompetitive Conduct in the Field of Intellectual Property Rights and Assessment of the Interplay Between Competition Policy and IPR Protection*, Report Prepared for the European Commission, (Nov. 2011), http://ec.europa.eu/competition/consultations/2012_technology_transfer/study_ipr_en.pdf.

⁴²¹ See Lugard, *supra* note 420, at 53.

⁴²² *Id.*

⁴²³ *Id.*

⁴²⁴ *Id.*, at 55.

⁴²⁵ See Eccles, *supra* note 371, at 3.

⁴²⁶ Matthew Warren & Osman Zafar, *Technology Licensing and Settlements of IP Disputes: Implications of the European Commission's New Regime*, Journal of European Competition Law & Practice, (May 12, 2014), at 2.

⁴²⁷ Commission Staff Working Document, *supra* note 366, at 17.

⁴²⁸ *Id.*

clause, in particular where the licensee has already incurred significant sunk costs for the production of the contract products or is already producing the contract products.”⁴²⁹

To this extent, the EC’s position on non-challenges clause remains unchanged.⁴³⁰ The terminate-on-challenge clauses are still exempted only in exclusive license agreements to avoid the risk that licensors find themselves locked into an agreement with an exclusive licensee which no longer makes efforts to improve, produce and commercialize the licensed technology.⁴³¹ During the debate following the publication of the draft changes, Microsoft pointed out that the licensor’s right to terminate the agreement where the licensee disputes the validity of the licensed IPRs should always be allowed, unless the licensed titles constitute essential patents, i.e. patents essential for compliance with a standard.⁴³² By contrast, terminate-on-challenge clauses in non-exclusive licensing agreements are no longer protected and must now be individually assessed.⁴³³

By automatically exempting termination clauses only in cases of exclusive licensing, the EC seeks to find proper balance the public interest in encouraging out-licensing and the public interest in eliminating invalid IP rights.⁴³⁴ The TTBER further establishes that such clauses are unlikely to be enforceable where the licensed IP is either standard essential or commercially essential.⁴³⁵ With the new regime, licensees have now more freedom to challenge the validity of the licensed IP to negotiate lower royalties.⁴³⁶ On the other hand, licensors exploiting through exclusive arrangements are reassured that they are contractually

⁴²⁹ See TTBER, *supra* note, 47, Article 5(1)(b), recital 136; see also Commission Staff Working Document, *supra* note 366, at 17- (“In particular it was observed that “in cases involving standard essential patents where the licensee cannot technically produce a standard compliant product without the licensed standard essential patent, a termination clause in fact amounts to an indirect obligation not to challenge the validity of that IP right.”).

⁴³⁰ According to the TTBER Article 5(1)(b), recital 134 “the reason for excluding non-challenge clauses from the scope of the block exemption is the fact that licensees are normally in the best position to determine whether or not an intellectual property right is invalid.”

⁴³¹ See Warren & Zafar, *supra* note 426, at 2.

⁴³² Di Marco & Lo Bue, *Trasferimenti di Diritti Tecnologici, Accordi Transattivi e Aggregazioni di Brevetti nel Regolamento (UE) n. 316/2014*, FEDERALISMI, (2015), at 8; see also Public Consultation on Proposed Technology Transfer Package, Microsoft Response, (May 17, 2013), available at http://ec.europa.eu/competition/consultations/2013_technology_transfer/microsoft_en.pdf.

(“When a licensee challenges the validity of the licensed intellectual property, it strikes at the very subject matter of the agreement and potentially depriving the licensor of the right to respond by terminating the license has serious consequences for both existing and future license agreements.”).

⁴³³ See Warren & Zafar, *supra* note 426, at 2.

⁴³⁴ *Id*; see also Lawrance, *supra* note 356, at 2.

⁴³⁵ *Id*; see also TTBER, *supra* note 47, recital 180.

⁴³⁶ *Id*, at 2.

protected from any ‘lock-in’ with a hostile licensee who is challenging the validity of the licensed IP.⁴³⁷

3.3. Application Outside the Scope of the Block Exemption

Agreements that fall outside the block exemption are subjected to individual assessment, as any other licensing arrangements, under Article 101.⁴³⁸ The TTBER recalls that:

there is no presumption of illegality of agreements that fall outside the scope of the block exemption provided that they do not contain hardcore restrictions of competition.⁴³⁹

Accordingly, license agreements are subject to a detailed analysis within the legal and economic context in which they occur to determine their impact on competition.⁴⁴⁰ As a general matter, both courts and enforcement agencies recognize the pro-competitive benefits of IP licensing.⁴⁴¹ However, anti-competitive effects may arise where agreements restrict competition between the parties or between any of the parties and third parties.⁴⁴² In addition, in certain circumstances, license agreements may encourage collusive behaviors on the market or create and maintain barriers to entry or expansion of rivals.⁴⁴³ License agreements may also, by imposing contractual restraints on licensees, restrict competition that would have otherwise existed in the absence of such restraints.⁴⁴⁴ In the next section are examined the guidelines provided by TTBER on the application of Article 101 to various types of restraints and practices that are commonly included in license arrangements, such as royalty restraints, field-of-use restraints, tying and bundling and so forth.⁴⁴⁵ For each practice are discussed both potential pro-competitive and anti-competitive effects.

⁴³⁷ *Id*; see also Josef Drexler, *Research Handbook on Intellectual Property and Competition Law*, Edward Elgar Publishing, (May 31, 2010), at 112. (“Many of these may be viewed as commercially indispensable to induce licensors to license their technology in the first place. Many of these contractual restrictions do not amount to restrictions on competition but some may take a form that raises competition concerns.”).

⁴³⁸ See TTBER, *supra* note 47, at §4.1., recital 156.

⁴³⁹ *Id*. (“In particular, there is no presumption that Article 101(1) applies merely because the market share thresholds are exceeded. Individual assessment [...] is always required.”).

⁴⁴⁰ See Ehlermann & Atanasiu, *supra* note 17, at 189.

⁴⁴¹ See Anderman, *supra* note 262, at 211.

⁴⁴² *Id*; see also TTBER, *supra* note 47, recital 10.

⁴⁴³ See Baumgartner, *supra* note 5, at 30.

⁴⁴⁴ See Ehlermann & Atanasiu, *supra* note 17, at 190.

⁴⁴⁵ TTBER, §4.2., recital 181 (“This section deals with various types of restraints that are commonly included in licence agreements. Given their prevalence it is useful to provide guidance as to how they are assessed outside the safe harbour of the TTBER.”).

3.3.1. Royalty Obligations

The parties to a license agreement are normally free to determine royalties without being caught by Article 101. This principle applies to both competitors and non-competitors.⁴⁴⁶ Royalties may take the form of lump sum payments, a percentage of the selling price or a fixed amount for each product incorporating the licensed technology.⁴⁴⁷

In agreements between competitors, royalty obligations may raise antitrust concerns only where they are misappropriated and used for distinguished price fixing practices, which fall within hardcore restrictions under Article 4(1)(a) TTBER.⁴⁴⁸ Accordingly, reciprocal running royalties between competitors in circumstances where license is a sham (i.e. its purpose is the prevention of an integration of complementary technologies without having any procompetitive aim) constitute hardcore restrictions.⁴⁴⁹ It is also hardcore restriction where royalties extend to products manufactured solely with the licensee's own technology.⁴⁵⁰ In addition, Article 101(1) may also apply to royalties which are "clearly disproportionate compared to the market value of the license and where such royalties have a significant impact on market price."⁴⁵¹

Outside the scope of the Block Exemption, royalty obligations between non-competitors may come within the application of Article 101(1) where there are appreciable foreclosure effects (e.g. when royalties extend also to products produced with third party technology).⁴⁵²

Notwithstanding the fact that the Block Exemption only applies as long as the technology rights are valid and in force, the TTBER establishes that "parties can normally agree to extend royalty obligations beyond the period of validity of the licensed IPRs without falling foul of Article 101(1) TFEU."⁴⁵³ Thus what happens if a patent is held invalid? In the case *Genentech v Hoechst*,⁴⁵⁴ concerning a long-standing patent dispute relating to a license agreement, the ECJ ruled that Article 101(1) does not prohibit the enforcement of a royalty obligation in a license agreement even if the licensed right is declared invalid.⁴⁵⁵

⁴⁴⁶ *Id.*

⁴⁴⁷ *Id.*, at recital 184.

⁴⁴⁸ *Id.*; see also Baumgartner, *supra* note 5, at 30.

⁴⁴⁹ See TTBER, *supra* note 47, at §4.2, recital 185.

⁴⁵⁰ *Id.*

⁴⁵¹ *Id.*

⁴⁵² See Slaughter & May, *supra* note 268, at 14.

⁴⁵³ TTBER, recital 187.

⁴⁵⁴ Case 567/14 *Genentech Inc. v Hoechst GmbH and Sanofi-Aventis Deutschland GmbH*, ECLI:EU:C:2016:52, (2016).

⁴⁵⁵ *Id.*, at 43. (Holding that "in the light of the foregoing considerations, the answer to the question referred is that Article 101(1) TFEU must be interpreted as not precluding the imposition on the licensee, under a licence agreement such as that at issue in the main proceedings, of a requirement to pay a royalty for the use of a patented technology for the entire period in which that agreement was in effect, in the event of the revocation or non-infringement of a licenced

While recent case law had emphasized that licensees must remain free to challenge licensed IPRs, this ruling shifts the balance back in favor of licensors, by making clear that they should pretend the payment of royalties until termination of any license.⁴⁵⁶

3.3.2. *Exclusive Licensing and Sale Restrictions*

The TTBER makes distinction between exclusive licenses, i.e. restrictions related to the production on the basis of the licensed technology, and sales restrictions, i.e. restrictions on the sale of products incorporating the licensed technology.⁴⁵⁷ The two restrictions may be combined.⁴⁵⁸ Indeed, exclusive or sole licensing is often accompanied by sales restrictions that limit the freedom of the parties as to where they may sell products.⁴⁵⁹ Where the license is worldwide, the licensor leaves the market, whereas in case of territorial license the licensor abstains from producing goods within a given territory (e.g. a Member State).⁴⁶⁰

As mentioned above, exclusive licenses are likely to rise concerns only if the licensee has significant market power over the marketplace. The TTBER defines 'exclusive license' as an agreement under which the licensor itself is not permitted to produce on the basis of the licensed technology rights, nor to license the licensed technology rights to third parties.⁴⁶¹ Thus, the licensee is the only one allowed to produce on the basis of the licensed technology rights.⁴⁶² The block-exemption covers non-reciprocal exclusive licensing between competitors,

patent, provided that the licensee was able freely to terminate that agreement by giving reasonable notice.”).

⁴⁵⁶ Advocate General Wathelet emphasized that “Article 101 TFEU does not preclude effect being given, in the event of revocation or non-infringement of patents protecting a technology, to a licence agreement which requires the licensee to pay royalties for the sole use of the rights attached to the licensed patents where, first, the commercial purpose of the agreement is to enable the licensee to use the technology at issue while averting patent litigation and, secondly, the licensee may terminate the licence agreement by giving reasonable notice, even in the event of revocation or non-infringement.” (See Opinion of Advocate General Wathelet, Case C-567/14 *Genentech Inc. v Hoechst GmbH and Sanofi-Aventis Deutschland GmbH*, (March 17, 2016) at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A62014CC0567>).

⁴⁵⁷ See TTBER, *supra* note 47, at §4.1., recital 189; see also Ehlermann & Atanasiu, *supra* note 17, at 191.

⁴⁵⁸ See Ehlermann & Atanasiu, *supra* note 17, at 191.

⁴⁵⁹ *Id.*, see also TTBER, §4.1., recital 191 and Pazzi, *supra* note 343, at 156. The TTBER reformulated the notions of 'exclusive' or 'sole' licenses order to clarify the two concepts, as opposed to 'sale restrictions.' In fact, an 'exclusive licence' means that the licensor neither can produce on the basis of the licensed technology rights, nor can license it out to third parties. The license is a 'sole licence' where the licensor undertakes only not to licence third parties to produce inside the Member State or the territory in question.

⁴⁶⁰ TTBER, §4.1., recital 193.

⁴⁶¹ TTBER, recital 190. (“An ‘exclusive licence’ means that the licensor itself is not permitted to produce on the basis of the licensed technology rights, nor is it permitted to license the licensed technology rights to third parties, in general or for a particular use or in a particular territory.”).

⁴⁶² *Id.* (“This means that, in general or for that particular use or in that particular territory, the licensee is the only one allowed to produce on the basis of the licensed technology rights.”).

whereas reciprocal exclusive licensing between competitors is identified as hardcore restriction.⁴⁶³

In the case of non-reciprocal exclusive licensing between competitors, where the licensor has a limited market position on the product market or lacks the resources to effectively exploit the technology in the licensee's territory, the agreement is unlikely to infringe Article 101(1).⁴⁶⁴ By contrast, competition issues may arise if the parties have a significant degree of market power and the agreement reduces the competition that would have existed otherwise between the parties in the absence of the agreement.⁴⁶⁵

Exclusive licensing between non-competitors are often necessary to induce the licensee to invest in the licensed technology, especially when the latter has to make large investments to develop the product and bring it to market.⁴⁶⁶ For these reasons, such agreements usually fulfil the conditions of Article 101(3) and the EC will intervene only in exceptional circumstances.⁴⁶⁷ For instance, where a dominant licensee obtains an exclusive license and the licensed technology constitutes a real source of competition on the market, the agreement may foreclose third party licensees, raise barriers to entry and allow licensees to maintain its market power.⁴⁶⁸ In such circumstances, the exclusive license is likely to be caught by Article 101(1) TFUE.

Also the treatment of sales restrictions depends on the distinction between competitors and non-competitors. Accordingly, restrictions on active and passive sales in a reciprocal agreement between competitors are generally considered market sharing and constitute hardcore restrictions of competition under Article(4)(c) TTBER.⁴⁶⁹ Instead, the TTBER block exempts non-reciprocal agreements between competitors on active and passive sales into the exclusive territory or to the exclusive customer group reserved for the other party.⁴⁷⁰ In the case of agreements between non-competitors, the block exemption cover all active and passive sales restrictions into exclusive territory or costumer group reserved for the other party.⁴⁷¹ As regards sale restrictions on the licensor, the TTBER evidences that restrictions on active sales are often indispensable within

⁴⁶³ See Ehlermann & Atanasiu, *supra* note 17, at 19.

⁴⁶⁴ TTBER, recital 193; see also Slaughter & May, *supra* note 268, at 14 and Ehlermann & Atanasiu, *supra* note 17, at 191. ("The same is true where the location of the product capacity is of little competitive significance and where as a consequence the granting of an exclusive production right does not significantly affect the ability of the licensor to compete in the market.").

⁴⁶⁵ *Id.*, at 192.

⁴⁶⁶ TTBER, recital 194.

⁴⁶⁷ *Id.*

⁴⁶⁸ TTBER, recital 195.

⁴⁶⁹ TTBER, recital 198.

⁴⁷⁰ TTBER, recital 199-200 "The block exemption also covers restrictions on active sales into the territory or to the customer group allocated to another licensee, which was not a competitor of the licensor at the time when it concluded the licence agreement with the licensor."

⁴⁷¹ TTBER, recital 201; see also Ehlermann & Atanasiu, *supra* note 17, at 191.

the meaning of Article 101(3), to invest in the production, marketing and sale of the products incorporating the licensed technology.⁴⁷²

Generally speaking, the EC has always shown a negative attitude towards territorial restrictions in content licenses and, in particular, towards geo-blocking restrictions. Indeed, as previously mentioned, one of the main features of EU competition system is the drive to create a single and integrated market, especially in the new technological sectors in constant evolution. To this extent, in 2017 the EC published a report on the e-commerce sector inquiry where it identifies business practices that may restrict competition.⁴⁷³ Companies active in online sales activities are today under the magnifying glass of the national competition authorities and of the EC, which has investigated these issues in a recent sector survey concerning the e-commerce phenomenon, highlighting the antitrust risks related to these practices.⁴⁷⁴ In this respect, commissioner Margrethe Vestager affirmed: “certain practices by companies in e-commerce markets may restrict competition by unduly limiting how products are distributed throughout the EU. Our report confirms that. These restrictions could limit consumer choice and prevent lower prices online. At the same time, we find that there is a need to balance the interests of both online and 'brick-and-mortar' retailers. All to the benefit of consumers. Our findings help us to target the enforcement of EU competition rules in e-commerce markets.” Thus, on February 2017, the EC started a number of investigations in different sector, such as consumer electronics, video games and hotel accommodations, to see whether companies are violating EU competition law, by restricting retail prices or by excluding customers from certain offers because of their nationality or location.⁴⁷⁵ On December 2018, the EC fined Guess €40 million for anti-competitive agreements to block cross-border sales.⁴⁷⁶ Guess’s distribution agreements tried to prevent consumers from shopping in other Member States by blocking retailers from advertising and selling cross-border, thereby restricting passive sales to consumers.⁴⁷⁷ The agreements allowed Guess to partition European markets and to apply high retail prices in those areas, thus violating Article 101. Finally, this January, the EU reached a provisional agreement to facilitate sales of goods

⁴⁷² TTBER, recital 202.

⁴⁷³ Report from the Commission to the Council and the European Parliament on the E-Commerce Sector Inquiry, Brussels, (May 10, 2017), http://ec.europa.eu/competition/antitrust/sector_inquiry_final_report_en.pdf.

⁴⁷⁴ Francesco Anglani, *L'E-Commerce e i Rischi dell'Antitrust*, CORRIERE DELLA SERA, (Nov. 1, 2017), https://www.corriere.it/moda/business/17_novembre_01/ecommerce-rischi-dell-antitrust-39517c4e-befd-11e7-9a2b-0f2b2933b455.shtml?refresh_ce-cp.

⁴⁷⁵ European Commission Press Release No 17/201, Antitrust: Commission Opens Three Investigations Into Suspected Anticompetitive Practices in E-Commerce, Brussels, (Febr. 2, 2017), http://europa.eu/rapid/press-release_IP-17-201_en.htm.

⁴⁷⁶ European Commission Press Release No 18/6844, Antitrust: Commission Fines Guess €40 Million for Anticompetitive Agreements to Block Cross-Border Sales, Brussels, (Dec. 17, 2018), http://europa.eu/rapid/press-release_IP-18-6844_en.htm.

⁴⁷⁷ *Id.*

and supply of digital content and services in the EU.⁴⁷⁸ The new agreement sets a series of rules on digital contracts to tackle important obstacles to cross-border e-commerce in the EU and to better protect consumer across the EU.⁴⁷⁹ The text must now be formally adopted by the European Parliament and the Council of the EU.⁴⁸⁰

3.3.3. *Output Restrictions*

An output limitation is a contractual restriction that limits how much a party may produce and sell.⁴⁸¹ According to the TTBER, only reciprocal output restrictions in license agreements between competitors constitute a hardcore restriction under Article 4(1)(b)⁴⁸². Output restrictions on only one of the licensees or in non-reciprocal agreements or in agreements between non-competitors are block exempted, instead, up to the market share thresholds.⁴⁸³ Indeed, the case of non-reciprocal agreements completion issues may arise only if parties has significant degree of market power that is likely to distort competition.⁴⁸⁴ The TTBER further provides that, beyond the market share thresholds, Article 101(3) is likely to apply where, for example, “the licensor’s technology is substantially better than the licensee’s and the output limitation substantially exceeds the licensee’s output prior to the conclusion of the agreement”, as the effect of the restriction will be limited.⁴⁸⁵

Output limitations between non-competitors may reduce intra-technology competition between licensees.⁴⁸⁶ However, it has to be taken into account that those output limitations may have a positive impact on competition. For instance, when the licensor is also a producer he is normally free to determine the scope of the transfer of his property, even by imposing limitations on the output of the licensee.⁴⁸⁷ Finally, it is also relevant to consider whether the output restrictions are combined with exclusive territories or exclusive customer groups, as the restrictive effects are increased.⁴⁸⁸

⁴⁷⁸ European Commission Press Release No 19/742, Cross-Border E-Commerce: Commission Welcomes Agreement on Proposal to Facilitate Sales of Goods and Supply of Digital Content and Services in the EU, Brussels, (Jan. 29, 2019), http://europa.eu/rapid/press-release_STATEMENT-19-742_en.htm.

⁴⁷⁹ *Id.*

⁴⁸⁰ *Id.*

⁴⁸¹ See Baumgartner, *supra* note 5, at 233.

⁴⁸² TTBER, §4.2.3., recital 204.

⁴⁸³ See Slaughter & May, *supra* note 268, at 14.

⁴⁸⁴ See Ehlermann & Atanasiu, *supra* note 17, at 193.

⁴⁸⁵ TTBER, recital 204; see also Slaughter & May, *supra* note 268, at 14.

⁴⁸⁶ *Id.*

⁴⁸⁷ TTBER, recital 207. (Indeed, “if the licensor were not free to determine the output of the licensee, a number of licence agreements might not come into existence in the first place, which would have a negative impact on the dissemination of new technology.”).

⁴⁸⁸ TTBER, recital 206; see also Slaughter & May, *supra* note 268, at 14.

3.3.4. *Field of Use Restrictions*

Field of use restrictions are contractual restrictions which limit the licensee exploitation to one or more technical fields of application, product markets or industrial sector.⁴⁸⁹ Firstly, it is important to identify the technical features of the license product to distinguish field of use restrictions from output and costumers restrictions.⁴⁹⁰ Indeed, a single product market may encompass several fields of view.⁴⁹¹ For instance, a patented chemical should be used in producing both animal feed and antioxidants.⁴⁹² To maximize the value of an innovation, patent holders usually include field of use restrictions in licensing and cross licensing agreements.⁴⁹³

In *Windsurfing vs EC*, both the EC and the ECJ adopted a rigid and formalistic approach towards field of use restrictions.⁴⁹⁴ Accordingly, “[r]estrictions on the field of use of the products may be acceptable but only if they relate to different products belonging to different markets.”⁴⁹⁵ However, this approach has been abandoned as the TTBER provide a case-by-case approach.⁴⁹⁶

Field of use restrictions are now generally treated favorably. Indeed, they give the licensee the opportunity to acquire the license and exploit the licensed technology within its own business without being forced to pay cost of the license in fields outside its region of interest.⁴⁹⁷ Moreover, field of use restrictions may prevent infringement actions from the licensor, thereby allowing the licensee to freely develop its own technology without fearing infringement claims by the licensor.⁴⁹⁸ However, since field of use restrictions grant the inventor an effective

⁴⁸⁹ TTBER, recital 208; see also Ehlermann & Atanasiu, *supra* note 17, at 194.

⁴⁹⁰ *Id.* To distinguish field of use restrictions from costumer restriction, the TTBER highlights that the fact that a technical field use restriction may correspond to certain groups of costumer within a products market, does not necessarily imply that the restraint constitutes a costumer restriction under Articles 4(1)(c) and 4(2)(b). Similarly, since field of use restrictions do not limit the output the licensee may produce, they are not considered to be output restrictions under Article 4(1)(b).

⁴⁹¹ *Id.*

⁴⁹² Mart Blöndal, *Field-of-use Restrictions, a Comparative Approach Towards the EU and US Legal Framework*, Lund University, (2015), at §2.2.

⁴⁹³ Mar Cebrià Villar & Santiago Lòpez García, *Assessing the Impact of Field-of-Use Restrictions in Patent Licensing Agreements: The Ethical Pharmaceutical Industry in the United States, 1950–1962*, Enterprise & Society, 18(2), 282-323, (Febr, 20, 2017), at 284.

⁴⁹⁴ See also Blöndal, *supra* note 492, at 2; see also Case C-193/83, *Windsurfing International Inc. v Commission of the European Communities*, 1986, E.C.R. 611, para. 42.

⁴⁹⁵ *Id.*

⁴⁹⁶ *Id.*

⁴⁹⁷ *Id.*, at 4.

⁴⁹⁸ TTBER Guidelines, recital 212. (Indeed, “if the licensor could not 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, it would be likely to create a disincentive for the licensor to

monopoly over the market where the invention is relevant competition issues may nonetheless arise.⁴⁹⁹

Field of use restrictions between non-competitors are generally recognized as non-restrictive or efficiency enhancing.⁵⁰⁰ They promote dissemination of new technology by giving the licensor an incentive to license way parts of the technology, in fields that the licensor itself is not interested in.⁵⁰¹

With regard to agreements between actual or potential competitors, the individual assessment of field of use and product market restrictions depends on whether the agreements provide for asymmetrical or symmetrical of use restrictions.⁵⁰² According to the TTBER, the risk that the licensee will cease to be a competitive force outside the licensed field of use is higher in asymmetrical agreements, where one licensee is licensed one field of use and the other licensee is licensed another field of use.⁵⁰³ On the other hand, symmetrical field of use restrictions, whereby the parties are licensed to use each other's technologies within the same field(s) of use, are less likely to give rise to competition concerns.⁵⁰⁴

3.3.5. *Tying and Bundling*

This work analyzed so far potential anti-competitive practices falling within the application of Article 101, that prohibits any agreement or concerted practice occurring between two or more undertakings that may have the object or effect of restricting competition.⁵⁰⁵ In the next paragraph are discussed all those potential anti-competitive conducts that, if put in practice by a company enjoying a position of strength on a given market, may constitute an abuse of dominance under article 102.⁵⁰⁶ Indeed, the way in which companies exploit they IPRs may

license or would lead it to charge a higher royalty"); see also Ehlermann, Atanasiu, *supra* note 7, at 195.

⁴⁹⁹ See Blöndal, *supra* note 492, at 4.

⁵⁰⁰ Lennart Ritter, W.David Braun, *European Competition Law: a Practitioner's Guide*, Kluwer Law International; 3 edition (July 20, 2005) at 836.

⁵⁰¹ See Ehlermann & Atanasiu, *supra* note 17, at 196; see also Blöndal, *supra* note 492, at 8.

⁵⁰² See Ehlermann & Atanasiu, *supra* note 17, at 195.

⁵⁰³ *Id.*; see also TTBER, *supra* note 47, recital 213. ("A field of use restriction is asymmetrical where one party is permitted to use the licensed technology within one industrial sector, product market or technical field of use and the other party is permitted to use the other licensed technology within another industrial sector, product market or technical field of use.").

⁵⁰⁴ *Id.*

⁵⁰⁵ Slaughter & May, An Overview of the EU Competition Rules- A General Overview of the European Competition Rules Applicable to Cartels, Abuse of Dominance, Forms of Commercial Cooperation, Merger Control and State Aid, (June 2016), at 1, available at <https://www.slaughterandmay.com/media/64569/an-overview-of-the-eu-competition-rules.pdf>. As demonstrated in the previous paragraphs, Article 101(1) covers price fixing practices, market sharing cartels, exclusive dealing provisions and field of use restraints.

⁵⁰⁶ *Id.*

also rise Article 102 issues.⁵⁰⁷ Examples include: charging unreasonably high prices, refusal to supply to an existing customer and making the sale of one product conditional on the sale of another product, i.e. tying conducts.⁵⁰⁸

In the context of technology licensing, tying refers to the licensor's practice of conditioning the licensing of one technology upon the licensee taking a license for another technology or purchasing a product from the licensor or someone designated by him.⁵⁰⁹ Bundling occurs where two technologies or a technology and a product are only sold together as a package.⁵¹⁰ For instance, various patents may be tied and/or bundled together.⁵¹¹ Alternatively, a product containing a patented technology may be tied and/or bundled with another patented or unpatented product.⁵¹² In both cases, it is a condition that there is a distinct demand for each product and technology involved in the tying or bundling.⁵¹³ However, it is not required that they belong to separate products markets.⁵¹⁴ The TTBER recognizes the potential pro-competitive benefits of package licensing in certain situations. For instance, they may give rise to efficiency gains where the tied product is necessary for the efficient exploitation of the licensed technology or to ensure that the production conforms to quality standards.⁵¹⁵ However, as any other licensing agreements, anti-competitive issues may nonetheless arise. The main restrictive effects of tying and bundling is foreclosure of competing suppliers on the market of the tied and/or bundled products.⁵¹⁶ According to the TTBER, for tying agreements to produce anti-competitive effects, "the licensor must have a significant degree of market power in the tying product so as to restrict competition in the tied product."⁵¹⁷ In addition, for appreciable foreclosure effects to occur, the tie must also cover a sufficient proportion of the tied market.⁵¹⁸ To this extent, Article 102 (d) explicitly refers to the practice of tying and bundling as an example of abusive behavior of a dominant undertaking. More specifically, in *Microsoft v Commission*⁵¹⁹ the EC

⁵⁰⁷ *Id.*, at 14.

⁵⁰⁸ *Id.*; see also EC, *Abuse of a Dominant Position*, (last accessed April 15, 2019), http://ec.europa.eu/competition/consumers/abuse_en.html. (Other examples are: "depriving smaller competitors of customers by selling at artificially low prices they can't compete with and obstructing competitors in the market (or in another related market) by forcing consumers to buy a product which is artificially related to a more popular, in-demand product.").

⁵⁰⁹ TTBER, §4.2.6., recital 221.

⁵¹⁰ *Id.*

⁵¹¹ Sébastien J. Evrard et al., *International Licensing of Intellectual Property Rights- Issues Arising Under U.S., European and Japanese Competition Law*, (Fall/Winter 2008), at 24.

⁵¹² TTBER, recital 224.

⁵¹³ *Id.*; see also Ehlermann & Atanasiu, *supra* note 17, at 196.

⁵¹⁴ *Id.*

⁵¹⁵ *Id.*

⁵¹⁶ TTBER, recital 223.

⁵¹⁷ *Id.*

⁵¹⁸ *Id.*

⁵¹⁹ Case T-201/04 *Microsoft v Commission*, 2007, E.C.R. 3601.

established four elements in the presence of which tying and bundling are prohibited:

- (1) the tying and tied products are two separate products; (2) the undertaking concerned is dominant in the market for the tying product; (3) the undertaking concerned does not give customers a choice to obtain the tying product without the tied product;
- (4) the practice in question forecloses competition.⁵²⁰

In this well-known case Microsoft, that held very high market shares in the PC operating systems market for many years, conditioned the availability of the Windows client PC operating system on the simultaneous acquisition of Windows Media Player.⁵²¹ The EC found that Microsoft's tying conduct constituted abuse of dominant position under Article 102(d).

3.3.6. *Exclusive Dealing*

Under a non-compete obligation the licensee is obliged not to use third party technologies which compete with the licensed technology.⁵²² The *ratio* of such provision is to assure the licensor that its technology will not be used for the benefit of its competitors after having been transferred to the licensee.⁵²³

The EC underlines that non-compete obligations may promote dissemination of technology because they substantially reduce the risk of potential misappropriation of the licensed technology.⁵²⁴ This is particularly true in the case of know-how where, if a licensee is entitled to license competing technologies from third parties, there is a risk that the licensed know-how would be used in the exploitation of competing technologies, thereby benefitting competitors.⁵²⁵

The main competition risks presented by non-compete obligations are foreclosure on third party technologies, collusion, and the impediment of innovation as anti-competitive effect.⁵²⁶ Foreclosure effects may arise both when

⁵²⁰ *Id.*, at 859.

⁵²¹ *Id.*, at 44 (Ruling that "in the contested decision, the Commission considers that that conduct satisfies the conditions for a finding of a tying abuse for the purposes of Article 82 EC. First, it reiterates that Microsoft has a dominant position on the client PC operating systems market. Second, it considers that streaming media players and client PC operating systems constitute separate products. Third, it asserts that Microsoft does not give consumers the opportunity to buy Windows without Windows Media Player. Fourth, it contends that the tying in question restricts competition on the media players market."); see also Baumgartner, *supra* note 58, at 298-299.

⁵²² See TTBER, *supra* note 47, recital 226.

⁵²³ See Baumgartner, *supra* note 5, at 241.

⁵²⁴ *Id.*, at 242; see also TTBER, *supra* note 47, recital 244.

⁵²⁵ *Id.*

⁵²⁶ Mattias Rättzén, *The Enforceability of Non-compete Clauses in Patent License Agreements in the EU and the U.S.*, Lund University, (Summer 2013) at 7.

agreements are concluded by a single licensor with a significant market power or by a cumulative effect of agreements concluded by several licensors.⁵²⁷ Accordingly, the stronger the market position of the licensor, the higher the risk of foreclosing competing technologies.⁵²⁸ In addition, the notion of foreclosure captures situations where 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.⁵²⁹ Notably, the risk of foreclosure is particularly high where there is a limited number of potential licensees and where the license concerns a technology which serves the licensees as an input for their own use.⁵³⁰ Finally, also the existence of barriers to entry for new licensees may increase the risk of foreclosure effects.⁵³¹

On January 2017, the EC fined Qualcomm €997 million for abuse of dominant market position. The EC found that the company abused its market dominance in long term evolution baseband chipsets by concluding exclusive deal agreements to become Apple's sole supplier.⁵³² In 2011, Qualcomm signed an agreement with Apple, committing to make substantial payments to Apple on condition that the company would exclusively use Qualcomm chipsets in its "iPhone" and "iPad" devices.⁵³³ In 2013 the exclusive deal was extended to 2016. In doing so, Qualcomm prevented rivals from competing in the market.⁵³⁴ Based on a variety of qualitative and quantitative evidence, the EC found that both consumers and competition suffered as a result of Qualcomm's conduct.⁵³⁵

⁵²⁷ See TTBER, *supra* note 47, recital 229.

⁵²⁸ See Ehlerman & Atanasiu, *supra* note 17, at 198.

⁵²⁹ See TTBER, *supra* note 47, recital 229. However, in the case of foreclosing effects resulting from agreement concluded by several licensors, a seriously cumulative effect is unlikely to occur as long as less than 50 % of the market is tied.

⁵³⁰ See Baumgartner, *supra* note 5, at 241.

⁵³¹ *Id.*

⁵³² European Commission Press Release No.18/421, Antitrust: Commission Fines Qualcomm €997 Million for Abuse of Dominant Market Position, Brussels, (Jan. 24, 2018), http://europa.eu/rapid/press-release_IP-18-421_en.htm.

⁵³³ *Id.*

⁵³⁴ *Id.*

⁵³⁵ *Id.* The EC considered, among others, the following factors: the extent of Qualcomm's dominant position; the significant amounts paid by Qualcomm in exchange for exclusivity; a broad range of contemporaneous evidence that Qualcomm's payments reduced Apple's incentives to switch to rivals; the importance of Apple as a customer in the market for LTE baseband chipset suppliers: Apple accounts for a significant share of LTE chipset. By making sure that rivals had no chance to compete for any of Apple's important business, Qualcomm's conduct had an effect on the LTE baseband chipset market as a whole; and that Qualcomm did not demonstrate that the exclusivity condition created any efficiencies, which could have justified Qualcomm's practices.

3.4. The New EU Interpretative Guidelines on Technology Transfer Agreements

While TTBER is made up of a set of rules that are mandatory, the accompanying Guidelines constitute rules of soft law only.⁵³⁶ The Guidelines provide guidance on the application of the TTBER and of Article 101 outside the scope of the block exemption. Moreover, the TTBER Guidelines also deal with specific issues, including settlement agreements and technology pools. Settlement agreements constitute a legitimate way to resolve disputes.⁵³⁷ Technology pools are arrangements whereby two or more parties assemble a package of technology which is licensed to contributors of a technology pool, as well as to third parties.⁵³⁸ With particular regard to technology pools, it is notable how the revised Guidelines recognize the benefits of this kind of arrangements.⁵³⁹ The TTBER Guidelines further establish a sort of ‘soft safe harbour’ for the creation and operation of licensing pools under certain conditions.⁵⁴⁰ Patent pools that do not meet the criteria established therein, must be individually assessed to see if they comply with the requirements of Article 101(3).⁵⁴¹ The guidelines provide guidance on when this may be the case.⁵⁴²

3.4.1. Antitrust Treatment of Patent Pools

Most complex products, such as smartphones and computers, are assembled in a multitude of separate components.⁵⁴³ Each component is covered by many patents, owned by different companies which license them to create the whole product.⁵⁴⁴ Within the increasingly widespread phenomenon of patents aggregation, a leading role is played by patent pools.⁵⁴⁵

The European Union Patent Office (‘EPO’) defines patent pools as “an organizational approach in which two or more patent owners make their patents available as a bundle for a pre-defined (and openly publicized) price to any interested party.”⁵⁴⁶ Licensing out from the pool is generally a multiparty

⁵³⁶ Aldo Frignani & Massimiliano Granieri, *The Antitrust Framework for Technology Transfer Agreements and Patent Pools in the European Union*, Italian Antitrust Review, No.3 (2015), at 46.

⁵³⁷ *Id* at 16.

⁵³⁸ See Lugard, *supra* note 420, at 57.

⁵³⁹ See Slaughter & May, *supra* note 268, at 16.

⁵⁴⁰ *Id*; see also Pazzi, *supra* note 343, at 157.

⁵⁴¹ See Vinje, *supra* note 340.

⁵⁴² See Slaughter & May, *supra* note 268, at 16.

⁵⁴³ Robert P. Merges & Michael Mattioli, *Measuring the Costs and Benefits of Patent Pools*, 78 Ohio St. L.J. 281 (2017), at 281.

⁵⁴⁴ *Id*, at 283.

⁵⁴⁵ See Di Marco & Lo Bue, *supra* note 419, at 13.

⁵⁴⁶ European Commission, Report of the Expert on Patent Aggregation, Brussels, (2015), available at 6, https://ec.europa.eu/research/innovation-union/pdf/expert-groups/report_of_the_expert_group_on_patent_aggregation_-_2015.pdf.

agreements, thus agreements that establish such patent pools are not themselves covered by the Block Exemption (which covers only bilateral agreements).⁵⁴⁷ To this extent, the TTBER Guidelines provide adequate legal security for undertakings and a clear framework for the antitrust assessment of such agreements.⁵⁴⁸

According to the TTBER Guidelines, in terms of their structure, patent pools “can take the form of simple arrangements between a limited number of parties or of elaborate organizational arrangements whereby the organization of the licensing of the pooled technologies is entrusted to a separate entity. In both cases the pool may allow licensees to operate on the market on the basis of a single license.”⁵⁴⁹ The TTBER Guidelines further states that patent pools may actually produce pro-competitive effects.⁵⁵⁰ Indeed, pooling patents and making them available under a single license can significantly lower transaction costs of exchanging rights and reduce a plurality of royalties to a cumulative one.⁵⁵¹ More specifically, pools allow patent owners of minor importance to escape market isolation; on the other hand, pools allow the licensees to avoid long R&D costs and the resulting risks for the production of complex products.⁵⁵²

The TTBER Guidelines further establish that pooling arrangements must provide for fair, reasonable, and non-discriminatory (hereinafter ‘FRAND’) terms, leave contributors free to license their technologies independently and to develop competing technologies, leave parties free to challenge validity of the pooled technology, and safeguard against the exchange of sensitive information between contributors.⁵⁵³

Even if patent pools arrangements generally give rise to pro-competitive efficiencies, they may nonetheless restrict competition. The TTBER Guidelines establish, *inter alia*, new provisions with regard to licensing agreements between the technology pool and its licensees.⁵⁵⁴ In this regard, the Guidelines lay down a set of guiding principles to be applied in assessing individual restraints.⁵⁵⁵ In

⁵⁴⁷ See Cook, *supra* note 333, at 230; see also Lugard, *supra* note 407, at 58.

⁵⁴⁸ See Frignani & Granieri, *supra* note 523, at 47.

⁵⁴⁹ See TTBER Guidelines, recital 244.

⁵⁵⁰ *Id* at recital 245.

⁵⁵¹ See Vinje, *supra* note 340, at 51; see also generally Robert P. Merges, *Institutions for Intellectual Property Transactions: The Case of Patent Pools*, (Aug. 1999).

⁵⁵² See Frignani & Granieri, *supra* note 536, at 51.

⁵⁵³ TTBER Guidelines, recital 261; see also Vinje, *supra* note 340, at 51.

⁵⁵⁴ See Lugard, *supra* note 420, at 58.

⁵⁵⁵ See Frignani & Granieri, *supra* note 536, at 55; see also TTBER, *supra* note 47, recital 267. The principle are:

- 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;
- c) pools should not unduly foreclose third party technologies or limit the creation of alternative pools;
- d) the technology transfer agreements should not contain any of the hardcore restrictions listed in Article 4 of the TTBER (see section 3.4).

addition, where pool has dominant position on the market, it has to comply with some requirements to ensure that the pool is open and does not lead to anti-competitive effects on the downstream markets.⁵⁵⁶ Accordingly, “royalties and other licensing terms should be non-excessive and non-discriminatory and licenses should be non-exclusive.”⁵⁵⁷

In order to provide more legal certainty for technology pools, the TTBER Guidelines also formulate a ‘soft safe harbour’ for the creation and operation of such pools.⁵⁵⁸ The current Guidelines restrict the safe harbour on patent pools to collections of essential IPRs, and ensure that technologies that are subsequently found to be non-essential are removed from the pool.⁵⁵⁹ Essential technologies are defined as “technologies that are necessary (as opposed to merely optional) to implement the technology to which the pool pertains, and for which no substitutes exist inside the pool.”⁵⁶⁰ While the TTBER do not imply that the other pools excluded from the secure heaven of the safe harbour would necessarily be objectionable under competition law, their exclusion suggests that their defense might be significantly more difficult.⁵⁶¹ This rigid approach has been largely criticized by economic literature.⁵⁶² More specifically, some commentaries highlight that Standard Setting Organization (hereinafter ‘SSO’) oriented pools, might need to include some non-essential patents to achieve a degree of legal certainty and that pool members should be allowed to keep licensing their IP freely outside of the pool.⁵⁶³

Another important aspect that is not explicitly covered by the TTBER Guidelines is the relationship between competition and agreements to adopt standards.⁵⁶⁴ The Guidelines merely point out that there is no link between

⁵⁵⁶ See TTBER, *supra* note 47, recital 269.

⁵⁵⁷ *Id.*

⁵⁵⁸ See Lugard, *supra* note 420, at 58.

⁵⁵⁹ See Vinje, *supra* note 340, at 51; see also Regibeau & Rockett, *supra* note 420, at 98. See also TTBER, *supra* note 47, recital 262. (“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 owners;
- b) sufficient safeguards are adopted to ensure that only essential technologies (which therefore necessarily are also complements) are pooled;
- c) sufficient safeguards are adopted to ensure that exchange of sensitive information (such as pricing and output data) is restricted to what is necessary for the creation and operation of the pool;
- d) the pooled technologies are licensed into the pool on a non-exclusive basis;
- e) the pooled technologies are licensed out to all potential licensees on FRAND (97) terms;
- f) the parties contributing technology to the pool and the licensees are free to challenge the validity and the essentiality of the pooled technologies, and;
- g) the parties contributing technology to the pool and the licensee remain free to develop competing products and technology.”).

⁵⁶⁰ See Vinje, *supra* note 327, at 51.

⁵⁶¹ See Regibeau & Rockett, *supra* note 420, at 98.

⁵⁶² *Id.*

⁵⁶³ *Id.*

⁵⁶⁴ See Frignani & Granieri, *supra* note 536, at 56.

technology pools and standards; however pooled technologies often support industry standard.⁵⁶⁵ There are two types of standards: *de jure* and *de facto*.⁵⁶⁶ *De jure* standards are those approved by a recognized standard body (like the ISO, International Standard Organization for Standardization), whereas *de facto standards* are those developed by undertakings that obtained a general recognition and application over the years.⁵⁶⁷ Standardization agreements normally produce positive economic effects by encouraging development of new and improved products and substantially reducing sales costs, thereby benefitting the economy and the society at large.⁵⁶⁸ However, in a technological sector characterized by the existence of a standard, the holder of a SEP is likely to acquire a dominant position over the technology market under Article 102 TFEU: sometimes one-company dominance, more frequently collective dominance (technology pool).⁵⁶⁹ In these circumstances, in order to stem the risk of abuse by SEP holders, the EC evidenced that it is important for undertakings to grant licenses to use the patent on FRAND terms.⁵⁷⁰

In April 2014, the EC assessed two important cases, *Motorola* and *Samsung*, where SEP holders refused to license their respective patents.⁵⁷¹ In those cases the patents were not merged into technology pools by the owners, however the reasoning of the EC should be extended by analogy to future cases related to pools containing SEP.⁵⁷² In *Motorola* case, the EC considered that the company strategy of seeking and enforcement of an injunction against Apple before a German court on the basis of a smartphone (SEP) constitutes an abuse of a dominant position.⁵⁷³ Accordingly, “seeking injunctions before courts is generally a legitimate remedy for patent holders in case of patent infringements. However, the seeking of an injunction based on SEPs may constitute an abuse of a dominant position if a SEP holder has given a voluntary commitment to license its SEPs on FRAND terms and where the company against which an injunction is sought is willing to enter into a licence agreement on such FRAND

⁵⁶⁵ TTBER, recital 244.

⁵⁶⁶ *Id.*

⁵⁶⁷ See Frignani & Granieri, *supra* note 536, at 56.

⁵⁶⁸ *Id.*

⁵⁶⁹ See Di Marco & Lo Bue, *supra* note 432, at 19.

⁵⁷⁰ *Id.*; see also Communication from the Commission - Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-Operation Agreements, C 11/01, (2011), para. 187. (“FRAND commitments are designed to ensure that essential IPR protected technology incorporated in a standard is accessible to the users of that standard on fair, reasonable and non-discriminatory terms and conditions. In particular, FRAND commitments can prevent IPR holders from making the implementation of a standard difficult by refusing to license or by requesting unfair or unreasonable fees (in other words excessive fees) after the industry has been locked-in to the standard or by charging discriminatory royalty fees.”).

⁵⁷¹ See Di Marco & Lo Bue, *supra* note 432, at 19.

⁵⁷² *Id.*

⁵⁷³ European Commission Press Release No 14/489, Antitrust: Commission finds that Motorola Mobility Infringed EU Competition Rules by Misusing Standard Essential Patents, Brussels, (April 29, 2014), http://europa.eu/rapid/press-release_IP-14-489_en.htm.

terms.”⁵⁷⁴ Seeking SEP-based injunctions against a willing licensee could risk excluding products from the market, thereby decreasing innovation and harming consumer.⁵⁷⁵ The *Samsung* case looks quite similar to the *Motorola* case, as the two inquiries were conducted in parallel by the EC and the two decisions were published the same day.⁵⁷⁶ However, the EC closed the proceeding by accepting the commitments submitted by Samsung, thus without ascertaining antitrust infringement.⁵⁷⁷

In conclusion, undoubtedly the EC has made countless progress in the field of patent pools and SEPs. However, it is doubtful whether the EC with its approach has extensively weighted the anti-competitive risks of patent pooling by a reducing patent owners’ incentives to license patents outside the pool.⁵⁷⁸ In any case, we should affirm that a *case by case* approach to the evaluation of the patent pools effects is the best way not to nullify the benefits for innovation.⁵⁷⁹

3.4.2. Settlement Agreements

It is in the public interest for disputes involving the infringement and/or validity of IPRs to be settled by agreements, rather than proceeding all the way to a long and costly court or arbitration determination.⁵⁸⁰ The TTBER Guidelines recognize that settle agreements constitute a legitimate way to resolve a *bona fide* dispute over IPRs.⁵⁸¹ Such agreements often involve the grant of a license by the owner of the IPRs to the alleged infringer.⁵⁸² However, even the conditions and terms of settlement agreements may be caught by Article 101 (1).⁵⁸³

In particular, the EC has become concerned about a particular type of agreements particularly diffused within the pharmaceutical sector, so-called pay-for-delay settlements.⁵⁸⁴ Such agreements do not often imply the transfer of the technology, but rather a value transfer (e.g. sums of money) from one party in return for a limitation on the entry and/or expansion on the market of the other party.⁵⁸⁵ In those circumstances, if a settlement agreement provides for the licensing of IPRs but under terms that substantially limit or delay the licensee’s ability to launch a product on the market, this could constitute market allocation

⁵⁷⁴ *Id.*

⁵⁷⁵ *Id.*

⁵⁷⁶ See Di Marco & Lo Bue, *supra* note 432, at 21.

⁵⁷⁷ *Id.*

⁵⁷⁸ See Frignani & Granieri, *supra* note 536, at 60.

⁵⁷⁹ See Di Marco & Lo Bue, *supra* note 432, at 17.

⁵⁸⁰ See Warren & Zafar, *supra* note 426 at 3.

⁵⁸¹ See TTBER Guidelines, *supra* note 47, recital 234.

⁵⁸² See Warren & Zafar, *supra* note 426 at 3.

⁵⁸³ See Pazzi, *supra* note 343, at 157.

⁵⁸⁴ See Warren & Zafar, *supra* note 426, at 3.

⁵⁸⁵ See Pazzi, *supra* note 343, at 157; see Cook, *supra* note 346, at 230.

or market sharing in violation of competition law.⁵⁸⁶ Thus, the revised TTBER Guidelines make clear that pay-for-delay settlements are subjected to a particular scrutiny.⁵⁸⁷ However, if the infringer agrees to respect the IP holder's rights, perhaps through a payment to compensate for the infringing conduct, no competition issues should arise.⁵⁸⁸

⁵⁸⁶ See Slaughter & May, *supra* note 268, at 16. ("Particularly if the parties are actual or potential competitors and there was a significant value transfer to the licensee.").

⁵⁸⁷ See Warren & Zafar, *supra* note 426, at 3. ("The Guidelines, which make clear that if the parties 'are actual or potential competitors and there was a significant value transfer from the licensor to the licensee, the Commission will be particularly attentive to the risk of market allocation/ market sharing'. The Commission goes further, by expressing concern also for 'pay-for-restriction' arrangements, where there is a value transfer in exchange for which the licensee accepts some restrictions on its ability to launch the product on any market concerned.") (*Id.* at 4).

⁵⁸⁸ *Id.*

CHAPTER IV

The U.S. Regime on Technology Transfer Agreements and Anti-Competitive Practices

4.1. The Revised 2017 U.S. Guidelines for Licensing of Intellectual Property

The basic U.S. approach to licensing practices is reflected in the DOJ/FTC *U.S. IP-Antitrust Guidelines* and calls for a flexible effects-based economic analysis to IP licensing agreements.⁵⁸⁹ Jointly enacted in 1995 from the DOJ and the FTC, the Guidelines are the most comprehensive and reliable source on antitrust principles to be applied for the analysis and treatment of IP licensing by overseas antitrust authorities.⁵⁹⁰ Since the *U.S. IP-Antitrust Guidelines* were issued, the Agencies have repeatedly emphasized the importance of promoting innovation and enhancing competition. However, with the economic and technological progress postdated the 1995 *U.S. IP-Antitrust Guidelines*, several recent trends in IP license agreements have raised new antitrust concerns.⁵⁹¹ As a consequence, on January 13, 2017 the Agencies published and update to the 1995 *U.S. IP Guidelines* with the intent to give guidance to the public and the business community about the renewed approach of the Agencies towards IP licensing.⁵⁹² This is the first revision of the Guidelines in over 20 years.

Before finalizing the updates, the Agencies announced the proposed amendments of the *U.S. IP-Antitrust Guidelines* and made them available online to allow academics, industry organizations and tech companies to submit their comments.⁵⁹³ The majority of commentators note the relative minimalism of the proposed updates in scope and effect. However, several commentators are happy with the Agencies minor revisions, in accordance with the idea ‘don’t mess

⁵⁸⁹ See Pate, *supra* note 53.

⁵⁹⁰ U.S. Dep’t of Justice & Fed. Trade Comm’n, *Antitrust Guidelines for the Licensing of Intellectual Property* (1995). See also Baumgartner, *supra* note 5, at 55; see also Thomas L. Hayslett III, 1995 *Antitrust Guidelines for the Licensing of Intellectual Property: Harmonizing the Commercial Use of Legal Monopolies With the Prohibitions of Antitrust Law*, 3 J. Intell. Prop. L. 375 (1996), at 376. The *U.S. IP-Antitrust Guidelines* are designed to reconcile antitrust and IP laws and to emphasize somehow the common goals of antitrust prohibitions and IP protection. To this extent, the first intent of the Guidelines is to help potential licensor and licensees of IPRs to recognize what type of conducts will most likely be subject to antitrust scrutiny and to predict, on the other hand, which practices will not warrant antitrust investigations. (*Id* at 383).

⁵⁹¹ Shylah R. Alfonso & Adam G. Hester, *Updated Antitrust Guidelines for IP Licensing Address New Laws, Omit Some Key Areas*, (Febr. 14, 2017), <https://www.perkinscoie.com/en/news-insights/updated-antitrust-guidelines-for-ip-licensing-address-new-laws.html>.

⁵⁹² Fed. Trade Comm’n & U.S. Dep’t of Justice Press Release, FTC and DOJ Issue Updated Antitrust Guidelines for the Licensing of Intellectual Property (Jan. 13, 2017), www.ftc.gov/news-events/press-releases/2017/01/ftc-doj-issue-updated-antitrust-guidelines-licensing-intellectual.

⁵⁹³ *Id.*

with success.’⁵⁹⁴ The Agencies specify that some of the minor changes to the Guidelines are in order to reflect certain statutory and case law advancements.⁵⁹⁵ For instance, some of patent and copyright terms have been updated to match the revised statutory developments.⁵⁹⁶ In addition, the revised *U.S. IP-Antitrust Guidelines* now include also the Defend Trade Secrets Act of 2016, which creates a new federal cause of action for misappropriation of trade secrets.⁵⁹⁷ Two Supreme Court cases have also been included in the updates to make clear that (1) the ‘tying’ of patented products with unpatented products does not automatically confer market power and thus does not violate the Sherman Act (2) the vertical resale price maintenance are not *per se* illegal and are evaluated under the pro-competitive *rule of reason* analysis.⁵⁹⁸

However, some of the hottest topics at the intersection of the IP and antitrust, such as the antitrust treatment of patent settlements or of SEPs licensing under FRAND terms, are not considered by the Guidelines’ updates.⁵⁹⁹ Several commentators, including Intel Corporation and Innovation Alliance, applaud the Agencies’ silence on SEPs, arguing that SEP licensing requires no specialized treatment.⁶⁰⁰ Among these, the members of the Global Antitrust Institute at George Mason Law School in their public comment affirm that “the same key enforcement principles [found in the 1995 IP Guidelines] also guide our analysis when SEPs are involved.”⁶⁰¹ Innovation Alliance, instead, highlight that the law in this sector is in continuous evolution and it would be imprudent for the agencies to take a rigid stand on the current enforcement policy.⁶⁰² Other companies, including Apple, Tesla, Intel and HP, observe that there is already a

⁵⁹⁴ See Nokia’s public comment, available at <https://www.justice.gov/atr/file/897286/download>.

⁵⁹⁵ Fed. Trade Comm’n & U.S. Dep’t of Justice Press Release, DOJ and FTC Seek Views on Proposed Update of the Antitrust Guidelines for Licensing of Intellectual Property, (Aug. 12, 2016), <https://www.justice.gov/opa/pr/doj-and-ftc-seek-views-proposed-update-antitrust-guidelines-licensing-intellectual-property>.

⁵⁹⁶ *Id.*; see also Michael T. Renaud et al., *FTC and DOJ Issue Proposed Updates to Antitrust Guidelines for Licensing IP*, (Oct. 14, 2016), <https://www.mintz.com/insights-center/viewpoints/2231/2016-10-ftc-and-doj-issue-proposed-updates-antitrust-guidelines>.

⁵⁹⁷ *Id.*

⁵⁹⁸ *Id.*; see also *Illinois Tool Works Inc. v. Independent Ink, Inc.*, 547 U.S. 28 (2006) (holding that “[...] in all cases involving a tying arrangement, the plaintiff must prove that the defendant has market power in the tying product.”) and *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007) (holding that “[...] we think that were the Court considering the issue as an original matter, the rule of reason, not a *per se* rule of unlawfulness, would be the appropriate standard to judge vertical price restraints.”).

⁵⁹⁹ See Schneider et al., *supra* note 144, at 65.

⁶⁰⁰ Kelly Smith Fayne & Joshua Holian, *The New IP Antitrust Licensing Guidelines’ Silence On SEPs*, LAW 360, (Jan. 2017), <https://m.lw.com/thoughtLeadership/byline-reading-between-the-guidelines-seps>. The Intel Corporation’s public comment is available at <https://www.justice.gov/atr/file/898596/download>.

⁶⁰¹ They recalled a previous speech of the FTC Chairwoman Edith Ramirez. The comment is available here: <https://www.justice.gov/atr/file/893866/download>.

⁶⁰² See Alliance Innovation’s public comment, available at <https://www.justice.gov/atr/file/897246/download>.

substantial guidance on SEPs issues and associated FRAND terms provided by the Agencies and the U.S. courts.⁶⁰³

Another camp of commenters, by contrast, urge the Agencies to explicitly address IP licensing issues related to SEPs and patent settlements.⁶⁰⁴ Professors Farrell, Shapiro and Gilbert, for instance, note that “updating and unifying DOJ and FTC guidance relating to SEPs is vital and long overdue” and that “the antitrust treatment of patent settlements also is crying out for clear, up-to-date guidance from the DOJ and the FTC.”⁶⁰⁵ They further express concern that “a revision of the Guidelines that ignores [SEPs] might be seen as a retreat from the Agencies’ policy statements and enforcement actions in these areas.”⁶⁰⁶ In response to this comments the Agencies answer that their flexible and effects-based approach, set forth in *the IP-Antitrust Guidelines*, remains applicable to all IP areas, including those not explicitly covered.⁶⁰⁷ They further confirm the significance of the supplementary sources available to the public for a complete policy picture.⁶⁰⁸

4.1.1. General Principles

The finalized *U.S. IP-Antitrust Guidelines* method of analysis still focuses on evaluating harm to competition, not harm to any individual competitor.⁶⁰⁹ The finalized Guidelines remain soundly grounded in three foundational principles that have guided the Agencies’ analysis of IP issues for more than 20 years:⁶¹⁰

- (1) The Agencies apply the same antitrust analysis to conduct involving intellectual property as to conduct involving other forms of property, taking into account the specific characteristics of a particular property right.
- (2) The Agencies do not presume that intellectual property creates market power.

⁶⁰³ Public comment available at: <https://www.justice.gov/atr/file/898566/download>.

⁶⁰⁴ See Professor Michael. A Carrier’s comment, available at <https://www.justice.gov/atr/file/887841/download>.

⁶⁰⁵ Comment available at <https://www.justice.gov/atr/file/890491/download>.

⁶⁰⁶ *Id.*

⁶⁰⁷ See Fed. Trade Comm’n & U.S. Dep’t of Justice, *supra* note 595.

⁶⁰⁸ *Id.* (“In addition, the business community may consult the wide body of DOJ and FTC guidance available to the public – in the form of published agency reports, statements, speeches, and enforcement decisions – which rely on this analytical framework and further illuminate each agency’s analysis of a variety of conduct involving intellectual property, including standards-setting activities and the assertion of standards-essential patents.”).

⁶⁰⁹ Renata B. Hesse, Former Acting Assistant Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, Ring in the New Year with Modernized DOJ/FTC IP Licensing Guidelines, (Jan.13, 2017), <https://www.justice.gov/archives/opa/blog/ring-new-year-modernized-dojftc-ip-licensing-guidelines>; see also *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §1 (“The Agencies will evaluate each case in light of its own facts and apply these Guidelines reasonably and flexibly.”).

⁶¹⁰ *Id.*

- (3) The Agencies recognize that intellectual property licensing allows firms to combine complementary factors of production and is generally procompetitive.⁶¹¹

The finalized Guidelines further reinforce the Agencies' long-term view that "the antitrust laws generally do not impose liability upon a firm for a unilateral refusal to assist its competitors, in part because doing so may undermine incentives for investment and innovation."⁶¹² Indeed, IP owner's ability to exclude others from its property promotes competition by offering incentives for investment and innovation.⁶¹³

The basic 'common core' of the three basic analytical principles has been largely discussed in the first chapter of this work. Briefly, the new *U.S. IP-Antitrust Guidelines*, in line with the previous regime and the recent case law, establish that IPRs are subject to antitrust analysis on the basis of the same analytical approach applicable to other properties.⁶¹⁴ However, IPRs have important characteristics that distinguish them from other forms of property, such as ease of misappropriation, that have to be taken into account by standard antitrust analysis.⁶¹⁵

Secondly, the *U.S. IP-Antitrust Guidelines* assert that ownership of IP does not, on its own, convey market power.⁶¹⁶ The previous U.S. 1995 *IP-Antitrust Guidelines* provided that the Agencies would not presume that a patent, or any other IPRs, necessarily confers market power upon its holder.⁶¹⁷ Eleven years later, the Supreme Court eliminated any expression of uncertainty, holding that "Congress, the antitrust enforcement Agencies, and most economists have all reached the conclusion that a patent does not necessarily confer market power upon the patentee."⁶¹⁸

⁶¹¹ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §2.

⁶¹² *Id* at §2.1.; see also *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 600 (1985) (holding that "Even a firm with monopoly power has no general duty to engage in a joint marketing program with a competitor.").

⁶¹³ *Id* at §3.4; see also *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004) and World Bank Staff, *Intellectual Property: Balancing Incentives with Competitive Access*, (last accessed March 20, 2019), at 129, http://documents.worldbank.org/curated/en/285571468337817024/310436360_20050012013328/additional/multi0page.pdf.

⁶¹⁴ See Schneider et al., *supra* note 114, at 66.

⁶¹⁵ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §2.1.

⁶¹⁶ See Schneider et al., *supra* note 114, at 66.

⁶¹⁷ See 1995 *U.S. IP-Antitrust Guidelines*, *supra* note 590, at §2.

⁶¹⁸ See Schneider et al., *supra* note 114, at 66; see also *Illinois Tool Works Inc. v. Independent Ink, Inc.*, *supra* note 571 at 28. See also *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989) (Ruling that "by limiting the duration of a patent, "[t]he Patent Clause itself reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the 'Progress of Science and useful Arts.'")

Finally, the *U.S. IP-Antitrust Guidelines* affirm that licensing is generally pro-competitive and subject to the *rule of reason* analysis.⁶¹⁹ The Guidelines dedicate an entire paragraph to the pro-competitive benefits of licensing arrangements. Licensing may facilitate integration of the licensed property with other components owned by licensee necessary to realize its commercial value.⁶²⁰ Such arrangements increase the value of the licensed IP, thus providing incentives to invest in new ideas.⁶²¹ To this extent, field-of-use territorial restrictions and other limitations in IP licensing are not necessarily anti-competitive and should rather allow the holder to exploit his property as efficiently as possible.⁶²² In addition, field-of-use-restrictions may encourage the licensees to invest in commercialization of the licensed IP.⁶²³ The *U.S. IP-Antitrust Guidelines* explain that the Agencies general approach in analyzing a licensing restraint under the *rule of reason* is to inquire whether the restraint is likely to have anti-competitive effects and, if so, whether the restraint is reasonably necessary to achieve procompetitive benefits that outweigh those anti-competitive effects.⁶²⁴

4.1.2. Antitrust Concerns and Methods of Analysis

As largely discussed in the first chapters, even if licensing agreements are normally pro-competitive and efficiency-enhancing, antitrust concerns may nonetheless arise when a licensing agreement distorts competition among

⁶¹⁹ See 1995 U.S. *IP-Antitrust Guidelines*, *supra* note 590, at §2.3.

⁶²⁰ *Id.*

⁶²¹ *Id.*; see also OECD, *Competition Policy and Intellectual Property Rights*, (1989) at §3, <http://www.oecd.org/regreform/sectors/2376247.pdf>. (“An important point of departure in analyzing these profit-enhancing aspects of licensing agreements is that those terms which can help an innovator capture the consumer surplus generated by his innovation is not anticompetitive; [...] it may be seen as a gain to competition.”) (*Id.* at 17).

⁶²² *Id.* The U.S. *IP-Antitrust Guidelines* make the example of a new computer software program licensed by the company in an arrangement that imposes both field of use and territorial limitations. Some licenses allow the use only in hospitals, others only in group medical practices. All of the company licensees permit the use of the licensed software program only in specific territories. The company charges different royals to different users. However, the licenses allow the licensees free to develop, use, sell other computer programs, or to compete in separate goods or service markets. None of the licensees is a competitor of the company. The Guidelines establish that the arrangement in question is merely a subdivision of the proprietor’s IP among different fields of use and territories. Thus, the Agencies would be unlikely to consider the agreement as anti-competitive. Their conclusion could differ if, for example, the license barred licensees from using any other inventory management program. (See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §2.3. E.g. 1).

⁶²³ *Id.*

⁶²⁴ *Id.*; see also Schneider et al., *supra* note 144, at 66. The U.S. *IP-Antitrust Guidelines* further provide that their provisions and the DOG-FTC antitrust enforcement policy, apply “with respect to the licensing of intellectual property protected by patent, copyright, and trade secret law, and of know-how.” They further highlight that “unlike a patent, which protects an invention not only from copying but also from subsequent independent creation by others, a copyright does not preclude others from independently creating similar expression.” (See §1).

entities that would be actual or potential competitors.⁶²⁵ In such circumstances, the Agencies will follow a three-steps analysis.

The Agencies *in primis* have to identify one or more relevant markets in which the anti-competitive effects are likely to occur.⁶²⁶ Those effects are evaluated in three different markets: goods markets, technology markets and innovation markets.⁶²⁷ In this regard, the Agencies updated the analysis of markets affected by the licensing to reflect their actual experience.⁶²⁸ The Agencies retained the concept of ‘innovation markets’, but replaced the term with ‘R&D markets’ to better reflect how these markets have been defined in enforcement actions.⁶²⁹ However, the treatment of such markets in the revised *U.S. IP-Antitrust Guidelines* is similar to the treatment of innovation markets in the previous Guidelines.⁶³⁰ Indeed, the new Guidelines still observe that the Agencies will “delineate a R&D market only when the capabilities to engage in the relevant R&D can be associated with specialized assets or characteristics of specific firms.”⁶³¹

Once the relevant market has been defined, the Agencies will examine the agreement to determine whether the relationship among the parties is primarily horizontal or vertical in nature, or whether it has aspects of both.⁶³² Accordingly, “licensing arrangement has a vertical component when it affects activities that are in a complementary relationship.”⁶³³ An agreement has a horizontal component when the parties “would have been actual or potential competitors in a relevant market in the absence of the license, even if a vertical relationship also exists.”⁶³⁴ Attorney Chemtob explains that one of the biggest challenge too look at when giving advice to clients on antitrust-IP related issues is whether the parties are in an horizontal relationship and through a licensing decide not to compete to each other.⁶³⁵ However, a horizontal relationship between licensor and licensees does

⁶²⁵ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §3.1.; see also Richard J. Gilbert, *Competition Policy for Knowledge Markets*, University of California, Berkeley, (May 2005), at 7.

⁶²⁶ *Id.* at §3.1.

⁶²⁷ Hans Henrik Lidgard & Jeffery Atik, *The Intersection of IPR and Competition Law- Studies of Recent Developments in European and U.S. Law*, Sweden, (2008), at 3.

⁶²⁸ See Fed. Trade Comm’n & U.S. Dep’t of Justice, *supra* note 595.

⁶²⁹ *Id.* The new U.S. *IP-Antitrust Guidelines* define such markets at §3.2.3. as “the assets comprising research and development related to the identification of a commercializable product, or directed to particular new or improved goods or processes, and the close substitutes for that research and development.”

⁶³⁰ See Schneider et al., *supra* note 144, at 68.

⁶³¹ *Id.*; see also U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §3.2.3.

⁶³² *Id.* at §3.3.

⁶³³ *Id.* For example, when the licensor’s primary business is R&D and the licensees are manufacturers who buy the licensor’s rights to use the developed technology.

⁶³⁴ *Id.*

⁶³⁵ Stuart Chemtob is Senior Of Counsel in the Washington, D.C., office of Wilson Sonsini Goodrich & Rosati, where his practice focuses on government conduct investigations, litigation and arbitrations involving antitrust and licensing issues, and global antitrust counseling. He kindly granted me an interview on November 8, 2018 in Washington DC where we discussed, among others, about the most current issues at the IP-antitrust intersection.

not necessarily cause the arrangement to be anticompetitive. and the *rule of reason* will rather applies.⁶³⁶

Even if the *rule of reason* is the most widely used approach when analyzing potential antitrust issues within the IP licensing, in some circumstances courts have concluded that some restraints and their effects are “so plainly anticompetitive that it should be treated as unlawful *per se*, without an elaborate inquiry into the restraint’s likely competitive effect.”⁶³⁷ Among these are listed naked price-fixing, output restraints and market allocation among horizontal competitors.⁶³⁸

To determine whether a potential restrictive conduct has to be examined under the *per se rule* or *rule of reason*, the Agencies have to determine whether the restraint in question can be expected to contribute somehow to an efficiency-enhancing integration of economic activity.⁶³⁹ Indeed, a restraint in licensing arrangement may facilitate the combination of the licensor’s technology with complementary factors of production, such as manufacturing and distribution facilities, owned by the licensee.⁶⁴⁰ The *U.S. IP-Antitrust Guidelines* provide that, in general, “if there is no efficiency-enhancing integration of economic activity and if the type of restraint is one that has been accorded *per se* treatment, the Agencies will challenge the restraint under the *per se* rule.”⁶⁴¹ Otherwise, the Agencies will apply a *rule of reason* analysis.”⁶⁴² The *rule of reason* approach is the presumptive standard for assessing the legality of challenged IP licensing

⁶³⁶ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §3.3. and §5.1. As the Guidelines note, licensing arrangements among horizontal competitors “may promote rather than hinder competition if they result in integrative efficiencies. Such efficiencies may arise, for example, from the realization of economies of scale and the integration of complementary research and development, production, and marketing capabilities.”

⁶³⁷ *Id.*; see also *Palmer v. BRG of Ga., Inc.*, 498 U.S. 46, 49-50 (1990).

⁶³⁸ *Id.*; see also *Broad. Music, Inc. v. Columbia Broad. Sys., Inc.*, 441 U.S. 1 (1979) (“The rule of reason is not applied, however, when the restraint is price fixing, because price fixing is a naked restraint with no purpose other than to restrain competition. It is thus better to declare the entire category of price fixing illegal *per se* than to inquire into its actual anticompetitive impact on a case by case basis [...] such agreements are unlawful no matter how reasonable the price set may be, no matter how ruinous competition otherwise may be, and no matter how legitimate the association otherwise may be.”).

⁶³⁹ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 539. See also *National Soc’y of Prof’l Eng’rs v. United States*, 435 U.S. 679, 692 (1978). (“[...] the Rule [of Reason] does not open the field of antitrust inquiry to any argument in favor of a challenged restraint that may fall within the realm of reason. Instead, it focuses directly on the challenged restraint’s impact on competitive conditions.”).

⁶⁴⁰ *Id.*

⁶⁴¹ *Id.*; see also ABA Section of Antitrust Law, *The Federal Antitrust Guidelines for the Licensing of Intellectual Property- Origins and Applications*, Chicago, (3d ed. 2010), at 190. See also *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, *supra* note 598. (“*Per se* condemnation of economic restraints under Section 1 of the Sherman Act, 15 U.S.C. 1, is thus exceptional, and is reserved for restraints that always, or almost always, reduce consumer welfare by limiting competition and output.”).

⁶⁴² *Id.*

practices and entails a flexible market inquiry.⁶⁴³ Purely vertical agreements should generally be assessed under the *rule of reason*. Similarly, patent pools and other technology sharing should presumptively be challenged under the *rule of reason* review.⁶⁴⁴ By contrast, price fixing agreements are naked restraint with no countervailing pro-competitive virtue.⁶⁴⁵ A so called ‘naked practice’ is totally unrelated to any kind of productive activity with potential welfare-enhancing effects on the economy, such as joint production, joint research or technology sharing, or joint distribution.⁶⁴⁶ Those agreements are part of class of arrangements that are demonstrably anti-competitive and thus unlawful *per se*.⁶⁴⁷

4.1.3. *General Principles on the Agencies’ Evaluation of Licensing Arrangements Under the Rule of Reason*

The *U.S. IP-Antitrust Guidelines* dedicate an entire section to the method for evaluating the existence of anti-competitive effects resulting from different types of restraint in licensing arrangements. Only if the Agencies conclude that a particular restrictive practice is likely to substantially lessen competition in a relevant market, they will assess efficiencies and justifications.⁶⁴⁸ As previously mentioned, the existence of anti-competitive effects depends, among others, on whether the licensor and the licensee stand in a horizontal or vertical relationship and whether the agreement involves exclusivity.⁶⁴⁹

The Guidelines provide that “when a licensing arrangement affects parties in a horizontal relationship, a restraint in that arrangement may increase the risk of coordinated pricing, output restrictions, or the acquisition or maintenance of market power.”⁶⁵⁰ Negative effects on innovation may also arise if the arrangement poses a significant risk of retarding or lessening the development of new or improved products or processes.⁶⁵¹ In evaluating potential anti-competitive effects, the Agencies give weight to the level of concentration.⁶⁵² Generally, mergers that cause a significant increase in concentration and result in highly concentrated markets are presumed to be likely to enhance market power.⁶⁵³ Indeed, highly concentrated market may cause difficulties to potential

⁶⁴³ See generally Herbert J. Hovenkamp, *Competitor Collaboration after California Dental Association*, University of Chicago Legal Forum: Vol. 2000: Iss. 1, Article 7.

⁶⁴⁴ Hovenkamp, Herbert J., *The Rule of Reason*, Faculty Scholarship. 1778, (2018), at 153.

⁶⁴⁵ See *FTC v. Ind. Fed’n of Dentists*, 476 U.S. 447, 459-62 (1986).

⁶⁴⁶ See Hovenkamp, *supra* note 40, at 517.

⁶⁴⁷ *Id.*; see also Patrick D. Curran, *Standard-Setting Organizations: Patents, Price Fixing, and Per Se Legality*, The University of Chicago L. Rev. 70, no. 3 (2003): 983-1009., at 1000, available at doi:10.2307/1600663.

⁶⁴⁸ See ABA Section of Antitrust Law, *supra* note 3, at 68.

⁶⁴⁹ See Lidgard & Atix, *supra* note 627, at 117.

⁶⁵⁰ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §4.1.

⁶⁵¹ *Id.*

⁶⁵² See HM Guidelines, *supra* note 81, at §2.1.3.

⁶⁵³ *Id.*

competitors to entry into.⁶⁵⁴ Agencies will further evaluate the reaction of supply and demand to changes in price in the relevant markets.⁶⁵⁵

As *per* vertical agreements, the Guidelines provide that “the Agencies will analyze whether the licensing arrangement may harm competition among entities in a horizontal relationship at either the level of the licensor or the licensees, or possibly in another relevant market.”⁶⁵⁶ To this extent, vertical restraints may suppress competition by foreclosing access to important inputs or by facilitating coordination on price limitations of output.⁶⁵⁷ Vertical restraints may also facilitate horizontal coordination to raise the price and reduce the output, especially when the relevant market is concentrated and difficult to enter.⁶⁵⁸

In addition, the Agencies need to determine whether the licensing involve exclusivity.⁶⁵⁹ For instance, the licensor may grant one or more exclusive licenses (such as territorial or field- of-use licenses), which limit the ability of the licensor to license third parties, as well as to use the licensed technology.⁶⁶⁰ In such circumstances, antitrust concerns may arise only if the parties involved are set in a horizontal relationship.⁶⁶¹ Examples include cross-licensing agreements among competitors that collectively possess market power, grant-backs provisions and acquisition of IPRs.⁶⁶² The licensor may also prevent or restraint the licensee(s), through and explicit exclusive dealing term or other provisions, from licensing, selling, distributing or using competing technologies.⁶⁶³ Those agreements may lessen competition by foreclosing the access to the relevant market or by preventing the competitors’ from obtaining important inputs or by facilitating coordination to raise price or reduce output.⁶⁶⁴ However, such

⁶⁵⁴ *Id.*, at §5.3.

⁶⁵⁵ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.1.1.

⁶⁵⁶ *Id.*; see also Crane, Daniel A., *Toward a Unified Theory of Exclusionary Vertical Restraints*. G. Miralles, co-author. S. Cal. L. Rev. 84, no. 3 (2011): 605-60. (Proposing test for all exclusionary vertical restraints that consider “whether the loyalty-inducing provision poses an unacceptable risk of harming consumer welfare by denying to rivals a reasonable opportunity to participate efficiently in the market and whether it does so without a sufficient efficiency justification.”) (*Id.* at 607).

⁶⁵⁷ *Id.* According to the Guidelines “the risk of anticompetitively foreclosing access or increasing competitors’ costs is related to the proportion of the markets affected by the licensing restraint; other characteristics of the relevant markets, such as concentration, difficulty of entry, and the responsiveness of supply and demand to changes in price in the relevant markets; and the duration of the restraint.” See also ABA Section of Antitrust Law, *supra* note 3, at 69.

⁶⁵⁸ *Id.*

⁶⁵⁹ See U.S. *IP-Antitrust Guidelines*, *supra* note 27, at §4.1.2.

⁶⁶⁰ *Id.*

⁶⁶¹ *Id.* (Indeed, “a non-exclusive license of intellectual property that does not contain any restraints on the competitive conduct of the licensor or the licensee generally does not present antitrust concerns. That principle holds true even if the parties to the license are in a horizontal relationship, because the non-exclusive license normally does not diminish competition that would occur in its absence.”).

⁶⁶² *Id.*

⁶⁶³ *Id.*; see also Leslie, *supra* note 29.

⁶⁶⁴ *Id.*; see also U.S. Dep’t of Justice & Fed. Trade Comm’n, *Antitrust Guidelines for Collaborations Among Competitors* (2000), at §3.34.,

restraints may also promote competition. For instance, they may encourage the licensee to invest in development and commercialization of the licensed technology.⁶⁶⁵ Any potential pro-competitive benefit is taken into consideration by the Agencies in evaluating the reasonableness of the agreement under the *rule of reason* analysis.⁶⁶⁶

If the Agencies conclude that a licensing restraint is unlikely to have anti-competitive effects they will end the investigation without challenging the restraint.⁶⁶⁷ Conversely, if the Agencies conclude that the restraint has potential anti-competitive effects in a relevant market, they will consider efficiencies and justifications.⁶⁶⁸ In substance, they will consider whether the restraint is reasonably necessary to achieve pro-competitive efficiencies, including if there are less restrictive alternatives.⁶⁶⁹ If so, the Agencies will balance the pro-competitive efficiencies and the anti-competitive effects to determine the probable net effect on competition in each relevant market.⁶⁷⁰

4.1.4. *The Antitrust 'Safety Zone'*

Like the European TTBER, also the *U.S. IP Guidelines* provide a sort of 'safe harbour' that includes a series of conditions under which the Agencies will not challenge a restraint in an IP licensing arrangements absent extraordinary circumstances.⁶⁷¹ The *ratio* of the safety zone is to grant IP owners some degree of certainty in those cases where anti-competitive effects are so unlikely to occur that the arrangement is presumed not to be anti-competitive without an inquiry into particular industry circumstances.⁶⁷² However, unlike the 'safe harbour' the

https://www.ftc.gov/sites/default/files/documents/public_events/joint-venture-hearings-antitrust-guidelines-collaboration-among-competitors/ftcdojguidelines-2.pdf.

⁶⁶⁵ *Id.*

⁶⁶⁶ *Id.* See e.g. Example 7.

⁶⁶⁷ *Id.* at §4.2.

⁶⁶⁸ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 69.

⁶⁶⁹ *Id.* ("In making this assessment, however, the Agencies will not engage in a search for a theoretically least restrictive alternative that is not realistic in the practical prospective business situation faced by the parties"); see also Antitrust Guidelines for Collaborations Among Competitors, *supra* note 661, at §1.2. ("If investigation indicates anticompetitive harm, the Agencies examine whether the relevant agreement is reasonably necessary to achieve procompetitive benefits that likely would offset anticompetitive harms.").

⁶⁷⁰ *Id.* In determining the reasonableness of the restraint, the Agencies will also evaluate its duration, that may depend both on the market context or the presence of contractual terms established by the parties. In particular, the Agencies will be inclined to challenge a restraint with anticompetitive effects when its duration "clearly exceed the period needed to achieve procompetitive efficiencies."

⁶⁷¹ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.3; see also Antonio Capobianco, *Roundtable on Safe Harbours and Legal Presumptions in Competition Law - Note by the United States*, OECD, (Dec. 1, 2017), https://www.ftc.gov/system/files/attachments/us-submissions-oecd-other-international-competition-fora/safe_harbors_united_states.pdf.

⁶⁷² See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.3

‘safety zone’ does not have preclusive effects.⁶⁷³ Accordingly, a conduct that falls within the safety zone is not exempted from the Agencies’ scrutiny, nor does the existence of a safety zone preclude a finding of competitive infringement.⁶⁷⁴ In addition the Agencies evidence that a licensing arrangement is not automatically deemed anti-competitive merely because does not fall within the scope of the safety zone.⁶⁷⁵ Indeed, the majority of licensing agreements that are lawful and pro-competitive are not covered by the safety zone.⁶⁷⁶ However, the safety zone does not apply to conducts that are illegal *per se* or transfers of IPRs to which a merger analysis is applied.⁶⁷⁷

Under the U.S. *IP-Antitrust Guidelines*, to fall within the application of the safety zone a restraint firstly has not to be ‘facially anticompetitive’, i.e. unlawful *per se* (such as naked-price fixing, output restraints and market division among horizontal competitors).⁶⁷⁸ Secondly, according to the Guidelines, the Agencies will not challenge the restraint in question if “the licensor and its licensees collectively account for no more than twenty percent of each relevant market significantly affected by the restraint.”⁶⁷⁹ In evaluating potential anti-competitive effects in a relevant market, the Agencies will further consider whether there are any actual or potential close substitutes to the product, technology or service in question, to prevent any exercise of the market power.⁶⁸⁰

The Agencies’ evaluation most notably refer to the factual circumstances prevailing at the time of the conduct at issue.⁶⁸¹ The competitive effects of a

⁶⁷³ See Capobianco, *supra* note 671, at 7.

⁶⁷⁴ *Id.*

⁶⁷⁵ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.3.

⁶⁷⁶ *Id.*

⁶⁷⁷ *Id.*; see also Antitrust Guidelines for Collaborations Among Competitors, *supra* note 664, at §4.2. (“The safety zone, however, does not apply to agreements that are *per se* illegal, or that would be challenged without a detailed market analysis, or to competitor collaborations to which a merger analysis is applied.”) (*Id.*).

⁶⁷⁸ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 71.

⁶⁷⁹ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.3 and §5.7. If market data are unavailable or unreliable, the Agencies will not challenge a competitor collaboration if “there are four or more independently controlled technologies in addition to the technologies controlled by the parties to the licensing arrangement that may be substitutable for the licensed technology at a comparable cost to the user.” (*Id.*).

⁶⁸⁰ *Id.*, at §2.2. (“With regard to potential anti-competitive effects in a R&D market, the Agencies will examine if “four or more independently controlled entities in addition to the parties to the licensing arrangement possess the required specialized assets or characteristics and the incentive to engage in R&D that is a close substitute of the R&D activities of the parties to the licensing agreement.”) (*Id.* at §2.3., Example 1). (“In evaluating close substitutes, the Agencies may consider numerous factors including the following: the nature, scope and magnitude of the R&D efforts of the other independently controlled entities; their access to financial support, intellectual property, skilled personnel or other specialized assets; their timing; and their ability, either acting alone or through others, to successfully commercialize innovations.”) (*Id.* at §4.3.).

⁶⁸¹ *Id.*; see also Antitrust Guidelines for Collaborations Among Competitors, *supra* note 664, at §2.4. (“The Agencies assess the competitive effects of a relevant agreement as of the time of possible harm to competition, whether at formation of the collaboration or at a later time, as appropriate.”).

relevant agreement, as well as the safety zone rules, may therefore change over time.⁶⁸²

4.2. Application of General Principles to Particular Licensing Agreements

In managing their IPRs, holders should be aware of the potential antitrust issues associated with their conduct.⁶⁸³ The *U.S. IP-Antitrust Guidelines* provide a non-exhaustive list of licensing practices that could raise competition concerns.⁶⁸⁴ This section describes how the Agencies criteria discussed above are applied to common licensing restraints.⁶⁸⁵

4.2.1. Price and Output Restraints

One of the most significant change in the *IP-Antitrust Guidelines* concerns the Guidelines' treatment of minimum resale price maintenance (hereinafter 'RPM') practices.⁶⁸⁶ Within the IP context, RPM refers to a vertical pricing arrangement between a manufacturer and a distributor, in which the licensor, i.e. the manufacturer, conditions a license in the resale price of the product incorporating the licensed technology.⁶⁸⁷

Attorney Schneider tells a very common scenario in RPM that occurs within the pharmaceutical sector.⁶⁸⁸ Let's suppose that a start-up pharma has a new product but no resources to market it and thus enters into agreement with a big pharma industry (such as Novartis) to combine two pharma into one prescription and selling as a package. The small pharma grants the big one an exclusive license with the purpose of marketing the new product with an already existing product of the big pharma. The small pharma, on the other hand, is worry that the big pharma would allocate all the value resulting from the transaction and thus may want to agree in the price of the final product. The two parties may therefore structure the agreement in such a way as to guarantee the small pharma a minimum return form each sale.

⁶⁸² *Id.*

⁶⁸³ See Lyerla, *supra* note 125, at 5.

⁶⁸⁴ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.3 and §5.

⁶⁸⁵ See ABA Section of Antitrust Law, *supra* note 3, at 76.

⁶⁸⁶ Jim Mc Keown, et al., *DOJ and FTC Update Antitrust-Intellectual Property Licensing Guidelines*, FOLEY, (Sept. 9, 2016), <https://www.foley.com/doj-and-ftc-update-antitrust-intellectual-property-licensing-guidelines-09-09-2016/>.

⁶⁸⁷ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.2.; see also Thomas R. Overstreet, Jr., Bureau of Economics Staff Report to the Fed. Trade Comm'n, *Resale Price Maintenance- Economic Theories and Empirical Evidence*, (Nov. 1983), at 46.

⁶⁸⁸ Hartmut Schneider is a US and German-qualified lawyer who practices antitrust law primarily before US agencies and courts. He regularly counsel clients on legal issues at the intersection of antitrust and intellectual property law, on horizontal cooperation agreements and vertical distribution agreements. He kindly gave me an interesting interview on November 16, 2018, in Washington DC, in which he shared his vast experience within this fields.

For many years RPM was on the list of *per se* antitrust violations. After the Supreme Court's decision in *Leegin Creative Leather Prod., Inc. v. PSKS, Inc.*,⁶⁸⁹ the Agencies proposed to update the 1995 Guidelines and to analyze the RPM practices under the *rule of reason* approach.⁶⁹⁰ In particular, in *Leegin* the Supreme Court noted that "because the effects of RPM can be either anti-competitive or pro-competitive depending on the facts in a given case, a *per se* rule is clearly inappropriate."⁶⁹¹ Indeed, RMP may have a variety of pro-competitive effects that enhance consumer welfare and that must now be balanced with any potential anti-competitive effects on the market in the light of *rule of reason* analysis.⁶⁹² For instance, by preventing 'free-riding' by price-cutting dealers, RMP may substantially incentive retailers to engage in beneficial point-of-sale services.⁶⁹³ In addition, even absent free riding, RPM may be the most efficient way to incentive retailers to make additional non-price sales efforts, such as investing in attractive stores and locations or using their experience to provide valuable services.⁶⁹⁴ The Supreme Court ultimately makes clear that the *per se* approach is inappropriate where the economic impact of the licensing restraints at issue is not "obviously and predictably anti-competitive", and rather opts for a case-by-case approach that evaluates both the competitive effects and harms of such RMP agreements.⁶⁹⁵

Conversely, as previously noted in the *U.S. IP-Antitrust Guidelines*, arrangements between parties in an horizontal relationship, that have the effect

⁶⁸⁹ 551 U.S. 877 (2007). See also Overstreet, *supra* note 687, at 10. ("Many economic and legal scholars [...] do not accept the argument that the causes and consequences of vertical price and nonprice restraints are different. The critics argue that because firms can compete (or avoid competing) by employing both price and nonprice variables, any potential procompetitive effects associated with nonprice restraints, justifying a rule-of-reason approach, may also be associated with price restraints, which should therefore be accorded similar treatment under the law.").

⁶⁹⁰ See Keown et al, *supra* note 686. The *Leegin* decision reversed *Dr. Miles Medical Company v. John D. Park & Sons Company*, 220 U.S. 373 (1911), where the Supreme Court's decision made all RPM agreements *per se* illegal.

⁶⁹¹ *Id.*; see also Thomas J. Rosch, Former Fed. Trade Commissioner, *Developments in the Law of Vertical Restraints: 2012*, (2012), at 2, https://www.ftc.gov/sites/default/files/documents/public_statements/developments-law-vertical-restraints-2012/120507verticalrestraints.pdf.

⁶⁹² See *Leegin*, *supra* note 598, at 902; see also ABA Section of Antitrust Law, *supra* note 3, at 78.

⁶⁹³ See *Leegin*, *supra* note 598, at 902. (By reducing *intra*brand competition, RPM can [also] stimulate *inter*brand competition by giving retailers incentives to promote the manufacturer's brand in ways that are desirable for both consumers and the manufacturer."). (*Id.* at 2715).

⁶⁹⁴ *Id.*, at 921. See also ABA Section of Antitrust Law, *supra* note 3, at 78, [...] "and, at least for some products, RPM may also serve the manufacturer's interest in preserving brand reputation and consumer loyalty.").

⁶⁹⁵ *Id.*; see also U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.2. and Fed. Trade Comm'n & U.S. Dep't of Justice Press Release, FTC Modifies Order in Nine West Resale Price Maintenance Case, (May 6, 2008), <https://www.ftc.gov/news-events/press-releases/2008/05/ftc-modifies-order-nine-west-resale-> (Determining that Nine West's use of minimum RPM agreements did not "pose any potential competitive concerns" because of "among other things, 'its modest market share.' For more information, see In the Matter of Nine West Group Inc., FTC, File No. 981 0386, Docket No. C-3937.).

of fixing pricing or restricting output, merit *per se* treatment.⁶⁹⁶ Price fixing are arrangements among competitors to fix prices at a minimum, maximum or within some range.⁶⁹⁷ Price fixing agreements are almost always illegal, as they restrict competition and often result in higher prices.⁶⁹⁸ Therefore, courts established that where the vertical organizer has not only committed to vertical agreements, but has also agreed to participate in a horizontal [price-fixing] conspiracy among competitors, they need not consider whether such agreement restrain trade in the downstream market, because horizontal restraints are *per se* unlawful.⁶⁹⁹ For instance, the FTC challenged the cross-licensing of laser eye surgery technology between only two firms approved by the Food and Drug Administration, that violated antitrust law by creating a patent pool that raised prices and eliminate competition.⁷⁰⁰ More recently, in 2007 the British Airways was fined \$247 million in a dual action by the U.S. and the UK competition authorities for price fixing agreements in fuel surcharges on long-haul flights.⁷⁰¹ Staff members of the British Airways admitted that, between August 2004 and January 2006, colluded with the rival Virgin Atlantic Airways over the surcharges added to ticket prices in response to rising oil prices.⁷⁰²

The pleading problem in *per se* cases is that generally price-fixing schemes are often worked out in secret and can be hard to uncover without

⁶⁹⁶ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §2.3., §3.1., §3.4. and §5.1.; see also ABA Section of Antitrust Law, *supra* note 3, at 76 and Lyerla, *supra* note 125, at 57.

⁶⁹⁷ *Price Fixing*, FTC, (last accessed Febr. 11, 2019), <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/dealings-competitors/price-fixing>.

⁶⁹⁸ *Id.* See also *United States v. Gen. Elec. Co.*, 272 U.S. 476, 479, 490 (1926). (Holding that an owner of a product patent may condition a license to make and use, without granting a license to sell. In particular, the Court found it appropriate to allow the patent holder to condition a license to manufacture the product on the fixing of the first sale price of the patented product that it also manufactures.).

⁶⁹⁹ See *United States v. Apple, Inc.*, 791 F.3d 290, 324-25 (2d Cir. 2015); see also *Leegin*, 551 U.S. at 893.

⁷⁰⁰ See *Summit Techn. and VSIX, Inc.*, FTC Docket No. 9286 (Complaint March 24, 1998) (Competitive Impact Statement Regarding Consent Decree, Aug. 21, 1998), available at <https://www.ftc.gov/enforcement/cases-proceedings/summit-technology-inc-visx-inc-matter>. See also ABA Section of Antitrust Law, *supra* note 3, at 76 and Fed. Trade Comm'n & U.S. Dep't of Justice Press Release, *Summit and VISX Settle FTC Charges of Violating Antitrust Laws*, (Aug.21, 1998), <https://www.ftc.gov/news-events/press-releases/1998/08/summit-and-visx-settle-ftc-charges-violating-antitrust-laws>. (According to the Agencies: "the effect of this per-procedure fee was to fix and raise the price that doctors paid for PRK equipment and technology, and to deprive consumers of the benefits of competition." "[...] The Guidelines recognize that intellectual property licensing arrangements and patent pools may be procompetitive, but that antitrust concerns arise when an agreement or pool affects competition among companies that would have been competitors in the absence of the agreement.").

⁷⁰¹ Fiona Walsh, *BA fined £270m for Price Fixing*, (Aug.1, 2007), THE GUARDIAN, <https://www.theguardian.com/business/2007/aug/01/britishairways.theairlineindustry>.

⁷⁰² *Id.* see also *United States v. British Airways, PLC*, (Aug.1, 2007), DOJ, <https://www.justice.gov/atr/case/us-v-british-airways-plc>; see also *United States v. United States Gypsum Co.*, 336 U.S. 364 (1948) ("Patents grant no privilege to their owners of organizing the use of those patents to monopolize an industry through price control [...]").

access to discovery.⁷⁰³ However, the existence of conspiracy can be proved through circumstantial evidence, such as identical price contractual terms between parties, price behaviors or eyewitness testimony.⁷⁰⁴ However, fortunately price-fixing cartels are difficult to occur and maintain.⁷⁰⁵ Firstly, cartel members are hardly coordinated on the determination of the price to charge and/or on how to divide up the market.⁷⁰⁶ Secondly, even assuming that members found an agreement on the price, cartels are often inherently unstable, because each conspirator is tempted to charge a lower price or to sell more than its cartel allotment of goods.⁷⁰⁷

With regard to output restraints, in *Hartford-Empire Co. v. U.S.*⁷⁰⁸ the Supreme Court established that an agreement to restrict production, sales, or output among competitors is just as illegal as direct price fixing.⁷⁰⁹ In such circumstances, an agreement having an output restraint between parties in a horizontal relationship, drives up its price to the detriment of consumers.⁷¹⁰ For example, the FTC challenged an agreement among competing oil importers to restrict the imports and sales of lubricants in Puerto Rico.⁷¹¹ The agreement resulted in higher prices paid by consumers.⁷¹² The FTC alleged that the conspiracy was a *per se* illegal horizontal agreement “to restrict output that was inherently likely to harm competition and that had no countervailing efficiencies that would benefit consumers.”⁷¹³ By contrast, an agreement having an output restraint between parties in a vertically relationship is generally subject to the *rule of reason* analysis and the subsequent reasonableness test.⁷¹⁴

⁷⁰³ See Hovenkamp, *supra* note 644, at 90.

⁷⁰⁴ *Id.* See also Leslie, *supra* note 29, at 300.

⁷⁰⁵ *Id.*, at 299.

⁷⁰⁶ *Id.*

⁷⁰⁷ *Id.*; see also, Christopher R. Leslie, *Predatory Pricing and Recoupment*, 113 Colum. L. Rev. 1695, 1728–32 (2013).

⁷⁰⁸ 323 U.S. 386, 435 (1945).

⁷⁰⁹ See FTC, *supra* note 697.

⁷¹⁰ *Id.*; see also Lyerla, *supra* note 96, at 57.

⁷¹¹ See FTC, *supra* note 697; see also *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150 (1940) (condemning an agreement between two dominant oil companies that, to prevent oil prices from dropping, agreed to purchase it from independent refiners surplus gasoline, thereby creating a price floor for their own product. The Court ruled that such conduct was *per se* illegal).

⁷¹² *Id.*; see also United States of America Before Federal Trade Commission, In the Matter of American Petroleum Company, Inc., Docket No. C-4198 (Aug. 28, 2007), available at <https://www.ftc.gov/sites/default/files/documents/cases/2007/08/070828do0610229.pdf>.

⁷¹³ *Id.*; see also Fed. Trade Comm’n & U.S. Dep’t of Justice Press Release, FTC Charges Puerto Rico Lubricant Importer with Illegal Agreement, (June 14, 2007), <https://www.ftc.gov/news-events/press-releases/2007/06/ftc-charges-puerto-rico-lubricant-importer-illegal-agreement>. (“[The Commission] bars the company from agreeing, or attempting to agree, with any other lubricant seller to: 1) restrain, limit, or reduce the importation or sale of lubricants; or 2) deal with, refuse to deal with, threaten to refuse to deal with, boycott, or threaten to boycott any lubricant buyer or potential buyer.”) (*Id.*).

⁷¹⁴ See ABA Section of Antitrust Law, *supra* note 3, at 77; see also Lyerla, *supra* note 125, at 57 and *Atari Games v. Nintendo of Am., Inc.*, 897, F2d 1572, 1578 (Fed. Cir. 1990).

4.2.2. Territorial and Costumer Restraints

Territorial restraints and costumer restraints are subject to a similar analysis that distinguishes between horizontal and vertical restraints. A territorial restraint is a covenant limiting the geographic area in which parties can manufacture, sell or use the invention.⁷¹⁵ Vertical territorial restraints are generally governed by the *rule of reason* and are commonly deemed to be lawful, as they provide incentives for the licensees or distributors to locally commercialized the licensed product.⁷¹⁶ The *U.S. IP-Antitrust Guidelines* further recognize that territorial restrictions in IP licensing agreements may serve pro-competitive effects by allowing the owner to exploit its property and compete more effectively.⁷¹⁷ The Guidelines makes the example of company that develops and license a new copyrighted software through an arrangement that imposes both field of use and territorial restrictions.⁷¹⁸ Some licenses allow the use only in hospitals, and others only in group medical practices. The company charges different royalties to different users and each license allow the use of the licensed computer program only in particular portions of the U.S. and specified foreign countries. The licensees are free to develop, use, sell other computer programs, or to compete in separate goods or service markets. Moreover, none of the licensees is a competitor of the company. The Guidelines establish that the arrangement in question is merely a subdivision of the proprietor's IP among different fields of use and territories and does not appear likely to harm competition.⁷¹⁹

Courts have always given a less hostile treatment to territorial restrictions involving IPRs than have price-fixing agreements.⁷²⁰ This is partially due to the fact that some territorial restrictions involving IPRs find their justification in the Patent Act, that expressly provides that "an applicant, patent holder, or his assigns or legal representative may [...] grant and convey an exclusive right under his application for patent(s) to the whole or any specified part of the U.S."⁷²¹

⁷¹⁵ See ABA Section of Antitrust Law, *supra* note 3, at 80; see also Malcom E. Wheeler, *A Reexamination of Antitrust Law and Exclusive Territorial Grants by Patentees*, University of Pennsylvania L. Rev., Vol.119, No 04 (Feb. 1971), at 642.

⁷¹⁶ *Id.*; see also Lyerla, *supra* note 125, at 59; see also James R.Burley, *Territorial Restriction in Distribution Systems: Current Legal Developments*, Journal of Marketing 39, No. 4 (1975): 52-56.

⁷¹⁷ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §2.3; see also Peter J. Lettenberger, *Trade Regulations: Customer and Territorial Restrictions*, 47 Marq. L. Rev. 389 (1964), at 392.

⁷¹⁸ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §2.3 at Example 1.

⁷¹⁹ *Id.* At Example 1; see also ABA Section of Antitrust Law, *supra* note 3, at 81 and *United States v. Studiengesellschaft Kohle, G.m.b.H.*, 670 F.2d 1122, 1133 (D.C. Cir.1981), where the D.C. Circuit hold that territorial restraints on the sale of unpatented products made pursuant to a license under a process patent are analyzed by the *rule of reason*.

⁷²⁰ See *Hovenkamp*, *supra* note 644, at 1997.

⁷²¹ 35 U.S.C. §261; see also *Ehtyl Gasoline Corp. v. United States*, *supra* note 201, where the Supreme Court confirmed that a patentee "may grant licenses to make, use or vend, restricted in point of space or time, or with any other restriction upon the exercise of the granted privilege."

On this basis, courts often rely on the language of the Patent Act to allow territorial restrictions.⁷²² For instance, in *Brownell v. Ketcham Wire & Manufacturing Co.*, the Ninth Circuit observed that the patent licensing agreement between the parties, granting the sole and exclusive right in the U.S. and prohibiting sales or export of the article covered by the patents outside the U.S., did not violate antitrust laws.⁷²³ Accordingly, the intent of the agreement was to “honor the territorial limits of the license granted” and was therefore lawful.⁷²⁴

In contrast, territorial restraints employed to facilitate market-division among firms that would have been actual or potential competitors are typically treated as unlawful *per se*.⁷²⁵ More specifically, horizontal territorial restraints in licenses have been challenged by courts where the licensing agreement was considered as a sham license or a pretext to allocate markets among competitors.⁷²⁶ Similarly, territorial restraints imposed by the licensees themselves to avoid competition with each other may be deemed to be illegal.⁷²⁷ Consistent with this approach, courts have also repeatedly held that territorial restraints constitute a violation of antitrust law when they form part of a broader anticompetitive agreement among undertakings that would have competed absent the license restrictions.⁷²⁸ In such circumstances, courts noted that the licensees’ agreements and practices are evaluated as a whole, regardless of the potential legality of each agreement.⁷²⁹

Customer restraint is a practice of restricting customers to whom a dealer can sell.⁷³⁰ The DOJ considered for many years customer restrictions unlawful *per se*.⁷³¹ Today, like territorial restraints, agreements including a customer restraint among parties in a vertical relationship are generally analyzed under the *rule of reason*.⁷³² By contrast, customer restrictions among horizontal

However, “by attaching a condition to his license [the patentee] may not enlarge his monopoly and thus acquire some other which the statute and the patent together did not give.”

⁷²² See ABA Section of Antitrust Law, *supra* note 3, at 82.

⁷²³ *Brownell v. Ketcham Wire & Manufacturing Co.*, 211 F.2d 121 (9th Cir. 1954).

⁷²⁴ *Id.*, at 129-130. (“We hold that the licensing agreement is not illegal or unenforceable. It follows that the appellant unlawfully exercised control and dominion over [licensor]’s rights under the licensing agreement and that [licensor] was entitled to the relief granted by the trial court.”).

⁷²⁵ See ABA Section of Antitrust Law, *supra* note 3, at 80; see also Baumgartner, *supra* note 5, at 187.

⁷²⁶ See ABA Section of Antitrust Law, *supra* note 3, at 80.

⁷²⁷ *Id.*; see also *International World Processors v. Power Dry, Inc.*, 792 F.2d 416, 429 (4th Cir. 1986). (The case involved two corporations that used patent licenses to support a system of pervasive control in the paper towel cabinet and paper towel industry. The District Court held that “regardless of the possible legality of each of the agreements and practices standing alone, their total effect, qualified by the alleged unlawful purpose to restrain trade, will suffice to support the complaint against a motion to dismiss.”) (*Id.*, at 126).

⁷²⁸ See Baumgartner, *supra* note 5, at 188.

⁷²⁹ *Id.*; see also *United States v. Crown Zellerbach Corporation*, 141 F. Supp. 118 (N.D. Ill. 1956).

⁷³⁰ See Wheeler, *supra* note 715, at 398.

⁷³¹ *Id.*

⁷³² See Lyerla, *supra* note 125, at 57; see also U.S. IP-Antitrust Guidelines, *supra* note 37, at §2.3 and *Westinghouse Electric & Mfg. Co. v. Tri-City Radio Electric Supply Co.*, 23 F.2d 628 (8th Cir.

competitors are normally subject to a *per se* analysis.⁷³³ Finally, the patent exhaustion doctrine also apply to costumer restraints; as a consequence, if competition restrained after the first sale of the patented article, however, any attempt to impose restraints on resale may subject to challenge.⁷³⁴

4.2.3. Field of Use Restraints

Like the TTBER, also the *U.S. IP-Antitrust Guidelines* provide field of use restrictions that limit the industries or uses of which a licensed technology may be employed to a particular market or application.⁷³⁵ In exclusive field of use restraints the licensee is the only person authorized to exploit the invention in the field delimited by the licensor.⁷³⁶ The *U.S. IP-Antitrust Guidelines* do not distinguish between field of use restrictions and costumer restriction, covering both of them under licensing restraints.⁷³⁷

Under Section 1 of the Sherman Act the majority of field of use restraints are analyzed under the *rule of reason* and are commonly found lawful.⁷³⁸ The Guidelines acknowledge that field of use limitations “may serve procompetitive ends by allowing the licensor to exploit its property as efficiently and effectively as possible.”⁷³⁹ The Guidelines further state that such restraints may also incentive the licensor to license by protecting him “from competition in the licensor’s own technology in a market niche that it prefers to keep to itself.”⁷⁴⁰ In addition, field of use restrictions may allow the licensor to keep the monopoly in one market while benefitting from the advantages of licensing, such as royalty payments, in another field.⁷⁴¹

1927) (enforcing a license agreement that limited the sale of radio amateurs and radio experimenters to three classes of costumers).

⁷³³ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 84; and *United States v. Topco Assocs.*, 405 U.S. 496, 611-12 (1972).

⁷³⁴ See ABA Section of Antitrust Law, *supra* note 3, at 84. For instance, in *Quanta Computer, Inc., v. Elecs., Inc.*, 533 U.S.617 (2008), the Supreme Court recognized that “the patent rights [of the licensor] had been exhausted after the first unrestricted authorized sale by its licensee.” This case demonstrates that costumer restrictions may be challenged under the patent exhaustion doctrine. See also *Bownman v. Monstanto Co.*, 133 S.Ct. 1761 (2013).

⁷³⁵ See ABA Section of Antitrust Law, *supra* note 3, at 85; see also Lyerla, *supra* note 125, at 59. See also generally Joel A. Bleeke & James A. Rahl, *The Value of Territorial and Field-of-Use Restrictions in the International Licensing of Unpatented Know-How: An Empirical Study*, 1 Nw. J. Int’l L. & Bus. 450 (1979).

⁷³⁶ Jens Hackl, Wolfgang Schoenig & Jeff Jaeckel, *IP Licensing and Antitrust Law - What Companies Have to Consider When Doing Business in the U.S. and the EU*, LEXOLOGY, (last accessed Febr. 18, 2019), <https://www.lexology.com/library/detail.aspx?g=f1188c90-091f-4537-a750-14fa4df19d2c>.

⁷³⁷ See Blöndal, *supra* note 492, at §3.1.1.; see also Lyerla, *supra* note 125, at 57.

⁷³⁸ *Id.*

⁷³⁹ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §2.3.

⁷⁴⁰ *Id.*

⁷⁴¹ Thomas C. Meyers, *Field-of-Use Restrictions as Precompetitive Elements in Patent and Know-How Licensing Agreements in the United States and the European Communities*, 12 Nw. J. Int’l L. & Bus. 364 (1991-1992), at 366.

The U.S. approach to field of use restraints in licensing arrangements is reflected in *General Talking Pictures Corp. v. Western Electric Co.*, where the Supreme Court held that patentee may use licenses to impose post-sale field of use restrictions on purchasers as long as they remain within the scope of the patent.⁷⁴² In that case, the licensing agreement between the parties contained a clause restricting the licensee the right to manufacture and sell patented amplifiers in the private home as opposed to commercial fields.⁷⁴³ However, the licensee ignored the field of use limitation and sold some amplifiers manufactured by it to the *General Talking Picture* for commercial use in theaters.⁷⁴⁴ The Court held the restriction to be a lawful exploitation of the patents, “rather than improper attempts to extend the ‘patent monopoly.’”⁷⁴⁵ The Court found that since the owner of the patent is able to license his asset to make, use or sell the invention he should also be allowed to alienate part of it, thereby restricting the licensee to a particular field.⁷⁴⁶ Accordingly:

It is common practice where a patented invention is applicable to different uses, to grant written licenses to manufacture [...] restricted to one or more of the several fields of use permitting the exclusive or nonexclusive use of the invention by the licensee in one field and excluding it in another field.⁷⁴⁷

Consistent with the Supreme Court approach, in *Mallinckrodt, Inc. v. Medipart, Inc.* the Federal Circuit confirmed that anticompetitive effects that are not *per se* violations of law, including field of use restrictions, “are reviewed in accordance with the *rule of reason*.”⁷⁴⁸ In other words, as long as licensor and

⁷⁴² *General Talking Pictures Corp. v. Western Electric Co.*, 304 US 175 (1938); see also Blöndal, *supra* note 469, at §3.1.1; see also Stefan M. Meisner, *Supreme Court to Patent Holders: Sell Product Anywhere, Exhaust Patent Rights Everywhere*, (May 31, 2017), <https://www.mwe.com/insights/supreme-court-to-patent-holders-sell-product/>.

⁷⁴³ See Meyers, *supra* note 741, at 383.

⁷⁴⁴ *Id.*

⁷⁴⁵ See ABA Section of Antitrust Law, *supra* note 3, at 85.

⁷⁴⁶ See Blöndal, *supra* note 492, at §3.1.1.

⁷⁴⁷ See *General Talking Picture*, *supra* note 742, at 293. Justice Brandeis’ dissented to the majority opinion and observed that by allowing of field of use restrictions the area of patent monopoly would inevitably expand. He further noted that “since the amplifiers were made and sold outside the scope of the license the effect is precisely the same as if no license whatsoever had been granted to Transformer Company. And as [the licensee] knew the facts, it is in no better position than if it had manufactured the amplifiers itself without a license. It is liable because it used the invention without license to do so.” (See *General Talking Pictures*, 305 U.S. at 127).

⁷⁴⁸ *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700 (Fed. Cir. 1992). See also Mark Patterson, *Contractual Expansion of the Scope of Patent Infringement through Field-of-Use Licensing*, 49 Wm. & Mary L. Rev. 157 (2007-2008), at §3. See also *Braun Medical v. Abbott Laboratories*, 124 F.3d 1419, 1427 (Fed. Cir. 1997) at 1426. (“Holding that “field of use restrictions are generally upheld [...] and any anticompetitive effects may cause are reviewed in accordance with the *rule of reason*.”)

the licensee are in a vertical relationship, a field of use restriction is subject to the *rule of reason* analysis as any other vertical non-price restraint.⁷⁴⁹

In *Monsanto Co. v. Scruggs*, Monsanto licensed its biotechnology for herbicide and insect resistance, allowing the licensees to produce seeds for genetically modified crop.⁷⁵⁰ The licenses also restrict the licensees from supplying and selling seed containing Monsanto's technology to growers unless the growers entered into a valid and written license arrangement and agree to grow only a single commercial crop.⁷⁵¹ In evaluating the validity of the no-replanting use restriction, the Federal Circuit noted that:

Monsanto has a right to exclude others from making, using, or selling its patented plant technology, and its no replant policy simply prevents purchasers of the seeds from using the patented biotechnology when that biotechnology makes a copy of itself. This restriction therefore is a valid exercise of its rights under the patent laws.⁷⁵²

However, post-sale field of use restrictions law may be declared unenforceable under the patent exhaustion doctrine.⁷⁵³ In *Quanta Computer Inc. v. LG Electronics Inc.*, the Supreme Court unanimously ruled that, under the first sale doctrine of patent law, the monopoly granted to the patent owner has been exhausted after the first sale of an article embodying the patent.⁷⁵⁴ In the case at issue, Intel was creating computer chips and microprocessors under license from LG, in an agreement that allowed Intel to manufacture and sell microprocessors that use the LG patent.⁷⁵⁵ At the same time the agreement provided that chips

⁷⁴⁹ See Hovenkamp et al. *supra* note 25, at §33.4. For instance, a field of use restraint is vertical when the licensee does not manufacture the patented good, but rather licenses different licensees to serve different users or classes of costumers. (*Id.*)

⁷⁵⁰ *Monsanto Co. v. Scruggs*, 459 F.3d 1328 (Fed. Cir. 2006). See also Federal Circuit IP Decisions, *Patentee May Regulate Use of Subsequent Generations of Patented Self-Generating Biotechnology*, (last accessed Febr. 19, 2019), <https://www.finnegan.com/en/tools/monsanto-company-v-scruggs-et-al/analysis.html>.

⁷⁵¹ *Id.*; see also Monsanto Technology/Stewardship Agreement (Dec. 15, 2010), available at https://thefarmerslife.com/wp-content/uploads/2012/02/scan_doc0004.pdf.

⁷⁵² See *Monsanto Co. v. Scruggs*, *supra* note 722, at 33. See also *Monsanto Co. v. McFarling*, 302 F.3d 1292 (Fed. Cir. 2002).

⁷⁵³ See ABA Section of Antitrust Law, *supra* note 3, at 88.

⁷⁵⁴ 553 U.S. 617 (2008) at 638 ("Authorized sale of an article that substantially embodies a patent exhausts the patent holder's rights and prevents the patent holder from invoking patent law to control postsale use of the article."). See also William D. Coston, *The Patent-Antitrust Interface: Are There Any No-No's Today*, VENABLE LLP, (Jan. 2013), <https://www.venable.com/insights/publications/2013/01/the-patentantitrust-interface-are-there-any-nonos>. See also Michael Mutter, *Quanta Exhaustion and its Effect on Licensing*, World Intellectual Property Rev., (March/April 2012).

⁷⁵⁵ Lucas Dahlin, *When Is a Patent Exhausted? Licensing Patents on a Claim-By-Claim Basis*, 90 Chi.-Kent L. Rev. 757 (2015), at 778. See also Emily Van Vliet, *Quanta and Patent Exhaustion: The Implications of the Supreme Court's Decision in Quanta Computer, Inc. v. LG Electronics, Inc. One Year Later*, 11 Minn. J.L. Sci. & Tech. 453 (2010), at 462. The license did stipulate that "no license is granted by either party hereto [...] to any third party for the combination by a third party of Licensed Products of either party with items, components, or the like acquired [...] from

and processors were not to be combined with non-Intel products.⁷⁵⁶ Intel started selling the computer chips and microprocessors to Quanta Computer, Inc.⁷⁵⁷ The accused infringer Quanta purchased products embodying the invention from Intel.⁷⁵⁸ The court found this to be a post-sale restraint and as such likely to enter within the application of the patent exhaustion doctrine.⁷⁵⁹ LG patents were exhausted when Intel sold the chips and microprocessors to Quanta and, as a consequence, the patents holder LG could not invoke its method patent claims against Quanta.⁷⁶⁰

4.2.4. Exclusive Restraints in Licensing Agreements

Exclusive licensing refers to the practice of limiting the ability of the licensor to license third parties and also to use the technology itself.⁷⁶¹ Although the Guideline's definition is not particularly clear, it is acknowledged that an exclusive license commonly refers to the licensor who transfer its right to practice the invention.⁷⁶² On the other hand, a non-exclusive license grants the licensee the right to use the invention but not on a non-exclusive basis.⁷⁶³ This means that the licensor can exploit the IPRs and he can also allow other licensees to exploit the invention as well.⁷⁶⁴

The Patent Act expressly recognizes exclusive restraints, providing that a patent holder may "grant and convey an exclusive right under his application for patent, or patents, to the whole or any specified part of the United States."⁷⁶⁵ Along this line, courts has largely recognized the patent holder's rights to assign to another its patent, as well as to grant exclusive and non-exclusive licenses.⁷⁶⁶

sources other than a party hereto, or for the use, import, offer for sale or sale of such combination." (See *Quanta*, 128 S. Ct. at 2113).

⁷⁵⁶ See Dahlin, *supra* note 755, at 762.

⁷⁵⁷ *Id.*

⁷⁵⁸ Michael J. Kasdan, *Quanta Computer v. LG Electronics: Will the Supreme Court Revive the Exhaustion Doctrine?*, Amster, Rothstein & Ebenstein, LLP, (Jan. 2008), https://www.arelaw.com/downloads/ARElaw_ExhaustionDoc.pdf.

⁷⁵⁹ See Dahlin, *supra* note 755, at 762.

⁷⁶⁰ See ABA Section of Antitrust Law, *supra* note 19, at 88; see also Krishan Y. Thakker, *Will High Court Take On Patent Exhaustion?*, Law360, (Oct. 13, 2016), https://www.sterneckessler.com/sites/default/files/201711/Will_High_Court_Take_On_Patent_Exhaustion.pdf.

⁷⁶¹ U.S. *IP-Antitrust Guidelines*, *supra* note 37, *supra* note 27, at §4.1.2.

⁷⁶² See ABA Section of Antitrust Law, *supra* note 3, at 94.

⁷⁶³ European IP Helpdesk, *What is the Difference Between an Exclusive and a Non-Exclusive Licence?*, (last accessed March 21, 2019), <http://www.iprhelpdesk.eu/node/3189>.

⁷⁶⁴ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 94.

⁷⁶⁵ 35 U.S.C. § 261.

⁷⁶⁶ See ABA Section of Antitrust Law, *supra* note 3, at 94; see also Lyerla, *supra* note 96, at 60. See *Radio Corp. v. Hazeltine Research*, 395 U.S. 100, 135-136 (1969) ("The law also recognizes that he may assign to another his patent, in whole or in part, and may license others.") to practice his invention and *Genentech, Inc. v. Eli Lilly & Co.*, 998 F.2d 931, 949 (Fed. Cir. 1993). ("The patenting and licensing of the results of University research is not a violation of antitrust principles,

Non-exclusive licensing are basically agreements not to sue for infringement and do not generally raise antitrust concerns.⁷⁶⁷ This is true also even if the contracting parties are in a horizontal relationship, as the Guidelines establish that a non-exclusive license “normally does not diminish competition that would occur in its absence.”⁷⁶⁸ However, when the parties are competitors antitrust concerns may arise in some circumstances.⁷⁶⁹ For instance, cross licensing agreements or grantbacks provisions may have anti-competitive effects when concluded by parties with a significant market power over the marketplace.⁷⁷⁰ In any case, merely granting an exclusive license, even between parties in a horizontal relationship, normally does not *per se* violate antitrust law or constitute misuse.⁷⁷¹ Indeed, the grant of an exclusive license constitute the legitimate exercise of a statutory right expressly recognized by the *IP-Antitrust Guidelines*, as well as by the Patent Act.⁷⁷² Therefore, evidence of anti-competitive effects or conspiracy are necessary for an exclusive license agreement to be subject to antitrust scrutiny.⁷⁷³

The Guidelines also provide exclusive dealing, i.e. another form of exclusivity occurring when “a license agreement prevents or restrains the licensee from licensing, selling, distributing or using competing technologies.”⁷⁷⁴ Exclusive dealing arrangements may harm competition by foreclosing competitors of the supplier from the market or by raising the competitors’ costs of obtaining inputs or facilitating anticompetitive pricing.⁷⁷⁵ However, exclusive

and the grant of an exclusive license is a lawful incident of the right to exclude provided by the Patent Act.”).

⁷⁶⁷ See ABA Section of Antitrust Law, *supra* note 3, at 94. See also *Intellectual Prop. Dev. v. TCI Cablevision*, 248 F.3d 1333, 1345 (Fed. Cir. 2011). (Holding that a non-exclusive patent license is “a covenant by the patent owner not to sue the licensee for making, using, or selling the patented invention and under which the patent owner reserves the right to grant similar licenses to other entities.”)

⁷⁶⁸ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, *supra* note 27, at §4.1.2.

⁷⁶⁹ See Lyerla, *supra* note 125, at 61.

⁷⁷⁰ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.1.2. The Guidelines further note that “the antitrust principles that apply to a licensor’s grant of various forms of exclusivity to and among its licensees are similar to those that apply to comparable vertical restraints outside the licensing context, such as exclusive territories and exclusive dealing.”

⁷⁷¹ See ABA Section of Antitrust Law, *supra* note 3, at 95.

⁷⁷² *Id.*

⁷⁷³ *Id.*; see also Lauren N. Norris, *Exclusive Dealing: An Antitrust Analysis*, ABA, (May 16, 2012), https://www.americanbar.org/groups/young_lawyers/publications/the_101_201_practice_series/exclusive_dealing_an_antitrust_analysis/.

⁷⁷⁴ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.1.2. The Guidelines further underline that exclusivity can be contained in the license agreement in the form of an explicit dealing term or other compensation terms or economic incentives (*Id.*) See also Alden F. Abbott & Joshua D. Wright, *Antitrust Analysis of Tying Arrangements and Exclusive Dealing*, George Mason Law & Economics Research Paper No. 08-37, at 17; *Antitrust law and Economics*, Keith N. Hylton, ed., Edward Elgar Publishing (2009).

⁷⁷⁵ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.1.2. “(Before anticompetitive foreclosure can occur a firm with a relatively large percentage of upstream market must foreclose a significant percentage of access to downstream market.)” (Hovenkamp, 2016).

dealing agreements between retailers and manufactures are generally lawful and subject to the *rule of reason* analysis which balances the procompetitive and anticompetitive effects.⁷⁷⁶ In *Tampa Electric v. Nashville Coal Co.*, the Supreme Court held that an exclusive dealing agreement does not violate antitrust laws unless the performance of such contract “will foreclose competition in a substantial share of the line of commerce affected.”⁷⁷⁷ In addition, the threatened foreclosure of competition must be in relation to the share of the commerce affected.⁷⁷⁸ Along this line, the *U.S. IP-Antitrust Guidelines* provide that, in evaluating the reasonableness of an exclusive dealing agreement, the Agencies will take into account all the pro-competitive effects of such agreement.⁷⁷⁹ Indeed, the majority of exclusive dealing arrangements are beneficial because they encourage the licensee to market and develop the licensed technology and to specialize in promoting the technology, thereby supporting the manufacturer’s brand.⁷⁸⁰ In addition, such arrangements may address problems of free riding between suppliers and may allow them to control distribution quality more easily.⁷⁸¹ Given the potential consumer benefits that flow from exclusivity, a plaintiff to prevail needs to prove a number of factors, including the defendant’s market power, a substantial degree of foreclosure, barriers to entry, the presence of actual or potential anticompetitive effects and deterrence of potential competitors.⁷⁸²

⁷⁷⁶ *Exclusive Dealing or Requirements Contracts*, FTC, (last accessed March 1, 2019), <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/dealings-supply-chain/exclusive-dealing-or>.

⁷⁷⁷ *Tampa Electric v. Nashville Coal Co.*, 365 U.S. 320 (1961) at 327.

⁷⁷⁸ *Id.* (“First, the line of commerce, i.e., the type of goods, wares, or merchandise, etc., involved must be determined, where it is in controversy, on the basis of the facts peculiar to the case. Second, the area of effective competition in the known line of commerce must be charted by careful selection of the market area in which the seller operates, and to which the purchaser can practicably turn for supplies.”) (*Id.*). See also *Standard Oil Co. v. United States*, 337 U.S. 293 (1949), where the Supreme Court introduced the so-called “quantitative substantiality test”. that evaluates the percentage of the market foreclosed to competitors resulting from the conclusion of the agreement.

⁷⁷⁹ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §4.1.2.

⁷⁸⁰ *Id.* (“If the Agencies determine that a particular exclusive dealing arrangement may have an anticompetitive effect, they will evaluate the extent to which the restraint, encourages licensees to develop and market the licensed technology, increases licensors’ incentives to develop or refine the licensed technology, or otherwise increases competition and enhances output in a relevant market.”) (*Id.*, at at §5.4.)

⁷⁸¹ Alden F. Abbott, Fed. Trade Comm’n General Counsel, *Exclusive Dealing and Competition: A US FTC View*, CN Workshop, Stellenbosch, South Africa, (Nov. 2, 2018), https://www.ftc.gov/system/files/documents/public_statements/1421189/abbott_-_icn_workshop_11-2-18.pdf.

⁷⁸² See Abbott & Wright, *supra* note 774, at 20. (“In order to succeed in its claim of unlawful exclusive dealing a plaintiff must show the requisite agreement to deal exclusively and make a sufficient showing of power to warrant the inference that the challenged agreement threatens reduced output and higher prices in a properly defined market [...] Then it must also show foreclosure coverage sufficient to warrant an inference of injury of competition [...] depending on the existence of other factors that give significance to a given foreclosure percentage, such as

The Guidelines further highlight that courts and Agencies will mostly focus on the practical effects of the agreement (and not on the letter of the agreement).⁷⁸³ As largely discussed, generally non-exclusive dealing agreements do not raise antitrust concerns.⁷⁸⁴ However, the Guidelines explains that a denominated ‘non-exclusive’ licensing or dealing agreement may nonetheless “have the effect of exclusive licensing if it is structured so that the licensor is unlikely to license others or to practice the technology itself.”⁷⁸⁵ For instance, a non-exclusive dealing agreement may increase the licensee’s cost when it use competing technologies.⁷⁸⁶

Finally, both the courts and Agencies will also take into account the length of the agreement in question.⁷⁸⁷ To this extent, many courts found that exclusive dealing contracts of short duration and early terminability are generally considered to be less problematic, and sometimes even presumptively lawful when they last for up to two years.⁷⁸⁸ Other courts, instead, noted that in some cases the short duration of a contract is not enough to exclude liability under antitrust laws.⁷⁸⁹

4.2.5. Tying Arrangements

The *U.S. IP-Antitrust Guidelines* and courts define a ‘tying,’ ‘tie-in,’ or ‘tied sale’ arrangement as “an agreement by a party to sell one product . . . on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that [tied] product from any other supplier.”⁷⁹⁰ In many cases is easy to determine whether two products are capable of being tied together, as in the case of land and transport services, computers and software,

contract duration, presence or absence of high entry barriers, or the existence of alternative sources or resale.”). See also *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §5.4.

⁷⁸³ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §4.1.2.

⁷⁸⁴ *Id.*; see also FTC, *supra* note 776.

⁷⁸⁵ *Id.*

⁷⁸⁶ *Id.* However, an arrangement will not be automatically categorized as exclusive merely because a party chooses to deal with a single licensor or licensee, or to restrict its activity to a single field of use or location, or because only a single licensee took the license. Instead, also in those case the *rule of reason* applies. (*Id.*)

⁷⁸⁷ *Id.*

⁷⁸⁸ See ABA Section of Antitrust Law, *supra* note 3, at 101. See also *Omega Environmental, Inc. v. Gilbarco, Inc.*, 127 F.3d 1157 (9th Cir. 1997) at 1163 and *Roland Mach. v. Dresser Indus.*, 749 F.2d 380, 395 (7th Cir. 1984) (holding that contracts terminable in less than a year are normally deemed to be lawful). See also *CDC Techs., Inc. v. IDEXX Labs., Inc.*, 186 F.3d 74, 81 (2d Cir. 1999) (distributors only provided sales leads and sales increased after competitor imposed exclusive dealing arrangements).

⁷⁸⁹ See *U.S.v. Dentsply Intern., Inc.*, 399 F.3d 181 (3d Cir. 2005). See also Abbott, *supra* note 781.

⁷⁹⁰ See *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §5.3. See also *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 462 (1992).

projectors and motion pictures.⁷⁹¹ In other cases, instead, the actual analysis of the compatibility of two products or services it's more complex, as in the case of a remote control airplane sold with batteries included.⁷⁹² In any event, the tying condition must be of something that prevents or disincentives a customer from purchasing the goods separately, for example through a discount to the buyers when buy the products together or a functional design that forces the costumer to use the two products together.⁷⁹³

The U.S. courts' approach to tying arrangements has considerably changed over time, as a reflection of the evolution within the field of IP. As largely discussed in the first chapter of this work, in the past patent rights were considered to be a form of monopoly. As a consequence of this misconception of IPRs, most older cases considered tying agreements as an attempt to extend the 'patent monopoly' to unpatented products and to restraint competition in the market of tied product.⁷⁹⁴ For these reasons, federal courts have long categorized tying arrangements as *per se* illegal.⁷⁹⁵ However, in *Illinois Tool Works v. Independent Ink.*, the Supreme Court in affirming that a patents do not necessarily confer market power, went further and held that "in all cases involving a tying arrangement, the plaintiff must prove that the defendant has a substantial market power in the tying product."⁷⁹⁶ To establish that a tying agreement constitutes a *per se* violation of Section 1 or Section 3 of the Clayton Act, plaintiff has to show (1) the existence of two separate products or services: the tying and the tied product⁷⁹⁷ (2) evidence in a sale or agreement of coercion or conditioning sale of

⁷⁹¹ Kate Wallace, *The Wonderful World of Tying*, ABA, (Aug. 27, 2013), https://www.americanbar.org/groups/young_lawyers/publications/the_101_201_practice_series/the_wonderful_world_of_tying/.

⁷⁹² *Id.*

⁷⁹³ Hovenkamp, Erik & Hovenkamp, Herbert J., *Tying Arrangements*, Faculty Scholarship. 1902, (2015), at 220. (Indeed, "if customers are not interested in purchasing the products separately, there is little risk the tie could foreclose any separate sales of the products.") (See Wallace, *supra* note 791).

⁷⁹⁴ See ABA Section of Antitrust Law, *supra* note 3, at 106. See also James F. Ponsoldt & Christopher D. David, *Comparison between U.S. and E.U. Antitrust Treatment of Tying Claims against Microsoft: When Should the Bundling of Computer Software Be Permitted*, 27 Nw. J. Int'l L. & Bus. 421 (2006-2007), 1t 424. See also e.g., *United States v. Paramount Pictures, Inc.*, 334 U.S. 131, 156-58 (1948) (copyrights) and *Int'l Salt Co. v. United States*, 332 U.S. 392 (1947) (Affirming that "the tendency of the arrangement to accomplishment of monopoly seems obvious."). The traditional argument against tying arrangement, under which the undertaking's intent is to extend monopoly power of the tying product over the market for the tied product, was mainly support by the Leverage School. Many scholars argued that tying agreements must be condemned, as they restrict competition in the tied product market and they force consumer to make unwanted purchases (See Leslie, *supra* note 29, at 135).

⁷⁹⁵ See Leslie, *supra* note 29, at 138.

⁷⁹⁶ 547 U.S. 28 (2006).

⁷⁹⁷ See *Jefferson Parish*, *supra* note 95, at 21-22 ("[It is] it clear that a tying arrangement cannot exist unless two separate product markets have been linked."). In *Jefferson Parish* the Supreme Court further held that "the answer to the question whether one or two products are involved turns not on the functional relation between them, but rather on the character of demand for the two items." (*Id.* at 2).

one item on purchase of the other⁷⁹⁸ (3) the seller has sufficient market power in the tying product market to restrict trade in the market for the tied product⁷⁹⁹, and (4) the involvement of a not substantial amount of interstate commerce in the tied market.⁸⁰⁰ There is a controversial fifth element requiring the plaintiff to demonstrate anticompetitive effects in the tied market.⁸⁰¹ The most common harm is ‘foreclosure’, which entails that the tying agreement excludes one or more competing sellers from the tied products’ market.⁸⁰² In any case, if there is no basis for a *per se* analysis, there still may be a tying claim under the *rule of reason*.⁸⁰³ In *Jefferson Par. Hosp. Dist. No. 2 v. Hyde*, the Supreme Court explained that the fact that a purchaser is ‘forced’ to buy a product he would not have otherwise bought even from another seller, “does not necessarily imply an “adverse impact on competition.”⁸⁰⁴ Instead, for tying arrangement to hinder competition there would have to be an exclusionary effect on other sellers.⁸⁰⁵

The *U.S. IP-Antitrust Guidelines* has taken note of this change of perspective and suggest that, even if antitrust concerns may arise, tying agreements may nonetheless have procompetitive effects and significant efficiencies.⁸⁰⁶ The Agencies, in assessing such agreements would consider both the anti-competitive and pro-competitive benefits of tying agreements under the *rule of reason* approach.⁸⁰⁷ The Guidelines further explain that “Agencies would

⁷⁹⁸ See *Ungar v. Dunkin' Donuts of Am., Inc.*, 531 F.2d 1211, 1218 (3d Cir. 1976), cert. denied, 429 U.S. 823 (1977). (“[C]oercion is implicit -both logically and linguistically- in the concept of leverage upon which the illegality of tying is premised: the seller with market power in one market uses that power as a ‘lever’ to force acceptance of his product in another market. If the product in the second market would be accepted anyway, because of its own merit, then, of course, no leverage is involved.”). See also Hovenkamp et al. *supra* note 14, at §22.3. (“Relevant coercion can occur either when the licensor refuses to license its IPRs except in bundles or packages, or when the licensor’s royalty structure is such that the price of licensing the bundle or package is significantly lower than the price of separate licensing and the difference cannot be justified by the lower cost of package licensing.”).

⁷⁹⁹ See *Illinois Tool Works v. Independent Ink.*, *supra* note 108, at 35. See also Hovenkamp et al. *supra* note 14, at §22.3. (“The market power question is not the ability to charge a supra-competitive price in the abstract, but rather the ability to exclude rival producers from the market.”).

⁸⁰⁰ See ABA Section of Antitrust Law, *supra* note 3, at 106; see also Lyerla, *supra* note 125, at 65.

⁸⁰¹ See ABA Section of Antitrust Law, *supra* note 3, at 104; see also Lyerla, *supra* note 125, at 65 and IP-Antitrust Guidelines, *supra* note 27, at §5.3.

⁸⁰² See also Hovenkamp et al. *supra* note 14, at §22.3. (“[Indeed], in the tying case, the buyer takes the tied product from the defendant rather than the alternative seller, who is then foreclosed from the market to the extent of the defendant’s tied product sale.”) (*Id.*)

⁸⁰³ See ABA Section of Antitrust Law, *supra* note 3, at 105.

⁸⁰⁴ See *Jefferson Parish*, *supra* note 93, at 2.

⁸⁰⁵ Koren W. Wong-Ervin, Evan Hicks, & Ariel Slonim, *Tying and Bundling Involving Standard-Essential Patents*, Geo. Mason L. Rev., Vol. 24:1092, (2017), T 1093.

⁸⁰⁶ See U.S. IP-Antitrust Guidelines, *supra* note 37, at §5.3.

⁸⁰⁷ *Id.* (“Although tying arrangements may result in anticompetitive effects, such arrangements can also result in significant efficiencies and procompetitive benefits. In the exercise of their prosecutorial discretion, the Agencies will consider both the anticompetitive effects and the efficiencies attributable to a tie-in.”) (*Id.*)

be likely to challenge a tying arrangement if: (1) the seller has market power in the tying product, (2) the arrangement has an adverse effect on competition in the relevant market for the tying product or the tied product, and (3) efficiency justifications for the arrangement do not outweigh the anticompetitive effects.”⁸⁰⁸

Indeed, antitrust policy generally tolerates tying agreements and recognizes that in some circumstances they may even yield significant benefits to competition and consumers at large.⁸⁰⁹ For instance, courts have considered customers satisfaction among possible justifications for ties.⁸¹⁰ The creator of a novel or a television show, for example, is generally justified in licensing the entire series as a package because in this way maximizes both the output and revenue and satisfies consumer preferences as well.⁸¹¹ Moreover, selling two products together can substantially reduce manufacturer’s costs for packaging, shipping and promoting the products.⁸¹² Attorney Chemtob points out that also licensing SEPs with non-SEPs might be beneficial and pro-competitive, provided that rights holders do not use their market power to coerce payment for non-SEPs.⁸¹³

The *IP-Antitrust Guidelines* further provide that “package licensing, i.e. the licensing of multiple items of IP in a single license or in a group of related licenses—may be a form of tying arrangement if the licensing of one IPR is conditioned upon the acceptance of a license of another, separate IPR.”⁸¹⁴ Attorney Chemtob explain that in this case the question is whether it is appropriate to be able to license a portfolio as a package rather on patent by patent basis. Like tying arrangements, also package licensing may benefit competition and have the potential to outweigh competition concerns associated with tying.⁸¹⁵ For instance, a R&D company might offer a package license of patent rights to radio manufactures to reduce transaction costs resulting from the

⁸⁰⁸ *Id.* In contrast to Lavarage scholars, members of Chicago School don’t see tying arrangements as a mean to harm competition in the tied product market, but rather as a mean to effect price discrimination. According to this theory, the tying seller may charge costumers different prices, for example by reducing the price of the tying product and charging higher price for the tied product, to be used in conjunction with the tying product. (See Leslie, *supra* note 29, at 136).

⁸⁰⁹ Joseph P. Bauer, *A Simplified Approach to Tying Arrangements: A Legal and Economic Analysis*, 33 Vand. L. Rev. 283 (1980)., at 287. See also Hovenkamp et al. *supra* note 25, at §22.3.

⁸¹⁰ See ABA Section of Antitrust Law, *supra* note 3, at 106.

⁸¹¹ See Hovenkamp et al., *supra* note 25, at §22.5. The authors make the example of a TV series called ‘Seinfeld’ that is a single legal product for tying purposes. It runs weekly at a regular and previously announced time slot.

⁸¹² *Tying the Sale of Two Products*, FTC, (last accessed March 6, 2019), <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/single-firm-conduct/tying-sale-two-products>. In addition, a tie arrangement may be justified where improves products quality or distribution. (See Wallace, *supra* note 791).

⁸¹³ See also Japan Patent Office, Guide to Licensing Negotiations Involving Standard Essential Patents, (June 5, 2018), <https://www.meti.go.jp/press/2018/06/20180605003/20180605003-2.pdf>.

⁸¹⁴ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.3.

⁸¹⁵ *Id.*

negotiation of separate licensing for every single IPR.⁸¹⁶ However, a package restraint may be illegal and constitute misuse when the license has been forced to license the package as a condition for licensing a desired IPR.⁸¹⁷ In any case, the Guidelines establish that if a package license constitutes a tying arrangement, the Agencies will evaluate its competitive effects under the same principles described above.⁸¹⁸

4.2.6. *Grant-back Provisions*

As already discussed in the first chapter of this work, a grant-back is a provision under which a licensee grants the licensor of IP the right to use any licensee's improvements to the licensed technology or new application obtained in using the licensed technology.⁸¹⁹ Grant-backs might be either exclusive or non-exclusive. Non-exclusive grant-back clauses are virtually always pro-competitive and allow the original licensor to use the improvements but also to license to others as well.⁸²⁰ As the *IP-Antitrust Guidelines* explain:

Grant-backs can have procompetitive effects, especially if they are nonexclusive. Such arrangements provide a means for the licensee and the licensor to share risks and reward the licensor for making possible further innovation based on or informed by the licensed technology, and both of these benefits promote innovation in the first place and promote the subsequent licensing of the results of the innovation.⁸²¹

Contractual grant-back clauses are often employed in licensing agreements to allow the licensor to obtain control over any development or

⁸¹⁶ See ABA Section of Antitrust Law, *supra* note 3, at 112. See also *Automatic Radio Mfg. Co. v. Hazeltine Research*, 339 U.S. 827 (1950).

⁸¹⁷ See Lyerla, *supra* note 125, at 66.

⁸¹⁸ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.3.

⁸¹⁹ *Id.*, at §5.6. See also *Transparent-Wrap Match v. Stokes & Smith Co.*, 329 U.S. 637, 646 (1947).

⁸²⁰ See ABA Section of Antitrust Law, *supra* note 3, at 136; see also Hovenkamp et al. *supra* note 14, at §25.2 ("Nonexclusive grantback provisions have been condemned only infrequently, and then only when court found them illegal in conjunction with other practices."). See e.g. *Binks Mfg. Co. v. Ransburg Electro-Coating Corp.*, 281 F.2d 252, 259 (7th Cir. 1960) (Approving nonexclusive grantback clause). See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.6. ("Such a grantback provision may be necessary to ensure that the licensor is not prevented from effectively competing because it is denied access to improvements developed with the aid of its own technology.").

⁸²¹ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.6.; see also Keld Laursen et al., *Cooperation or Competition: Grant-Back Clauses in Technology Licensing Contracts*, University of Cambridge /The Moeller Centre, (June 2012), at 1, https://conference.druid.dk/acc_papers/flxv2ovbg6hajpvt0eu6ldrog3ob.pdf. ("The grant-back clause is designed to manage the potential loss of competitive position experienced by the licensor due to learning and follow-on invention effects of the licensee.").

technological improvements to his patent.⁸²² Such provisions further allow the licensor to avoid any future competitive pressures from the licensees.⁸²³ Essentially, the *ratio* of such provisions is to help the parties to maximize the overall efficiency of their licensing relationship.⁸²⁴

On the other hand, according to the Guidelines, grant-back clauses may adversely affect competition if are likely to substantially reduce “licensees incentives to invest in improving the licensed technology.”⁸²⁵ The Guidelines further evidence that exclusive grant-backs are more likely to harm competition than do non-exclusive grant-backs provisions.⁸²⁶ In *Transparent-Wrap Machine Corp. v. Stokes & Smith Co.*⁸²⁷, the Supreme Court observed that a provision asking the licensee to allocate improvement patents to the licensee was not unlawful and unenforceable *per se*.⁸²⁸ The Court, however, explained that this does not mean that grant-backs could not be subject to antitrust scrutiny and they even could be deemed illegal where they allow firms to accumulate patents to exercise *de facto* monopoly.⁸²⁹

In this regard, the Agencies in evaluating the reasonableness of grant-back clauses pursuant to the *rule of reason* will take into account, among others, whether the licensor has market power in the relevant market.⁸³⁰ In assessing grant-backs’ effects on competition, the Agencies will balance the potential efficiencies of increasing incentive to innovate and the potential negative effects of reducing innovation in a relevant R&D market.⁸³¹ Finally, the Agencies will also

⁸²² Richard L. Schmalbeck, *The Validity of Grant-Back Clauses in Patent Licensing Agreements*, 42 University of Chicago L. Rev. 733-748 (1975), at 734. The scope of grant-backs can be defined as ‘narrow’ or ‘broad’. While ‘broad’ clauses require the licensee to grant-back all the technological improvements related to the licensed patent, ‘narrow’ provisions merely cover those inventions and acquisitions strictly related to the patent.

⁸²³ *Id.*, at 735. (“A patentee may prefer not to sell rights to his patent without the assurance that he will not be forced to compete with his licensees at his disadvantage.”).

⁸²⁴ *Id.*

⁸²⁵ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.6.

⁸²⁶ *Id.* (“Compared with an exclusive grantback, a non-exclusive grantback, which leaves the licensee free to license improvements technology to others, is less likely to harm competition.”) (*Id.*).

⁸²⁷ 329 U.S. 637, 646 (1947).

⁸²⁸ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 138.

⁸²⁹ See *Transparent-Wrap Machine*, *supra* note 827, at 646-648. The power to claim improvement might “enable the patentee not only to exploit the invention but to use it to acquire a monopoly not embraced in the patent.” (*Id.* 643).

⁸³⁰ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.6. (“The Agencies will evaluate a grant-back provision under the rule of reason, considering its likely effects in light of the overall structure of the licensing arrangement and conditions in the relevant markets.”) (*Id.*).

⁸³¹ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 139. (More specifically: “if the Agencies determine that a particular grant-back provision is likely to reduce significantly licensees’ incentives to invest in improving the licensed technology, the Agencies will consider the extent to which the grant-back provision has offsetting procompetitive effects, such as (1) promoting dissemination of licensees’ improvements to the licensed technology, (2) increasing the licensors’ incentives to disseminate the licensed technology, or (3) otherwise increasing competition and output in a relevant technology or research and development market.”).

examine the scope and duration of the grant-backs as well as the extent to which they increase licensor's incentives to innovate, to determine whether such clauses satisfy the *rule of reason*.⁸³²

Anti-competitive effects related to grant-back clauses may arise also in connection with patent pools.⁸³³ Also in the case of patent pools, grant-backs may promote competition by enabling the licensor to practice the improvements made by the licensees to the licensed patents.⁸³⁴ However, the risk is that grant-back clauses reduce future competition for new inventions within the scope of the pool.⁸³⁵ In the MPEG-2 pool Business Review Letter, the DOJ observed that "the license's grant-back provision requires the licensee to grant any of the licensors and other Portfolio licensees a nonexclusive worldwide license or sublicense, on FRAND, on any essential patent that it has the right to license or sublicense."⁸³⁶ The DOJ concluded that "nor does the portfolio license's grantback clause appear anticompetitive. Its scope, like that of the license itself, is limited to essential patents."⁸³⁷

4.2.7. Royalty-Related Restraints

Just as with any ordinary good, an IP holder has the right to exploit its IP and generally has great deal of discretion in establishing the structure and amount of royalties.⁸³⁸ Is the patentee who decides what price to grant a licensee

⁸³² *Id.* ("In addition, the Agencies will consider the extent to which grantback provisions in the relevant markets generally increase licensors' incentives to innovate in the first place.").

⁸³³ See ABA Section of Antitrust Law, *supra* note 3, at 139.

⁸³⁴ U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition, (2007), [hereinafter '2007 IP Report'], at 80. Narrow grant-backs, that are limited to innovation within the scope of the existing patents in the pool, are more likely to generate pro-competitive effects.

⁸³⁵ See Merges. & Mattioli, *supra* note 543, at 343.

⁸³⁶ See MPEG-2 pool Business Review Letter, available at <https://www.justice.gov/atr/business-review-letters-and-request-letters>.

⁸³⁷ *Id.* ("[...] The grantback simply obliges licensees that control an Essential Patent to make it available to all, on a nonexclusive basis, at a fair and reasonable royalty, just like the Portfolio patents.") ("[...] The grantback should not create any disincentive among licensees to innovate. Since the grantback extends only to MPEG-2 Essential Patents, it is unlikely that there is any significant innovation left to be done that the grantback could discourage. The grantback provision is likely simply to bring other Essential Patents into the Portfolio, thereby limiting holdouts' ability to exact a supracompetitive toll from Portfolio licensees and further lowering licensees' costs in assembling the patent rights essential to their compliance with the MPEG-2 standard.").

⁸³⁸ See ABA Section of Antitrust law, *supra* note 3, at 118; see also Lyerla, *supra* note, at 118. See also Hovenkamp et al, *supra* note 25, at §23.1. ("[...] the owner of a patent or other IPRs is free to charge any royalty rate it pleases, even if the owner is a monopolist."). See also *Royalty and Licensing Basics*, RSG MEDIA, (last accessed March 17, 2019), <https://www.rsgmedia.com/rsg-rights-resources/royalty-and-licensing-basics/>, ("Royalty payments are calculated on the types of royalty agreement made between two parties – it can be calculated on gross revenue, net revenue, price per unit, minimum sale, or fixed amount. Basically, a percentage of net revenue is given to the owner for exploitation of licensor's IP.").

to maximize its revenues and cover investment costs in the IP.⁸³⁹ In *Brulotte v. Thys Co.*,⁸⁴⁰ the Supreme Court established that “[a] patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly.”⁸⁴¹ Although a particularly high royalty may hinder the use of the invention, royalty restraints are generally considered pro-competitive.⁸⁴² The U.S. *IP-Antitrust Guidelines* provide that:

Licensing can allow an innovator to capture returns from its investment in making and developing an invention through royalty payments from those that practice its invention, thus providing an incentive to invest in innovative efforts.⁸⁴³

The Guidelines further provide that the licensor is free to charge different royalties to different users.⁸⁴⁴ Indeed, the antitrust law does not require a patentee to charge all licensees the same price.⁸⁴⁵ Imposing different prices to different licensees does not alone constitute misuse or break antitrust laws without evidence of anticompetitive effects.⁸⁴⁶ The licensor may also license the technology royalty-free in exchange for the right to use other technology.⁸⁴⁷

However, when high royalties are used by the licensors as a surrogate for price-fixing, antitrust concerns may arise.⁸⁴⁸ Royalty-related issues may also arise in the case of patent pools.⁸⁴⁹ However, in such circumstances the Agencies do not assess the reasonableness of royalty set by patents pools, but will rather examine the royalties’ structure and amount as one of the factor to be taken into consideration when investigating price discrimination conducts.⁸⁵⁰

⁸³⁹ *Id.*, at 119.

⁸⁴⁰ 379 U.S. 29 (1964).

⁸⁴¹ *Id.*, at 33.

⁸⁴² See ABA Section of Antitrust Law *supra* note 3, at 118; see also Lyerla, *supra* note 125, at 118. However, the Agencies determine that royalty restraints violate public policy (See Verizon *supra* note 613, at 407).

⁸⁴³ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §2.3; see also Fed. Trade Comm’n Report, The Evolving IP Marketplace: Aligning Patent Notice and Remedies With Competition, (March, 2011), at §2.3., <https://www.ftc.gov/reports/evolving-ip-marketplace-aligning-patent-notice-remedies-competition>.

⁸⁴⁴ See e.g. Example 1 where the licensor Computer Co develops and licenses a new computer software program for inventory management. ComputerCo charges different royalties for the different uses.

⁸⁴⁵ See ABA Section of Antitrust Law, *supra* note 3, at 124.

⁸⁴⁶ *Id.* An example of anti-competitive effects is a limitation of competition in a downstream market (*Id.*). See also *Azko N.V. v. ITC*, 808 F.2d 1471 (Fed. Cir. 1986), (finding that prices varied by end use were not illegal *per se*).

⁸⁴⁷ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §2.3.

⁸⁴⁸ Erik Hovenkamp, *A Broader Look at Patent Royalties and Antitrust* (Sept. 7, 2015), at 1.

⁸⁴⁹ See 2007 IP Report, *supra* note 834, at 47 (“[...] a pool that charges smaller royalties to licensors that are also licensees (insiders) than it charges to pure licensees (outsiders) might produce anticompetitive effects in downstream markets. [...] doing so would allow inefficient [licensor] competitors to dominate downstream markets by combining the power of the patents in the pool to the exclusion of efficient independent competitors.”).

⁸⁵⁰ *Id.*, at 83. (In any case, “the Agencies will not presume that different royalty payments faced by

Finally, with the technological evolution, have been experimented new opportunities in royalty-free licensing.⁸⁵¹ For instance, a few Standard Setting Organizations (hereinafter 'SSO'), such as the World Wide Web Consortium, require all IP holders to commit to royalty-free licensing terms before incorporating an IP into a standard.⁸⁵²

4.2.8. *Non-Assertion and No-Challenge Clauses*

Non-assertion clauses typically provide that a contracting party will not assert patents or other IPRs against the other contracting party, even if that party were to engage in an infringing use.⁸⁵³ Non-assertion clauses need to be distinguished from non-challenge clauses, that prohibit the licensees from challenging the validity of the licensor's patent.⁸⁵⁴ Basically, non-assert clauses serve the same purpose as a license or cross-license, i.e. they allow the avoid costly litigation over the use of an IPR.⁸⁵⁵ In addition, non-assert clauses, similarly to non-exclusive and royalty-free license, allow the contracting parties to allocate risk and avoid litigation.⁸⁵⁶

The U.S. *IP-Antitrust Guidelines* in the chapter dedicated to the enforcement of invalid IPRs state that "[t]he Agencies may challenge the enforcement of invalid intellectual property rights as antitrust violations."⁸⁵⁷ However, the Guidelines do not mention neither no-challenge nor non-assertion clauses, probably because the Agencies seem to classify these clauses as public policy issues based more on patent law than on antitrust law.⁸⁵⁸ Accordingly, while patent licensing encourage innovation and the circulation of ideas and must

different licensees (e.g., insiders and outsiders) are anticompetitive. [Instead], Whether such an arrangement could be anticompetitive would depend upon the specific facts of the case.").

⁸⁵¹ *Id.*, at 48.

⁸⁵² *Id.*

⁸⁵³ 2007 IP Report *supra* note 834, at 88. Non-assertion clauses can appear both in bilateral or multilateral agreements and they can cover exiting or future patents, or both.

⁸⁵⁴ Toshiaki Takigawa, Non-Assertion of Patent Clause and Competition Law-A Comparative Analysis of the US, the EU, Japan and China, Asia Competition Forum Conference, Creativity, Innovation, Technology, (December 5-6, 2016).

⁸⁵⁵ See 2007 IP Report, *supra* note 834, at 88. (McFalls noted that a non-assertion clause is "a convenient way for people to be able to effectively give comfort to somebody they would otherwise license"); see also ABA Section of Antitrust Law, *supra* note 3, at 143.

⁸⁵⁶ See 2007 IP Report, *supra* note 834, at 89 (they "guarantee to the licensor . . . that any intellectual property issue that exists at [the time of the license negotiation] will be surfaced by the licensee.").

⁸⁵⁷ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §6.

⁸⁵⁸ Yamane, Hiroko, *Competition Analyses of Licensing Agreements: Considerations for Developing Countries under TRIPS*, Discussion Paper, ICTSD, (2014), at 24. ("According to the report, '[w]hile patent licensing in general should be encouraged because it allows the efficient exploitation of technology and promotes competition and innovation, public policy strongly favors ridding the economy of invalid patents, which impede efficient licensing, hinder competition, and undermine incentives for innovation. Public policy also favours the swift resolution of patent litigation on terms not harmful to competition." (See 2007 IP Report, *supra* note 834, at 90-91).

therefore be supported, “invalid patents impair competition [...], and as a matter of patent policy, challenges to their validity are encouraged.”⁸⁵⁹

In any case, both non-assertion and non-challenge clauses may generate efficiencies. Non-assertion clauses may, for instance, substantially reduce transaction costs because they guarantee the licensor that any IP-related existing issues at the time of the negotiation between the parties will be surfaced by the licensee.⁸⁶⁰ In addition, non-assertion clauses may encourage the licensor to share important information and details, because there is no danger that the licensee will develop a blocking patent position.⁸⁶¹ However, non-assertion clauses may rise competitive concerns when, for example, they threaten to limit the licensees’ ability to allocate rents on their own IP, thereby discouraging independent innovation.⁸⁶² Moreover, in highly concentrated markets, a non-assertion agreement between only two parties may integrate an illegitimate duopoly or monopoly if the parties agree not to challenge each other’s patent.⁸⁶³

Non-challenge clauses merely govern licensees and thus have no effects towards unrelated third party actors.⁸⁶⁴ For this reasons, non-challenge clauses do not protect the licensor from any validity challenges and patent could still be potentially subject to challenges by third parties.⁸⁶⁵ However, in *Lear, Inc. v. Adkins*⁸⁶⁶ the Supreme Court held that “[l]icensees may often be the only individuals with enough economic incentive to challenge the patentability of an inventor’s discovery.”⁸⁶⁷ Prior to this case, the doctrine of ‘licensee estoppel’ had prevailed in the U.S. until 1969, according to which once a licensee accepts the benefit of a patent license, the licensee is estopped from challenging the validity of the licensed patent later.⁸⁶⁸ Two years later, in *Massillon-Cleveland-Akron Sign*

⁸⁵⁹ *Id.* As the Solicitor General argued, “[w]hile patent licensing in general should be encouraged because it allows the efficient exploitation of technology and promotes competition and innovation, public policy strongly favors ridding the economy of invalid patents, which impede efficient licensing, hinder competition, and undermine incentives for innovation.” (*Id.* at 90-91).

⁸⁶⁰ *Id.* at 89. (“Indeed [...] the licensee typically will benefit by, in effect, ‘charging’ the licensor for the value of the right it is giving up—a right to assert a hidden blocking patent, for example.”).

⁸⁶¹ *Id.* at 89. Such exchanges of information may have procompetitive benefits because both parties to the non-assertion agreement avoid hidden blocking patents. See also ABA Section of Antitrust Law, *supra* note 3, at 143.

⁸⁶² *Id.* at 90.

⁸⁶³ *Id.*

⁸⁶⁴ Thomas K. Cheng, *Antitrust Treatment of No Challenge Clauses*, NYU Journal of Intellectual Property and Entertainment Law, Vol.5, No.2, (July 24, 2016), at 441.

⁸⁶⁵ *Id.* (“However, if any of the potential challengers have already been recruited as a candidate for the challenge, the patentee can be assured of the continual validity of its patent.”).

⁸⁶⁶ 395, U.S. 653 (1969).

⁸⁶⁷ *Id.* at 670. See also Cheng, *supra* note 864, at 450 (In *Lear, Inc. v. Adkins*, the U.S. Supreme Court ruled on whether the licensee estoppel doctrine estopped Lear, Inc. from pleading patent invalidity in the suit. [The case] has been cited repeatedly by the lower courts ever since, the Supreme Court declared that the public policy of clearing invalid patents overrides the equitable considerations favoring the patentee [...]).

⁸⁶⁸ See Cheng, *supra* note 864, at 449-450; see also ABA Section of Antitrust Law, *supra* note 3, at 143. The doctrine of licensee estoppel was first applied by the Supreme Court in 1856 in *Kinsman v. Parkhurst*, 59 U.S. 289 (1855).

Co. v. Golden State Advertising Co.,⁸⁶⁹ the Ninth Circuit in determining the validity of a non-challenge clause in a settlement agreement, found that a licensee is not required to breach or terminate the licensing agreement to seek “a declaratory judgment in federal court that the underlying patent is invalid, unenforceable, or not infringed.”⁸⁷⁰ Courts later used the contractual estoppel doctrine to affirm the non-challenge clauses in a prior settlement agreement and repeatedly hold that a licensee was contractually estopped from challenging a patent’s validity.⁸⁷¹

4.2.9. Cross Licensing and Pooling Arrangements

The revised *IP-Antitrust Guidelines* highlight the pro-competitive benefits of IP cross licensing and pooling arrangements and show a more flexible approach compared to common kind of restraints within the IP field that have been previously analyzed. The Guidelines define cross-licensing and pooling arrangements as “agreements of two or more owners of different items of IP to license one another or third parties.”⁸⁷² A cross-licensing agreement between two or more parties allows each to license the IPR to each other or to a third party.⁸⁷³ While ‘cross-licensing’ usually refers to a bilateral exchange of licenses, the term ‘patent pool’ refers to an exchange of license of IPRs among multiple parties.⁸⁷⁴

⁸⁶⁹ 444 F.2d 425, (9th Cir. 1971).

⁸⁷⁰ *Id.*, at 137, see also ABA Section of Antitrust Law, *supra* note 3, at 145. In the case at issue the two parties were involved in a patent infringement dispute, which they settled in an agreement in 1962. According to such agreement, the alleged infringer recognized the validity of the patent and that its action had infringed the patent in question. The agreement further contained a clause under which the alleged agreed not to challenge the validity of the patent and not to infringe the patent again in the future.

⁸⁷¹ See e.g. *Flex Foot, Inc. v. CRP, Inc.*, 238 F.3d. 1362 (Fed. Cir. 2001) (holding that “once an accused infringer has challenged patent validity, has had an opportunity to conduct discovery on validity issues, and has elected to voluntarily dismiss the litigation with prejudice under a settlement agreement containing a clear and unambiguous undertaking not to challenge validity and/or enforceability of the patent in suit, the accused infringer is contractually estopped from raising any such challenge in any subsequent proceeding.”) (*Id.*, at 1370). See also *Baseload Energy, Inc. v. Roberts.*, 619 F.3d 1357 (Fed. Cir. 2010). (Stating that “[i]n the context of settlement agreements, as with consent decrees, clear and unambiguous language barring the right to challenge patent validity in future infringement actions is sufficient, even if invalidity claims had not been previously at issue and had not been actually litigated.”) (*Id.* at 1363). See also ABA Section of Antitrust Law, *supra* note 3, at 147 and Lyerla, *supra* note 125, at 82.

⁸⁷² See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.5.

⁸⁷³ Doh-Shin Jeon & Yassine Lefouili, *Cross-Licensing and Competition*, (Dec. 23, 2017), at 1; see also Lyerla, *supra* note 125, at 83. For instance, Apple and Microsoft entered into a cross-licensing agreement in the 1990s, covering technical software features on utility patents and design patent. The agreement also include anti-cloning provisions.

⁸⁷⁴ WIPO Secretariat, *Patent Pools and Antitrust- A Comparative Analysis*, (March 2014), at 3, https://www.wipo.int/export/sites/www/ip-competition/en/studies/patent_pools_report.pdf; see also Hovenkamp et al., *supra* note 25, at §34.2. and Merges & Mattioli, *supra* note 543, at 295. (“Patent pools are cooperative business arrangements in which two or more patent holders license out a set of complementary patent rights through a unified “blanket” agreement. A patent

In many industries, such as semiconductors or mobile phones, the patent rights necessary to produce a single product are often controlled by hundreds of holders. To this extent, portfolio cross-licenses and patent pools can help to solve the problems of higher negotiation costs and greater cumulative royalty payments resulting from these overlapping patent rights or patent thickets.⁸⁷⁵ Indeed, portfolio cross licenses and patent pools may reduce transaction costs for licensees while preserving the financial incentives for inventors to commercialize their existing innovations.⁸⁷⁶ In addition, cross licensing and patent pools, by eliminating altogether the need to search in a particular technology area, allow companies to engage in new, potentially patentable R&D.⁸⁷⁷ In the *IP-Antitrust Guidelines* the Agencies recognize that in the circumstances just described, cross licensing and pooling arrangements seek to achieve pro-competitive benefits by integrating complementary technologies, reducing transaction costs, clearing blocking patents and decreasing costly infringement litigation.⁸⁷⁸ Moreover, cross-licensing and pooling arrangements promote the dissemination of technologies.⁸⁷⁹ The Agencies further observe that in some circumstances patent pools may constitute the only reasonable method to make the technology available on the marketplace by mitigating any blocking patents.⁸⁸⁰

Although both cross-licensing and pooling arrangements have the potential to generate the above mentioned efficiencies, they may nonetheless present anti-competitive risks when, for example, the agreement results in price fixing, output restraints, exclusionary restraints or foreclosure of innovation.⁸⁸¹

pool may grant these aggregated rights back to each patent-holding member of the group, to outside licensees, or to both.”).

⁸⁷⁵ See 2007 IP Report, *supra* note 834, at 8. See also Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools and Standard Setting*, in *Innovation Policy and Economy*, 119, 120 (Adam Jeffe eds., 2001) (“[Patent thicket] is a dense web of overlapping IPRs that a company must hack its way through in order to actually commercialize new technology.”).

⁸⁷⁶ *Id.* See also Merges & Mattioli, *supra* note 543, at 295. (“The cost associated with patent-related transactions are reduced substantially when a licensee gets rights over many patents from a single licensor.”) (“[...] Obtaining a pool license may be less costly than negotiating separate licenses with each patent owner.”) (See 2007 IP Report, *supra* note 834, at 64.).

⁸⁷⁷ *Id.* Robert Shapiro observed that “[...] from the licensee's perspective, licensing the entire package is simpler and avoids the danger of paying for some patent rights that turn out to be useless without other complementary rights.” (See Shapiro, *supra* note 794, at 124-126).

⁸⁷⁸ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.5.

⁸⁷⁹ *Id.*; see also Steven C. Carlson, *Patent Pools and the Antitrust Dilemma*, 16 *Yale J. on Reg.* (1999), at 368.

⁸⁸⁰ See Lyerla, *supra* note 125, at 83. Blocking patent refers to one of two patents related to a particular area of technology, both of which cannot be effectively used and licensed without infringing the other. See also Giuseppe Colangelo, *Avoiding the Tragedy of Anticommons: Collective Rights Organizations, Patent Pools, and the Role of Antitrust*, LUISS Law and Economics Lab Working Paper No. IP-01-2004, (2004), at 22-23.

⁸⁸¹ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.5 (“For example, collective price or output restraints in pooling arrangements, such as the joint marketing of pooled intellectual property rights with collective price setting or coordinated output restrictions, may be deemed unlawful if they do not contribute to an efficiency-enhancing integration of economic activity among the participants.”); See also 2007 IP Report, *supra* note 834, at 58.

The Guidelines further provide that when cross-licensing and pooling arrangements are a mean to achieve naked price-fixing or market allocation, they are challenged under the *per se* rule.⁸⁸² In all the other cases, both patent pools and cross-licensing agreements are likewise analyzed by the Agencies pursuant to the *rule of reason*.⁸⁸³ Pooling agreements are most notably subject to a stricter control by the antitrust authorities than cross-licensing arrangements, since they are more likely to encourage collusion among parties, also due to the larger number of market participants.⁸⁸⁴

In any case, in evaluating the legality of cross-license and patent pools, the courts and Agencies will take into account a number of factors, including the nature and the features of the IPR involved.⁸⁸⁵ For instance, patent pools are often employed for the purpose of licensing the rights that are required to comply with a technical standard, so called SEPs.⁸⁸⁶ Several patent pool proposals have been analyzed by the DOJ in three business review letters.⁸⁸⁷ Attorney Chemtob explains that even if U.S. is generally permissive about patent pools because they see efficiencies, they are nonetheless worried about price fixing, even for downstream products or technologies. To this extent, the DOJ uses the business review letter as a tool to express its opinion about a particular patent pool.⁸⁸⁸ For

⁸⁸² *Id.* In *United States v. Line Material Co.*, 333 U.S. 287 (1948), the cross-licensing agreement set price floors at which the licensee could sell the patented electrical device. The Court evidenced that “it is not the cross-licensing to promote efficient production which is unlawful [...] The unlawful element is the use of the control of such cross-licensing gives to fix prices.” (*Id.* at 315).

⁸⁸³ See ABA Section of Antitrust Law *supra* note 3, at 149.

⁸⁸⁴ See 2007 IP Report *supra* note 834, at 58. In 1902 in *E. Bement & Sons*, *supra* note 186, where the Supreme Court confirmed the dominance of patent rights over antitrust law in ruling that patentees were free to conclude collusive agreements under the protection of patent laws (See *Calson*, *supra* note 797, at 373). However, ten years later in *Standard Sanitary Manufacturing Co. v. United States*, 323 U.S. 386 (1945), the Supreme Court condemned a pooling agreements that forced the firms “to adhere to a minimum sales price, to enforce resale prices, to refuse to sell to jobbers dealing with unlicensed manufacturers, and to halt the sale of seconds. The Supreme Court found that such agreement was unlawful and violated the Sherman Act. (*Id.* In the late 1960s, the DOJ’s hostile attitude towards patent licensing culminated in the ‘Nine No-Nos’ doctrine, i.e. a list of nine practices considered *per se* violation of antitrust law. (*Id.* at 375). With the entry into force of the 1995 U.S. IP-Antitrust Guidelines both Agencies and courts started recognizing the pro-competitive benefits of patent pools and have now the difficult task of balancing those effects and the anti-competitive effects of pooling arrangements. (*Id.* at 398-399).

⁸⁸⁵ See ABA Section of Antitrust Law, *supra* note 3, at 150.

⁸⁸⁶ *Id.*; see also Matthew Warren, *The Pros and Cons of Patent Pooling*, BRISTOWS, (Aug. 5, 2009), <https://www.bristows.com/news-and-publications/articles/the-pros-and-cons-of-patent-pooling>.

⁸⁸⁷ See 2007 IP Report, *supra* note 834, at 68. The three letters are: the MPEG-2 pool Business Review Letter, the three-member DVD pool (“3C DVD”) Business Review Letter, and the six-member DVD pool (“6C DVD”) Business Review Letter.

⁸⁸⁸ Attorney Chemtob further explains that the DOJ sets also a series of criteria, i.e. a sort of *safe harbour*, to structure patent pools in order to avoid antitrust enforcement actions. More specifically, the pool should involve either an essential patents or complementary patents, i.e. patents that do not substitute each other to avoid price fixing conducts. Secondly, each member of the pool should be free to license outside de pool.

instance, the 3C DVD and 6C DVD, respectively created by three and six firms, are an example of pools licensing patents that are essential to practice the DVD-ROM standards. In both DVD pools, licensees were under an obligation to grantback the licensor and the other licensees to use any of their SEPs on FRAND terms.⁸⁸⁹ The DOJ in the two business review letters concluded that the definition of ‘essential’ includes both essential patents and patents covering technologies for which “there is no realistic alternative”, and thus patents that are “commercially essential.”⁸⁹⁰ The MPEG-2 pool is a technical standard for encoding and compressing technology used in many different products and services and defines a patent in the pool ‘essential’ “whether access to the patents in the pool is (...) necessary to manufacture products in compliance with the standard.”⁸⁹¹

In examining cross-license and patent pools, the Agencies will also evaluate the licensor’s market power in the affected relevant market and the extent to which the arrangement is open to additional licensees.⁸⁹² The *IP-Antitrust Guidelines* specify that normally cross-licensing and pooling arrangements need not to be open to all parties.⁸⁹³ Likewise, exclusivity in patent pools may provide incentives to invest in innovation.⁸⁹⁴ However, the Guidelines note that, under some circumstances, exclusion of competitors may harm competition.⁸⁹⁵ In particular, the exclusion may have anticompetitive effects when “(1) excluded firms cannot effectively compete in the relevant market for the good incorporating the licensed technologies and (2) the pool participants collectively possess market power in the relevant market.”⁸⁹⁶ In *United States v. Krasnov* a cross-licensing agreement included provisions giving the licensee a veto power over the other by requiring a joint consent before licensing to third parties.⁸⁹⁷ The

⁸⁸⁹ See Warren, *supra* note 886.

⁸⁹⁰ See ABA Section of Antitrust Law, *supra* note 3, at 150; see also Letter from Joel I. Klein, Assistant Attorney Gen., U.S. Dep’t of Justice, to Garrard R. Beeney, Esq. (Dec. 16, 1998), available at <http://www.usdoj.gov/atr/public/busreview/2121.pdf> and Letter from Joel I. Klein, Assistant Attorney Gen., U.S. Dep’t of Justice, to Carey R. Ramos, Esq. (June 10, 1999), available at <http://www.usdoj.gov/atr/public/busreview/2485.pdf>.

⁸⁹¹ *Id.*; see also 2007 IP Report, *supra* note 834, at 68.

⁸⁹² See ABA Section of Antitrust Law, *supra* note 3, at 150.

⁸⁹³ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.5.

⁸⁹⁴ See 2007 IP Report, *supra* note 834, at 85.

⁸⁹⁵ *Id.*; see also U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.5.

⁸⁹⁶ *Id.* (“If these circumstances exist, the Agencies will evaluate whether the arrangement’s limitations on participation are reasonably related to the efficient development and exploitation of the pooled technologies and will assess the net effect of those limitations in the relevant market.”). For instance, owners of SEPs may use a patent pool to extend their market power into areas beyond the rights arising from essential patents by tying the use of non-essential patents that they also own to the licensing of the essential patents. (See Philip B. Nelson, Patent Pools: An Economic Assessment of Current Law and Policy, 38 Rutgers L.J. 539, 542, at 542, (2007)).

⁸⁹⁷ *United States v. Kosnow*, 335 U.S.5 (1957); see also Hovenkamp et al., *supra* note 14, at §34.4.

court, considering also that the cross-licensees were in dominant position in the relevant market, found that such practice constituted a restraint of trade.⁸⁹⁸

The *IP-Antitrust Guidelines* focus also on another possible anti-competitive effect of pooling arrangement, i.e. R&D restraint.⁸⁹⁹ According to the Guidelines, a pooling arrangement may discourage participants in engaging in R&D, thereby reducing innovation.⁹⁰⁰ However, these arrangement may also benefit competition “by exploiting economies of scale and integrating complementary capabilities of the pool members, (including the clearing of blocking positions), and is likely to cause competitive problems only when the arrangement includes a large fraction of the potential R&D in a relevant market.”⁹⁰¹

4.2.10. Settlement Agreements

As already discussed in the third chapter devoted to the TTBER Guidelines, the vast majority of IP disputes settle before trial.⁹⁰² However, contrary to the European system, the U.S. *IP-Antitrust Guidelines* do not address the topic of settlement agreements. In the section dealing with cross-licensing and pooling arrangements, the Guidelines merely recognize that “settlements involving the cross-licensing of IPRs can be an efficient means to avoid litigation and, in general, courts favor such settlements.”⁹⁰³ However, when these agreements involve horizontal competitors “the Agencies will consider whether the effect of the settlement is to diminish competition among entities that would have been actual or potential competitors in a relevant market in the absence of the cross-license. In the absence of offsetting efficiencies, such settlements may be challenged as unlawful restraints of trade.”⁹⁰⁴ As a matter of fact, because settlements of IP controversies occur between the patentee and the accused infringer, who are often competitors before the lawsuit and may agree to stop

⁸⁹⁸ *Id.*, at 201-202.

⁸⁹⁹ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.5.

⁹⁰⁰ *Id.* (“Licensors could be discouraged from making investments in innovation if “a pooling arrangement . . . requires members to grant licenses to each other at minimal cost . . . because members of the pool have to share their successful research and development and each of the members can free ride on the accomplishments of other pool members.”).

⁹⁰¹ *Id.* See e.g. Example 9.

⁹⁰² Janis, Mark D, Hovenkamp, Herbert J. & Lemley, Mark A., *Anticompetitive Settlement of Intellectual Property Disputes* (2003). Articles by Maurer Faculty. Paper 406, (2003), at 1730.

⁹⁰³ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.5.

⁹⁰⁴ *Id.*; see also Janis et al., *supra* note 902, at 1721. (“Settlements of IP disputes often take the form of unrestricted or restricted licenses, which may or may not be exclusive; cross-licensing arrangements; pools; agreements not to license third parties or to license only jointly; or market division or field-of-use agreement. Further, the agreements are quite typically horizontal, particularly in patent cases, for the firms are either actual or at least potential competitors in the market for the ultimate product and may be competitors in the innovation market itself.”).

competing and to share important information about goods and prices, those agreements present a number of antitrust concerns.⁹⁰⁵

In *FTC v. Actavis, Inc.*⁹⁰⁶ the U.S. Supreme Court held reverse-payment patent settlements, where the patent holder is required to pay a sum to the defendant, are subject to the traditional *rule of reason* antitrust scrutiny.⁹⁰⁷ More specifically, the present case concerned a pay-for-delay agreement occurring in the context of a generic drug manufacturer, i.e. the alleged infringer, dropping both its efforts to enter the market prior to the expiration of the asserted patent in exchange for a form of a payment.⁹⁰⁸ In *re Cipro Cases I & II*, the California Supreme Court, along the lines of *Actavis*, held that reverse-payment settlements are not immune from antitrust analysis.⁹⁰⁹

In sum, a court considering an antitrust challenge to an IP settlement agreement should first of all ask whether the settlement in question would have violated antitrust laws in absence of an IP dispute.⁹¹⁰ If the answer is affirmative, the court has to consider whether the challenged settlement would be illegal even if the IPRs involved were valid and infringed.⁹¹¹ If the answer is again yes, the settlement at issue must be condemned under antitrust law without regard to the presence of an IP controversy.⁹¹²

⁹⁰⁵ *Id.* at 1720; see also ABA Section of Antitrust Law, *supra* note 3, at 160.

⁹⁰⁶ 570 U.S. 136 (2013).

⁹⁰⁷ Lizbeth Hasse, *When IP Settlements Create Antitrust Headaches*, THE NATIONAL L. J., (March 21, 2016), <https://www.jamsadr.com/files/uploads/documents/articles/hasse-nlj-ip-settlements-2016-03-21.pdf>.

⁹⁰⁸ *Id.*; see also ABA Section of Antitrust Law, *supra* note 3, at 160 and FTC, *Pay for Delay*, (last accessed March 19, 2019), <https://www.ftc.gov/news-events/media-resources/mergers-competition/pay-delay> (“Pay-for-delay” patent settlements effectively block all other generic drug competition for a growing number of branded drugs.”).

⁹⁰⁹ 134 Cal.Rptr.3d 165 and 200 Cal.App.4th 442 (2004); see also Hasse, *supra* note 907. The California Supreme Court hold that a reverse-payment settlement must be subject to antitrust scrutiny even if the terms of such agreement apparently fall within the patent’s exclusionary scope. The Court further observed that an invalidated patent has no right to exclude others.

⁹¹⁰ See Janis et al., *supra* note 902, at 1728.

⁹¹¹ *Id.* Obviously if the answer is no, the antitrust challenge can be automatically dismissed (*Id.*).

⁹¹² *Id.* (Indeed, “Only cases that do not fall within these camps must be decided on the basis of IP policy rather than antitrust policy.”).

CHAPTER V

The Long Path Toward Convergence Between the EU and the U.S. in the Licensing of Intellectual Property Rights

5.1. Comparing the EU and the U.S. Guidelines: Convergences and Divergences

As appears from the previous chapters, both the European and U.S. systems have made tremendous progress in the application of antitrust law to IP.⁹¹³ These progresses are reflected in their respective Guidelines for the licensing of IP, the TTBER and the *U.S. IP-Antitrust Guidelines*, where the EU and U.S. have finally reached consensus on antitrust enforcement strategies when it comes to IPRs.⁹¹⁴ Both try to provide firms with appropriate guidelines to evaluate the legality of their conducts.⁹¹⁵ In particular, as largely demonstrated, the revised TTBER and the accompanying Guidelines show a much more flexible effect-based approach comparing to the old block exemption.⁹¹⁶ Moreover, broadly speaking, both the EU and U.S. recognize the potential of IP licensing as a fundamental tool to encourage inventive efforts, to produce new and improved products and to feed the global economy at large.⁹¹⁷ To this extent, the two systems also recognize that IP-licensing is generally pro-competitive and welfare-enhancing.⁹¹⁸ Finally, both create a ‘safe harbour’ for technology transfer agreements between parties whose market share(s) falls below certain market share threshold.⁹¹⁹

⁹¹³ Makan Delhaim, *The Long and Winding Road: Convergence in the Application of Antitrust to Intellectual Property*, Assistant Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, The George Mason Law Review Symposium, (Oct. 6, 2004), <https://www.justice.gov/atr/file/518041/download>.

⁹¹⁴ *Id.*, at 1 (“Technology licensing [...] reaches across borders and touches consumers all over the world. Indeed, technology licensing has truly ‘gone global.’”) (*Id.* at 3); see also Todino, *supra* note 161, at 25.

⁹¹⁵ *Id.*, at 5.

⁹¹⁶ *Id.*, at 4. Delhaim in his speech argued that the Commissioner Mario Monti has played a key role in this shift in perspective, seeking to abandon the more formalistic approach and to align the TTBER with other block exemption, which follow an economic-based approach. See Mario Monti’s speech, *Antitrust in the US and Europe: a History of Convergence*, Washington DC, (Nov. 14, 2001) (“[...] adopting an economic approach, we both weight the positive and negative effects of agreements against each other. This increased convergence between the US and EC policies will not only make co- operation between our competition authorities easier.”).

⁹¹⁷ *Id.*, at 2. Transcripts of the Antitrust-IP Hearings are available on the FTC’s website, at <https://www.ftc.gov/news-events/events-calendar/2002/02/competition-ip-law-policy-knowledge-based-economy-hearings>.

⁹¹⁸ Philip Lowe, *Current Issues of the EU Competition Law: The New Competition Enforcement Regime*, 24 Nw. J. Int’l L. & Bus. 567, 581 (2004), at 581. (“Licensing, also when it contains restrictions on licensee or licensor, will therefore often be pro-competitive as it allows the integration of complementary assets, allows for more rapid entry, helps disseminating the technology and provides a reward for what was usually a risky investment.”).

⁹¹⁹ *Id.*, at 5; see also Mark Hansen & Omar Shah, *The New EU Technology Transfer Regime—Out of the Straightjacket into the Safe Harbour?*, (2004), E.C.L.R., Issue 8, at 466.

Even if the U.S. and the EU approaches toward IP licensing have converged in many ways and share the common goal of promoting consumer welfare while preserving incentives to innovate, there are still areas where the two systems diverge.⁹²⁰ This is partially due to the different background in which the two Guidelines have been developed and enforced. Indeed, as already evidenced in the second chapter of this work, the EU is the result of the integration of the economies of all the Member States belonging to the EU, and the creation of a common and integrated market is thus one of the main goals of European competition law.⁹²¹ Another factor that differs the EU from the U.S., is that in the EU patents are still national, and not continental.⁹²² These two factors have resulted in a variety of licensing practices being prohibited on the grounds that they are deemed to create market entry barriers and intra-technology restrictions.⁹²³

The first section of this chapter discusses three examples of IP licensing practices that the EU and U.S. systems treat differently. The second part of the chapter, instead, discusses more in detail the main differences of the two approaches in the field of patent pools and SEPs, through an analysis of case laws and authorities' speeches.

5.1.1. *Field of Use and Territorial Restraints*

The first example involves vertical restraints. European rules on vertical restraints are influenced more than others by the objective of creating a single market in which national boundaries are no longer an obstacle to trade.⁹²⁴ For these reasons, European competition rules on vertical restraints aim to prevent a supplier of goods to exclusively allocate territories within the EU.⁹²⁵ In addition,

⁹²⁰ See Lowe, *supra* note 918, at 7.

⁹²¹ ABA Section of Antitrust Law Spring Meeting, *The Role of Innovation in Competitive Analysis*, (March 21, 2005), at 5, <http://faculty.haas.berkeley.edu/shapiro/showcase.pdf>.

⁹²² *Id.*, at 4. Statement of Peter Plompen, Senior Vice President and the Competition Counsel for Royal Phillips Electronics of the Netherlands. ("[...] because there still is no Europe-wide patent, but only national licenses that could run counter to the economic integration goal of European competition law, there are special rules in European competition law with respect to passive and active imports in other countries by licensees. That's still a typical European situation, although within the Guidelines, there is also a modification: the Commission acknowledges that the European market, to a vast extent, has already been integrated and therefore the consequence of these territorial restrictions on competition may be less than they have been in the past."). (*Id.*, at 6.

⁹²³ *Id.*; see also Jenine Hulsmann, *Exclusive Territorial Licensing of Content Rights After the EU Premier League Judgments*, *Antitrust*, Vol. 26, No. 3, (Summer 2012), at 30, reproduced by the ABA, at https://www.cliffordchance.com/content/dam/cliffordchance/PDFs/Antitrust_Article_on_Exclusive_Territorial_Licensing.pdf.

⁹²⁴ Thomas G. Funke, *Territorial Restraints and Distribution in the European Union*, (September 2013), at 3, https://www.osborneclarke.com/media/filer_public/73/56/73569cbb-0450-40fe-9fc1-06112e5e049b/territorial-restraints.pdf.

⁹²⁵ *Id.*

where a distributor is prevented from selling to EU customers outside its allocated territory, European enforcers will likely consider this a restriction of competition.⁹²⁶

Consider, for instance, a company that has recently developed a patent that wants to license to end users, but includes field-of-use and territorial restrictions into the agreement.⁹²⁷ Thus, the license is either limited to one or more technical fields of application or one or more product markets or industrial sectors.⁹²⁸ The license is also restricted by territories, so the licensees may use the licensed technology only in certain parts of the U.S. and only in specified foreign countries.

In the U.S. these kind of territorial and field-of-use restraints are generally pro-competitive and do not rise antitrust concerns.⁹²⁹ According to the U.S. *IP-Antitrust Guidelines*, because the patent holder is free to license the entire right, market and sell the invention, he should have also the right to license just part of it.⁹³⁰ Moreover, the U.S. recognizes that such arrangements are generally pro-competitive, as they allow the licensee to develop and use different technologies or to create them by their own; on the other hand, the licensor has the opportunity to introduce the invention in several markets simultaneously and obtain full and fair profit as well.⁹³¹

The EU may analyze such agreement differently, as their point of view on field-of-use and territorial restraints is quite different.⁹³² The EC and national competition authorities to justify such restraint would engage in a more detailed analysis to determine whether a less restrictive solution for that provision exists.⁹³³ Thus, as Professor's Shapiro noted, apparently the EU needs to be convinced that the agreement is objectively necessary for the existence of the agreement of this type.⁹³⁴ And this is a risk for the patent holder.⁹³⁵ By contrast,

⁹²⁶ *Id.*

⁹²⁷ See Delhram, *supra* note 913, at 8. A similar example is described in the U.S. *IP-Antitrust Guidelines*, at §4.1.2.

⁹²⁸ See TTBER, *supra* note 47, at §4.2.4.

⁹²⁹ See Delhram, *supra* note 913, at 8.

⁹³⁰ See Blöndal, *supra* note 492, at 11. See also U.S. *IP-Antitrust Guidelines*, *supra* note 37, Example 7 at §2.3. ("The arrangement is merely a subdivision of the licensor's intellectual property among different fields of use and territories.").

⁹³¹ *Id.*; see also Meyers, *supra* note 741, at 386.

⁹³² See Delhram, *supra* note 913, at 9.

⁹³³ *Id.*; see also Shapiro's comment at the ABA Section of Antitrust Law Spring Meeting, *supra* note 921, at 5. See also TTBER, *supra* note 47, at §2.2. ("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 [...] claims that in the absence of a restriction the supplier would have resorted to vertical integration are not sufficient").

⁹³⁴ *Id.* (Shapiro argued that "evidently, it is not going to be enough for my documents to say 'I really need this restriction in order to make this license work for me as a business matter.' Instead, it seems that the EU will need to be convinced that in this general type of situation -using some comparison set restrictions-, licenses will not be achieved without these types of restrictions.").

⁹³⁵ *Id.*

as evidenced by Attorney General Delhaim, the ‘but-for’ or counterfactual analysis conducted by U.S. Antitrust Agencies, “examines only whether competition under the licensing agreement as a whole would be less than that which would occur in the absence of any licensing agreement at all.”⁹³⁶

Undoubtedly the EU stricter approach is rooted in the idea that every licensing practices that may somehow hinder competition intra- and extra-EU have to be impeded. However, in doing so, it may, in some instances, obstacle the circulation of ideas and discourage inventive efforts. Indeed, vertical restraints, such as field-of-use and territorial restraints, may increase the IP owner’s profits, thereby generating more innovation and leading to new competition.⁹³⁷ For these reasons, questions arise as to whether the EU should adopt a more lenient approach for licensing arrangements that may affect intra-technology competition.⁹³⁸ Indeed, a licensee that exploits a licensed technology, even if restricted to a particular territory or field-of-use, still encourages innovation and expands the frontiers of competition.⁹³⁹ The EC and national competition authorities, when examining licensing arrangements involving vertical restraints, should keep in consideration that technology licensing agreements, even if territorially limited, promote rather than lessen competition.⁹⁴⁰ That is not to say that the EU should allow any vertical restraints, but rather that it may give more importance to incentives for innovation by imposing a lower burden on parties to justify a licensing restriction. To this extent, the *U.S. IP-Antitrust Guidelines* adopt a more flexible approach, requiring a restraint to be “reasonably necessary”, as opposed to the “objectively necessary” requirement requested by the TTBER.⁹⁴¹

5.1.2. Price Restraints

As discussed in the third chapter of this work, under the TTBER indirect and direct price fixing between both competitors and non-competitors constitute hardcore restrictions, and they fall within the scope of Article 101.⁹⁴² Accordingly, those agreements have no other effect than to harm competition. By contrast, the

⁹³⁶ See Delhaim, *supra* note 913, at 9.

⁹³⁷ *Id.* Delhaim argues that “[...] uncertainty created by the EC’s approach may Cause IP owners to avoid licensing their technology in this environment, choosing instead ‘non- licensing solutions,’ such as vertical integration, which may not always be as efficient, or simply not fully exploiting the technology.”

⁹³⁸ See Richard Gilbert, *Converging Doctrines? US and EU Antitrust Policy for the Licensing of Intellectual Property*, (Unpublished Discussion Paper), (Feb. 16 2004), at 13, available at <http://repositories.cdlib.org/iber/cpc/CPC04-044>.

⁹³⁹ *Id.*, at 13.

⁹⁴⁰ *Id.*

⁹⁴¹ *Id.*, at 7. See also *U.S. IP-Antitrust Guidelines*, *supra* note 37, at §4.2. (“The existence of practical and significantly less restrictive alternatives is relevant to a determination of whether a restraint is reasonably necessary.”).

⁹⁴² See Baumgartner, *supra* note 5, at 219.

U.S. approach appears to be much more relaxed than the European one.⁹⁴³ In particular, while the *U.S. IP-Antitrust Guidelines* treat horizontal naked price fixing as illegal *per se*, the two systems diverge in the treatment of vertical RPM.⁹⁴⁴

Until *Leegin* case, in the U.S. minimum RPM agreements between manufacturers and distributors were considered *per se* antitrust violations.⁹⁴⁵ In 2007 the Supreme Court overruled its nearly century-old opinion in *Dr. Miles*⁹⁴⁶, which held RPM *per se* illegal, in favor of the broader *rule of reason* approach.⁹⁴⁷ The *U.S. IP-Antitrust Guidelines* thus now provide that “as with RPM agreements that apply to outright sales of goods, the Agencies will apply a *rule of reason* analysis to price maintenance in IP licensing agreements.”⁹⁴⁸ Therefore, it is necessary a case-by-case analysis which takes into account the economic context, as well as both positive and negative effects on trade.

In the EU, instead, the treatment of RPM conducts did not see a considerable change.⁹⁴⁹ According to the EU, agreements involving RPM provisions are qualified as hardcore restraints under the TTBER, and are thus presumed to harm competition within the meaning of Article 101.⁹⁵⁰ Accordingly, RMP may facilitate collusion between different suppliers and may lessen competition between manufacturers and/or retailers.⁹⁵¹ Moreover, such arrangements may also lead to higher prices for consumers and decrease innovation at the retail level.⁹⁵² The only exception provided by the TTBER is vertical maximum price fixing between non-competitors.⁹⁵³ Accordingly, when parties are non-competitors the TTBER allows licensors to impose a maximum RMP or recommended sale price on a licensee.⁹⁵⁴ In all the other cases, companies might still try to justify their agreements and plead a defense under Article 101(3); however, they have to be very convincing, as such restrictions are not likely to fulfill the conditions of Article 101(3).⁹⁵⁵

⁹⁴³ *Id.*

⁹⁴⁴ *Id.*

⁹⁴⁵ Jarod Bona, *Classic Antitrust Cases: Leegin and Resale-Price Maintenance Agreements*, (Aug. 2, 2018), <https://www.theantitrustattorney.com/classic-antitrust-cases-leegin-resale-price-maintenance-agreements/>.

⁹⁴⁶ *Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911).

⁹⁴⁷ See U.S. *IP-Antitrust Guidelines*, *supra* note 37, at §5.2.

⁹⁴⁸ *Id.*

⁹⁴⁹ Nagy, C., *Resale Price Fixing After the Revision of the EU Vertical Regime- A Comparative Perspective*, *Acta Juridica Hungarica*, *Acta Juridica Hungarica*, 54(4), 349-366, (2013), at 350.

⁹⁵⁰ European Parliament, Petition No 2383/2014 by Norbert Perstinger (Austrian), on the introduction of the Minimum Advertised Price (MAP) in the European Union.

⁹⁵¹ *Id.* at 2/3. Indeed, RMP may increase price transparency on the market, thereby favoring deviating conducts from the agreed price.

⁹⁵² *Id.*

⁹⁵³ See Baumgartner, *supra* note 5, at 219.

⁹⁵⁴ See Delhaim, *supra* note 913, at 13; see also TTBER, *supra* note 47, at Article 4(2)(a).

⁹⁵⁵ See European Parliament, *supra* note 950. (“While efficiency defenses under Article 101(3) for such clauses are in principle not excluded, it will be very difficult for companies to demonstrate in a particular case that pro-competitive effects of the clauses outweigh the negative effects.”).

The more restrictive approach adopted by the EU has been largely criticized, due to the potential pro-competitive benefits of RPM practices.⁹⁵⁶ Indeed, like other vertical restraints, RPM provisions may promote distribution efficiencies and stimulate interbrand competition by reducing intrabrand competition.⁹⁵⁷ The U.S. Supreme Court in *Leegin* explained that this aspect it's important, as one of the objectives of antitrust law is to protect interbrand competition, i.e. competition among manufacturers.⁹⁵⁸ In addition, as already evidenced in the fourth chapter, RPM eliminates the free riding issue by making retail prices uniform.⁹⁵⁹ Finally, economists have long recognized that, even when free riding is not a concern, RPM may still constitute an efficient way for manufacturers to raise retailers' margins, thereby encouraging them to provide better service.⁹⁶⁰

In conclusion, although the strict approach to RPM in the EU benefits European consumers, as it ensures competitive market with low prices and a wider choice, it is desirable for the future to achieve a balance with the more flexible U.S. approach.⁹⁶¹ The EU might open the door to a substantive analysis of RPM along the lines of the U.S. assessment method. Indeed, even if the VBER recognizes that generally an agreement containing RPM clauses may also lead to efficiencies pursuant to Article 101(3), in practice it's still almost impossible to convince a national competition authority or a national court of the positive effects of these kind of agreements.⁹⁶² For these reasons, without a substantial change in perspective from the ECJ and national courts, it is unlikely that the negative attitude of the EU toward RPM will change in the foreseeable future.⁹⁶³

5.1.3. *Exclusive Restraints*

In the fourth chapter it has been discussed the case, that occurs quite often, of a small pharmaceutical company that develops a new drug but has no

⁹⁵⁶ See Baumgartner, *supra* note 5, at 220.

⁹⁵⁷ See Bona, *supra* note 945.

⁹⁵⁸ *Id.*

⁹⁵⁹ OECD, Competition Law & Policy, *Resale Price Maintenance*, (2008), at 11, available at <https://www.oecd.org/daf/competition/43835526.pdf>.

⁹⁶⁰ *Id.* (Indeed, "to the extent that retailers have the discretion to choose their sales promotion efforts on a product-by-product basis, they will focus their promotional activities on higher-margin products.").

⁹⁶¹ *Id.*; see also Andrew Gavil, *Resale Price Maintenance in the Post-Leegin World: A Comparative Look at Recent Developments in the United States and European Union*, The CPI Antitrust Journal, (June, 2010).

⁹⁶² Filippo Amato, *RPM in the European Union: Any Developments Since Leegin?*, The CPI Antitrust Journal, (Nov.2013), at 7; see also VBER, *supra* note 339, at 64 ("However, RPM may not only restrict competition but may also, in particular where it is supplier driven, lead to efficiencies, which will be assessed under Article 101(3).").

⁹⁶³ *Id.*

resources and money to market it.⁹⁶⁴ Let's suppose that the small pharma concludes an exclusive licensing agreement with a big pharma, according to which the small pharma prohibits the big pharma to sell similar drugs and grants the big pharma the exclusive right to market it. Let's suppose also that the two pharma are not competitors, as the big pharma doesn't have any drug in the specific field at issue.

The *U.S. IP-Antitrust Guidelines* would treat favorably the agreement in question, as the restraint favors the marketing of the new drug.⁹⁶⁵ Accordingly, the agreement would incentive the big pharma to invest in the production, distribution and commercialization of the drug.⁹⁶⁶ On the other hand, the exclusivity clause will allow the licensor, i.e. the small pharma, to profit from its investment for the creation of the new drug and to exploit its IPRs as efficiently as possible.⁹⁶⁷ As a result, such exclusive license might raise antitrust concerns only if parties are in a horizontal relationship, (in the example if the two pharma sell competing drugs).⁹⁶⁸

The TTBER provides a far-reaching guidance that distinguishes between various categories of exclusive licensing agreements and evaluates the relationship between parties, as well as the nature of the arrangement.⁹⁶⁹ In particular, the TTBER qualifies reciprocal exclusive licensing arrangements between competitors as hardcore restraints; non-reciprocal exclusive licensing between competitors are, instead, block exempted up to the market share threshold of 20%.⁹⁷⁰ With regard to exclusive agreements between non-competitors, the TTBER establishes that, to the extent they are caught by Article 101(1), are likely to satisfy the conditions of Article 101(3).⁹⁷¹

Although the two systems appear to be fairly close in the analysis of exclusive licensing arrangements, in the EU the burden of proof still remains with the contracting parties, who have to prove that they meet the conditions established in Article 101(3).⁹⁷² Thus, even though hardcore restrictions may be individually exempted under Article 101(3), in practice this never happens.⁹⁷³ For

⁹⁶⁴ See generally Carolyne Hathaway, John Manthei & Cassie Scherer, *Exclusivity Strategies in the United States and European Union*, (2009), at https://www.lw.com/upload/pubcontent/_pdf/pub2655_1.pdf.

⁹⁶⁵ See Delhaim, *supra* note 913, at 10.

⁹⁶⁶ *Id.*; see also TTBER, *supra* note 47, at §4.1.2.

⁹⁶⁷ *Id.*

⁹⁶⁸ *Id.*

⁹⁶⁹ Siegfried Fina & Anna Maria Baumgartner, *A Comparative Antitrust Analysis of Exclusivity Clauses in Patent Licenses Under Article 101 TFEU and Section 1 Sherman Act*, Stanford-Vienna Transatlantic Technology Law Forum, TTLF Working Paper No. 11, (2012), at 28.

⁹⁷⁰ See TTBER, *supra* note 47, at §4.1.2.

⁹⁷¹ *Id.*

⁹⁷² See Baumgartner & Fina, *supra* note 969, at 29; see also Delhaim, *supra* note 913, at 10.

⁹⁷³ *Id.*

these reasons, the agreement described in the example above would probably be black listed.⁹⁷⁴

5.2. Differences between the U.S. and EU Models in the Treatment of Global Patent Pools and Standard Essential Patents

In analyzing the *U.S. IP-Antitrust Guidelines* it has been evidenced that, as opposed to the TTBER, they do not explicitly cover patent pools. This choice was welcomed by commentaries and companies, and criticized by others. In the EU, patent pools are, instead, the subject of a separate treatment in the TTBER Guidelines.⁹⁷⁵

In the past, the creation of patent pools in the EU was approved through the so-called 'comfort letter', i.e. informal message where the EC explained the interested parties the way it intended to apply competition law with respect to a specific issue.⁹⁷⁶ This was quite different from the U.S. business review letters, which contain a clear exposition and the relevant facts of the antitrust Agencies involved.⁹⁷⁷ The new TTBER Guidelines finally introduced more detailed provision on patent pools in a way similar to the described U.S. business review letters.⁹⁷⁸ Moreover, the new TTBER Guidelines provides a more favorable treatment of SEPs, i.e. patents that constitute a necessary part of the package of the technologies for the purpose of producing the product(s) or carrying out the process(es) to which the pool relates.⁹⁷⁹ Accordingly, essential patents are complementary by nature.⁹⁸⁰ However, the question whether a patented technology is essential or not, is often still debated both in the EU and U.S.⁹⁸¹ Therefore, the analysis of patent pools and SEPs under antitrust rules is not static, but rather require a continuous and intense review in line with competition law.⁹⁸² In addition, the EC recently published a long-awaited Communication on litigating and SEPs, containing an in-depth analysis on the EU approach to

⁹⁷⁴ *Id.*

⁹⁷⁵ See Peter Plompen's speech, ABA Section of Antitrust Law, *supra* note 921, at 7.

⁹⁷⁶ *Id.* See e.g. European Commission Press Release No 98/1155, Commission Approves a Patent Licensing Programme to Implement the MPEG-2 Standard, Brussels, (Dec. 18, 1998), http://europa.eu/rapid/press-release_IP-98-1155_en.htm.

⁹⁷⁷ *Id.* (Indeed, "more often than not, third parties did not have access to the contents of those 'comfort letters', and only saw a summary of the notification of a certain plan to the Commission without any changes made to allow the Commission to issue its comfort letter.").

⁹⁷⁸ *Id.*

⁹⁷⁹ See WIPO, *supra* note 874, at 16.

⁹⁸⁰ *Id.*

⁹⁸¹ See Peter Plompen's speech, ABA Section of Antitrust Law, *supra* note 921, at 7. See also WIPO, *supra* note 809, at 16 ("The dynamics of new developments in the market and the invention of new technologies may cause a technology that had originally been identified as essential to become non-essential.").

⁹⁸² *Id.*

SEPs.⁹⁸³ In particular, the EC Communication of 29 November 2017 emphasizes the need to balance standardization of technology with the rights of patent-holders.⁹⁸⁴ On the other hand, Attorney General Makan Delhaim, in his recent speeches has rebalanced the relationship between antitrust law and IPRs, particularly in the area of SEPs.

The following sections examines the EU and U.S. approaches toward standardization and essential patents, with regard to the most recent case-laws and scholarly works.

5.2.1. *The EU Approach Toward Standard Essential Patents in Huawei v. ZTE*

In the third and fourth chapter of this work, it has been discussed the key advantages of standardization, that is particularly important in the information and communication sectors, as well as in the Internet of Things fields, (i.e. consumer electronics, automotive industry, and electricity grid industry).⁹⁸⁵ The growing diffusion of SEP licensing agreements among companies, together with the necessity to achieve a transparent SEP regime, makes the achievement of a balanced SEP licensing system a fundamental goal for the EU courts.⁹⁸⁶

To this extent, in *Huawei v. ZTE*⁹⁸⁷ the ECJ ruled that patent holders who have committed to license the SEPs under FRAND terms, may violate Article 102 by seeking an injunction against a potential licensee in some circumstances; but, patent holders who committed to license SEPs under FRAND terms to third parties, seeking an injunction or the recall of products, do not abuse their dominant position if they meet certain specific obligations.⁹⁸⁸

The dispute occurred between, on one hand, Huawei Technologies Co. Ltd, a multinational groups of undertakings operating for years in the telecommunications and, on the other, Shenzhen-based ZTE Corporation and Düsseldorf-based ZTE Deutschland, two companies belonging to a multinational

⁹⁸³ Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee Setting Out the EU approach to Standard Essential Patents, Brussels, COM (2017) 712 final, (Nov. 29, 2017), <https://ec.europa.eu/docsroom/documents/26583>; see also Edward Kelly, Comparing EU And US Standard-Essential Patent Guidance, ROPES & GRAY, (Dec. 28, 2017), <https://www.ropesgray.com/en/newsroom/alerts/2017/12/Comparing-EU-And-US-Standard-Essential-Patent-Guidance>.

⁹⁸⁴ Luke McDonagh & Enrico Bonadio, *Standard Essential Patents and the Internet of Things*, In-Depth Analysis for the JURI Committee, at 5, (Jan. 2019), <http://www.europarl.europa.eu/supporting-analyses>.

⁹⁸⁵ *Id.*, at 5.

⁹⁸⁶ *Id.*

⁹⁸⁷ Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH*.

⁹⁸⁸ See McDonagh & Bonadio, *supra* note 984, at 5.

operating in the same sector.⁹⁸⁹ Huawei's claim concerned a German SEP that was essential to the 4G ('LTE') mobile network standard and was subject to a FRAND commitment.⁹⁹⁰ In 2010, Huawei discovered that ZTE was marketing products in Germany that used the LTE standard.⁹⁹¹ In April 2011, Huawei filed suit in the Düsseldorf Court for infringement of the LTE patent, seeking an injunction and prohibiting the continuation of the infringement and an order for the rendering of accounts, the recall of products, and an award of damages.⁹⁹²

The judgment of the ECJ largely followed the opinion of the Düsseldorf court.⁹⁹³ The ECJ emphasized the importance of IPRs and the need to strike a balance between maintaining free competition and safeguarding the owner's IPRs and its right to effective judicial protection.⁹⁹⁴ In an effort to strike such a balance in concrete terms, the ECJ described the circumstances where a SEP owner committed under FRAND terms may pursue an injunction without abusing its dominant position over the marketplace and violating Article 102.⁹⁹⁵ Accordingly, the ECJ ruled that Article 102 must be interpreted as meaning that the owner of a SEP subject to a FRAND commitment does not abuse its dominant position by seeking an injunction prohibiting the infringement of its patent as long as (i) the owner has alerted the alleged infringer before bringing the action and the alleged infringer has failed to signal that it is willing to conclude a license on FRAND terms and (ii) where the alleged infringer continues to use the patent at issue, the SEP owner may pursue an injunction if it has provided a written offer, specifying the royalty and the way in which it is to be calculated, and the alleged infringer has failed to respond to the written offer in good faith, that has to be established on the basis of objective factors.⁹⁹⁶ The ECJ finally concluded that, according to the principle of equal treatment and in circumstances such as those

⁹⁸⁹ Dal Lago, Eugenia, *La Legittimità dell'Azione Inibitoria*, Università Cà Foscari di Venezia (a.a. 2016/2017), at 57; see also Frignani & Granieri, *supra* note 536, at 47.

⁹⁹⁰ Robin Jacob & Alexander Milner, *Lessons from Huawei v. ZTE*, Italian Antitrust Review, No.1 (2017), at 5.

⁹⁹¹ *Id.*

⁹⁹² Sean-Paul Brankin, et al., *Huawei: Injunctions and Standard Essential Patents—Is Exclusion a Foregone Conclusion?*, Antitrust, Vol. 30, No. 1, (Fall 2015), at 1. See also Frignani, *supra* note 536, at 58.

⁹⁹³ See Jacob & Milner, *supra* note 990, at 5. (Accordingly, the questions posed to the court were "Does the proprietor of [an SEP] which informs a standardisation body that it is willing to grant any third party a licence on [FRAND] terms abuse its dominant market position if it brings an action for an injunction against a patent infringer even though the infringer has declared that it is willing to negotiate concerning such a licence?" or "Is an abuse of the dominant market position to be presumed only where the infringer has submitted to the proprietor of the [SEP] an acceptable, unconditional offer to conclude a licensing agreement which the patentee cannot refuse without unfairly impeding the infringer or breaching the prohibition of discrimination, and the infringer fulfils its contractual obligations for acts of use?" [...]). (*Id.*)

⁹⁹⁴ *Id.*; see also Brankin et al., *supra* note 992, at 81.

⁹⁹⁵ *Id.*; see also Chiara Noto, *The ECJ Clamps Down on Standard Essential Patents*, Italian Antitrust Review, No.1 (2017), at 1.

⁹⁹⁶ *Id.*; see also *Huawei*, *supra* note 987, at 77.

listed above, the owner of a SEP in a dominant position must be guaranteed the right to promote an injunction if it necessary for the protection of his invention.⁹⁹⁷

The ECJ in this case has confirmed that an injunction can be made by a SEP owner violating competition law.⁹⁹⁸ In particular, where there is a licensee willing to take a license (i.e. nationally prepared to pay a royalty), an injunction based on SEP where such a commitment has been given is an abuse of dominant position.⁹⁹⁹ By contrast, if the user of a patent doesn't express a willingness to license on FRAND terms, the patent owner is allowed seek an injunction without violating Article 102.¹⁰⁰⁰

The EC's approach resembles that of the previous U.S. Obama administration, according to which, under appropriate circumstances, the antitrust law may reach violations of FRAND commitments.¹⁰⁰¹ However, the most recent approach of the U.S. Antitrust Division toward SEPs seems to drive in another direction and represents a sort of break with the virtual consensus reached by the other authorities around the world over the last decade on antitrust enforcement in the SEPs sector.¹⁰⁰²

5.2.2. *The U.S. New Madison Approach Toward Standard Essential Patents*

Consistent with *Broadcom v. Qualcomm*¹⁰⁰³, the Obama Antitrust Division advocated the position according to which a SEP owner's infringement of FRAND

⁹⁹⁷ *Id.* ("Article 102 TFEU must be interpreted as not prohibiting, in circumstances such as those in the main proceedings, an undertaking in a dominant position and holding a patent essential to a standard established by a standardisation body, which has given an undertaking to the standardisation body to grant licences for that patent on FRAND terms, from bringing an action for infringement against the alleged infringer of its patent and seeking the rendering of accounts in relation to past acts of use of that patent or an award of damages in respect of those acts of use.").

⁹⁹⁸ Mark Simpson, Huw Ecans and Seiko Hidaka, *The EU Court of Justice Judgment in Huawei v ZTE – Important Confirmation of Practical Steps to be Taken by Standard Essential Patent Holders Before Seeking Injunctions*, (Aug. 2015), <https://www.nortonrosefulbright.com/en/knowledge/publications/8f90efbd/the-eu-court-of-justice-judgment-in-huawei-v-zte---important-confirmation-of-practical-steps-to-be-taken-by-standard-essential-patent-holders-before-seeking-injunctions>.

⁹⁹⁹ Leah Nylen, Lewis Crofts and Matthew Newman, *Delrahim's 'New Madison' Approach Warns Against Antitrust Policing Patents*, (March 20, 2018), <https://mlexmarketinsight.com/insights-center/editors-picks/antitrust/cross-jurisdiction/delrahims-new-madison-approach-warns-against-antitrust-policing-patents>.

¹⁰⁰⁰ *Id.* ("The European Court of Justice has confirmed that there is a clear competition context in relation to SEPs where a commitment to license on FRAND terms has been given to a standardization body.").

¹⁰⁰¹ *Id.*; see also Emily Luken & James Tierney, *The New Madison Approach Goes to Court*, (Jan. 24, 2019), <https://www.jdsupra.com/legalnews/the-new-madison-approach-goes-to-court-76520/>.

¹⁰⁰² *Id.*

¹⁰⁰³ 501 F.3d 297 (3rd Cir. 2007) (holding that "(1) in a consensus-oriented private standard-setting environment, (2) a patent holder's intentionally false promise to license essential

commitment terms may constitute a violation of section 2 of the Sherman Act.¹⁰⁰⁴ More specifically, in *Qualcomm* the Third Circuit held that a SEP owner who makes a false FRAND promise to induce an SSO to include its patents in the standard and later, reneges on those promises after it succeeded in having its technology incorporated in the standard demanding higher royalties in violation of the FRAND commitment, violates section 2 of the Sherman Act.¹⁰⁰⁵ The Obama Administration further asserted that seeking an injunctive relief during a judicial proceeding, is an inappropriate remedy for the alleged violation of FRAND terms.¹⁰⁰⁶ Accordingly, injunctions are, in most cases, incompatible with the *ratio* of a FRAND commitment, as they unfairly shift the bargaining power in the hand of patent owners.¹⁰⁰⁷ By contrast, monetary damages represent a more appropriate remedy.¹⁰⁰⁸

However, in recent years, the U.S. Antitrust Agencies moved away from the more regulatory approach taken by the Obama Antitrust Division with respect to SEPs.¹⁰⁰⁹ The Division is now on the view that, contrary to what was argued in the past, patent hold-up (i.e. royalties above the fair rate) in the context of SSO does not represent an antitrust issue.¹⁰¹⁰ To this extent, Assistant Attorney General Makan Delrahim, head of the U.S. DOJ's Antitrust Division and a patent lawyer, in his recent major speeches on antitrust issues, signals a significant shift in antitrust policy in the U.S.¹⁰¹¹ In his speech at the University of Pennsylvania Law School, Mr. Delrahim contrasted the approaches to patents taken by taken by Thomas Jefferson, the first patent examiner of the U.S., and James Madison,

proprietary technology on FRAND terms, (3) coupled with an SDO's reliance on that promise when including the technology in a standard, and (4) the patent holder's subsequent breach of that promise, is actionable anticompetitive conduct.”).

¹⁰⁰⁴ See Luken & Tierney, *supra* note 1001.

¹⁰⁰⁵ *Id.*; see also *Research in Motion v. Motorola*, 644 F. Supp. 2d 788 (N.D. Tex. 2008) and *Microsoft Mobile v. Interdigital*, 2016 WL 1464545 (D. Del. Apr. 13, 2016).

¹⁰⁰⁶ *Id.*

¹⁰⁰⁷ *Id.*; see also *Apple v. Motorola*, 757 F.3d 1286 (Fed. Cir. 2014) (holding that “instead, an injunction might be appropriate where, although monetary damages could compensate for the patentee's injuries, the patentee is unable to collect the damages to which it is entitled [...] or if a defendant refused to pay a court-ordered damages award after being found to infringe a valid FRAND patent, a court might be justified in including an injunction as part of an award of sanctions.”).

¹⁰⁰⁸ *Id.*

¹⁰⁰⁹ John D. Harkrider, *Antitrust in the Trump Administration: A Tough Enforcer That Believes in Limited Government*, ABA 2017 Annual Review of Antitrust Developments, Vol. 32, No. 3 (Summer 2018).

¹⁰¹⁰ See Luken & Tierney, *supra* note 1001; see also Makan Delrahim, Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, The “New Madison” Approach to Antitrust and Intellectual Property Law, Remarks as Prepared for Delivery at University of Pennsylvania Law School (Mar. 16, 2018), <https://www.justice.gov/opa/speech/file/1044316/download> (“Many advocates of reducing the power of intellectual property rights cite the so-called “hold-up” problem in the context of SSOs. As many of you know, I believe these concerns are largely misplaced.”).

¹⁰¹¹ David. T. Teece, *Pivoting Toward Schumpeter: Makan Delrahim and the Recasting of U.S. Antitrust Towards Innovation, Competitiveness, and Growth*, ABA 2017 Annual Review of Antitrust Developments, Vol. 32, No. 3 (Summer 2018).

the principal drafter of the U.S. Constitution.¹⁰¹² Indeed, the term ‘New Madison Approach’ originates from the understanding of IPRs held by James Madison, who believed that strong IP protection is a key driver of innovation and economic development.¹⁰¹³ Mr. Delhaim affirmed:

The New Madison approach . . . has four basic premises that are aimed at ensuring that patent holders have adequate incentives to innovate and create exciting new technologies and that licensees have appropriate incentives to implement those technologies. [The four premises are (1)] that hold-up is fundamentally not an *antitrust* problem, and therefore antitrust law should not be used as a tool to police FRAND commitments that patent-holders make to standard setting organizations, [(2) that] standard setting organizations should not become vehicles for concerted actions by market participants to skew conditions for patented technologies’ incorporation into a standard in favor of implementers because this can reduce incentives to innovate and encourage patent hold-out, [(3) that] because a key feature of patent rights is the right to exclude, standard setting organizations and courts should have a very high burden before they adopt rules that severely restrict that right or—even worse—amount to a de facto compulsory licensing scheme, [and (4) that] consistent with the fundamental right to exclude, from the perspective of the antitrust laws, a unilateral and unconditional refusal to license a patent should be considered *per se* legal.¹⁰¹⁴

Mr. Delharim’s New Madison principles flows from the assumption that the fact that a patent holder can derive higher licensing fees through hold-up does not constitute an issue under antitrust laws, but it rather simply reflects a basic commercial reality.¹⁰¹⁵ By contrast, according to the Division, the greater risk to competition and innovation is the ‘hold out’ problem in SEPs, i.e. the practice of companies making products that innovate upon and incorporate the standard threaten to withhold their investment in the implementation of the new standard, or threaten not to take a license at all, until their royalty demands are met.¹⁰¹⁶ To this extent, antitrust law plays a fundamental role in ensuring that concerted

¹⁰¹² See Teece, *supra* note 1011; see also Luken & Tierney, *supra* note 1001.

¹⁰¹³ *Id.*

¹⁰¹⁴ Delhaim, *supra* note 1010.

¹⁰¹⁵ *Id.*; see also 2007 IP Report, *supra* note 834, at 35 n. 11 (“In the standard-setting context, firms may make sunk investments in developing and implementing a standard that are specific to particular intellectual property. To the extent that these investments are not redeployable using other IP, those developing and using the standard may be held up by the IP holders.”).

¹⁰¹⁶ Makan Delrahim, Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, Take It to the Limit: Respecting Innovation Incentives in the Application of Antitrust Law, Remarks as Prepared for Delivery at USC Gould School of Law (Nov. 10, 2017), <https://www.justice.gov/opa/speech/file/1010746/download>; see also Luken and Tierney, *supra* note 1001.

practices among potential adopters/licensees does not occur at any level of the standard setting process.¹⁰¹⁷

The third premise of the New Madison approach is the respect of the right to exclude at the core the protection of IPRs.¹⁰¹⁸ To this extent, Mr. Delhram correctly noted that “patents are a form of property, and the right to exclude is one of the most fundamental bargaining rights a property owner possesses. Rules that deprive a patent holder from exercising this right— whether imposed by an SSO or by a court—undermine the incentive to innovate and worsen the problem of hold-out.”¹⁰¹⁹ In his speeches he criticized the presumption, shared by several commentators, who believe that the mere act of seeking an injunction within a proceeding with the intent to prevent competition issues may violate antitrust law.¹⁰²⁰ Accordingly, “we should not transform commitments to license on FRAND terms into a compulsory licensing scheme,” even if we leave the courts free to determine what the FRAND terms are where parties are unable to find an agreement.¹⁰²¹

Finally, Mr. Delhram, recalling the U.S. Supreme Court ruling in *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko*¹⁰²², argues that a refusal to deal does not represent an antitrust violation if the parties have never done business with each other, since “there is no duty to aid competitors”.¹⁰²³ This allows holders to fully exploit their patent rights and to benefit from their inventions.¹⁰²⁴

5.2.3. *Contrasting the two Approaches*

While in the 2017 EC Communication and in the most recent case laws, both the EC and the ECJ seek to find a balance between the rights of the SEP owners and those of the licensees, what emerges from Mr. Delhram speeches is that the U.S. Antitrust Division favors the rights of the SEP owners over the

¹⁰¹⁷ Delhram, *supra* note 1010.

¹⁰¹⁸ *Id.*

¹⁰¹⁹ Delhram, *supra* note 1015, at 12.

¹⁰²⁰ *Id.*; see also Joseph Simons, Prepared Remarks of Chairman Joseph Simons Georgetown Law Global Antitrust Enforcement Symposium, Washington DC, (Sept. 25, 2018), https://www.ftc.gov/system/files/documents/public_statements/1413340/simons_georgetown_lunch_address_9-25-18.pdf. (“We agree with the division leadership that a breach of a FRAND commitment standing alone is not sufficient to support a Sherman Act violation. The same is true even for a fraudulent promise to abide by a FRAND commitment. More is needed.”).

¹⁰²¹ *Id.*; see also Teece, *supra* note 1011.

¹⁰²² 540 U.S. 398 (2004).

¹⁰²³ Makan Delrahim, Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, Antitrust Law and Patent Licensing in the New Wild West, Assistant Attorney General Makan Delrahim Delivers Remarks at IAM’s Patent Licensing Conference in San Francisco, (Sept. 18, 2018), <https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-iam-s-patent-licensing>.

¹⁰²⁴ *Id.*

SEP licenses.¹⁰²⁵ Indeed, as the EC and the ECJ have fought hard to establish a balanced ‘competition context’ of SEPs and patent-enforcement practices, “Delrahim is travelling in the other direction, rolling back what he sees as an antitrust incursion in the field of IP.”¹⁰²⁶

The divergence of the two approaches emerges with particular reference to the injunctive relief issue for SEPs. As discussed above, the *Motorola*, *Samsung* and *Huawei* cases clarified the EU point of view, according to which a SEP owner seeking an injunction for infringement of SEPs, may break competition rules when the holder has committed to license the SEP on FRAND terms and the alleged infringer has demonstrated to be willing to enter on a license agreement under FRAND terms.¹⁰²⁷ On the other hand, the DOJ recognizes that, in such circumstances, a claim for breach of a FRAND commitment may arise, but it is necessary a more in-depth analysis on the presence of market power or monopoly power before establishing antitrust liability.¹⁰²⁸ To this extent, the U.S. antitrust Agencies play a fundamental role in supporting the SEP’s holders in those situations.¹⁰²⁹

Yet, the US system seems to adopt a more liberal and at the same time balanced approach when it comes to IP-Antitrust intersection issues. Nonetheless, both the 2017 EC Communication and Mr. Delrahim’s speeches on SEPs issues should be viewed as a start point to achieve a more consistent guidance on SEP competition problems.¹⁰³⁰ Indeed, this is a sector in constant and continuous evolution and further transparency is necessary going forward.

¹⁰²⁵ Ian Simmons, Benjamin Hendricks, & Philippe Nogue, *The EC Communication on SEPs: Convergence, Divergence, or Silence?*, ABA 2017 Annual Review of Antitrust Developments, Vol. 32, No. 3 (Summer 2018); see also EC Communication, *supra* note 1025, at 3. (“The Commission therefore considers that there is an urgent need to set out key principles that foster a balanced, smooth and predictable framework for SEPs. These key principles reflect two main objectives: incentivising the development and inclusion of top technologies in standards, by preserving fair and adequate return for these contributions, and ensuring smooth and wide dissemination of standardised technologies based on fair access conditions. A balanced and successful policy on SEPs licensing should work to the benefit of start-ups in Europe and should serve all EU citizens by giving them access to products and services based on the best performing standardised technology.”).

¹⁰²⁶ Nylen et al., *supra* note 999.

¹⁰²⁷ See Simmons et al., *supra* note 1025, at 42.

¹⁰²⁸ *Id.*

¹⁰²⁹ *Id.*

¹⁰³⁰ *Id.*

CONCLUSIONS

The firms' ability to license their IPRs internationally is a prerequisite for building a strong global economy.¹⁰³¹ Moreover, in today's world, whether firms are creators or consumers, IPRs are essential for the development of new strategies to enhance competitiveness and accelerate socio-economic development.¹⁰³² In this regard, as emerges from the analysis carried out by this work, both the EU and U.S. systems have made tremendous progresses in the application of antitrust laws to IP licensing, especially in recent years.¹⁰³³ According to the U.S. Antitrust Division, there are substantial similarities between the EU and U.S. approaches toward licensing arrangements. Both the TTBER and the U.S. *IP-Antitrust Guidelines* recognize that technology licensing is generally pro-competitive and they both weigh the pro-competitive and anti-competitive effects when examining restrictive practices.¹⁰³⁴ In addition, both Guidelines include 'safety zones' and qualify naked price fixing and market allocation practices among competitors as hardcore restraints or illegal *per se*.¹⁰³⁵ Finally, they both describe the economic effect-based approach used by the Agencies to evaluating IP licensing arrangements.¹⁰³⁶

However, there are still several differences between the two approaches. Some of them are merely formal; for instance, the TTBER is longer and much more detailed, as a reflection of a long code-based tradition that characterizes the EU system.¹⁰³⁷ By contrast, the U.S. is a case-based system and, as a consequence, the U.S. *IP-Antitrust Guidelines* are less detailed and simplified to leave room for interpretation to the courts.¹⁰³⁸ With respect to patent pooling agreements, the EU treats them as any other agreements that may restrict competition, thereby subjecting them to the scrutiny of antitrust authorities that have to establish if they are pro-competitive and thus if they benefit from the

¹⁰³¹ Makan Delrahim, US And EU Approaches To The Antitrust Analysis Of Intellectual Property Licensing: Observations From The Enforcement Perspective, Remarks at the American Bar Association Spring Meeting in Washington DC, (Apr. 1, 2004), <https://www.justice.gov/atr/speech/us-and-eu-approaches-antitrust-analysis-intellectual-property-licensing-observations>.

¹⁰³² *Id*; see also Shahid Alikan, *Socio-Economic Benefits of Intellectual Property Protection in Developing Countries*, WIPO Library, (March 9, 2009), at 2, available at ftp://ftp.wipo.int/pub/library/ebooks/wipopublications/wipo_pub_454e.pdf.

¹⁰³³ Delhram, *supra* note 1031, at 9.

¹⁰³⁴ *Id*.

¹⁰³⁵ *Id*; see also Gilbert, *supra* note 938, at 2. It is recalled that the U.S. *IP-Antitrust Guidelines* establish that "absent extraordinary circumstances, the Agencies will not challenge a restraint in an intellectual property licensing arrangement if (1) the restraint is not facially anticompetitive and (2) the licensor and its licensees collectively account for no more than twenty percent of each relevant market significantly affected by the restraint." On the other hand, the TTBER exempts licenses that do not contain certain "hardcore" restrictions between non-competitors with market shares below 30% and between competitors with market shares below 20%.

¹⁰³⁶ *Id*; see also Gilbert, *supra* note 938, at 2.

¹⁰³⁷ *Id*.

¹⁰³⁸ *Id*.

exemption.¹⁰³⁹ The *U.S. IP-Antitrust Guidelines*' analysis of patent pooling arrangements is much less comprehensive and address the issue only briefly.¹⁰⁴⁰ However, the DOJ has addressed many patent pooling issues through business review letters, which offer a case-by-case analysis of the specific questions raised by the parties involved.¹⁰⁴¹ Finally, there are areas where the EU and U.S. approaches seem to diverge in substance. This work examined three example of licensing restraints that the EU and the U.S. treat differently. What has emerged is that generally the U.S. system is more tolerant and accommodative toward some licensing restraints than the EU and poses a lower burden of proof on the parties to justify a licensing restraint.¹⁰⁴²

In sum, although the revised TTBER and the accompanying Guidelines are a significant step toward the harmonization of antitrust laws applied to IP licensing agreements, there is still a very long way to go.¹⁰⁴³ Some of the disparities between the two systems are due to the different guiding principles in competition law.¹⁰⁴⁴ The EU system is strongly based on the 'single market imperative', and this is the reason why it has always placed more barriers on licensing restraints than the U.S. competition policy.¹⁰⁴⁵ However, by doing so, it also sets more limits to the circulation of ideas, thereby threatening to reduce the incentives for firms to invest in the creation of new technologies. As previously discussed, vertical restraints, including field-of use and territorial restraints, may allow IP holders to receive substantial returns from their investments and to invest in the creation of new products, thereby fostering competition. It is therefore desirable for the EU to adopt a more flexible approach toward licensing restraints in the future, to achieve a closer alignment with the U.S. competition policy for IP licensing agreements. Indeed, in today's global economy enterprises, firms and, more in general, states, do not operate in isolation from the rest of the world and tend to cooperate with one another.¹⁰⁴⁶ Therefore, questions arise about the possibility of an harmonization between the U.S. model of inter-state competition and the EU experience exemplified in the construction of a single and integrated market.¹⁰⁴⁷ That is not to say that harmonization has to result in uniformity.¹⁰⁴⁸

¹⁰³⁹ Alesksander Karol Maziarz, *Patent Pools in the Light of US and EU Competition Law*, Kozminski University, Poland, at 12.

¹⁰⁴⁰ Delhaim, *supra* note 1031.

¹⁰⁴¹ *Id.*

¹⁰⁴² See Gilbert, *supra* note 938, at 7.

¹⁰⁴³ *Id.*, at 12.

¹⁰⁴⁴ *Id.*, at 3; see also Aranda, *supra* note 1, at 68.

¹⁰⁴⁵ Swedish Competition Authority, *The Pros and Cons of Vertical Restraints*, Bromma, (Nov. 2008), at 192, available at <http://www.konkurrensverket.se/globalassets/english/research/report-the-pros-and-cons-of-vertical-restraints-18mb.pdf>.

¹⁰⁴⁶ Joel P. Trachtman, *International Regulatory Competition, Externalization, and Jurisdiction*, 34 Harv. Int'l L.J. 47, (Winter 2003), at 1.

¹⁰⁴⁷ Simon Deakin, *Legal Diversity and Regulatory Competition: Which Model for Europe?*, Centre for Business Research, University Of Cambridge Working Paper No. 323, (March 2006), at 2.

¹⁰⁴⁸ *Id.*, at 9.

Cooperation among states or between states and other institutions are the antithesis of competition.¹⁰⁴⁹ Several commentators note that “convergence, whether or not resulting from competition, normally takes place by one jurisdiction imitating rules of concepts of another jurisdiction, what are sometimes referred to as ‘legal transplants.’”¹⁰⁵⁰ There has been much discussion in doctrine on the difficulties of transplanting from one legal system to another.¹⁰⁵¹ Provided that there is no one, all-embracing model of regulatory competition, identifying a single and uniform model of competition for the U.S. and EU systems would risk eliminating the characteristics underlying the two jurisdictions, which are also the basis of antitrust policy.¹⁰⁵² The idea is rather to find a point of convergence between the U.S. and EU different approaches, with the goal of preserving diversity in order to protect autonomy and diversity of national or local rule-making systems.¹⁰⁵³ Applied to the level of transnational economic law and technology transfer agreements, the harmonization of the U.S. and EU rules would help above all the multinational technology companies operating internationally, such as Apple and Huawei. Indeed, licensing agreements are a vital component of the business strategy of all companies.¹⁰⁵⁴

¹⁰⁴⁹ *Id.*, at 2.

¹⁰⁵⁰ Esin Örüçü & David Nelken, *Comparative Law: A Handbook*, Hart Publishing, 1st Edition, Portland, (Oct. 12, 2007), at 162.

¹⁰⁵¹ *Id.*; see also Rodolfo Sacco & Piercarlo Rossi, *Introduzione al Diritto Comparato*, Utet Giuridica, Sesta Edizione, Milano (2015), at 144-145.

¹⁰⁵² See Deakin, *supra* note 1047, at 15. (“[...] The nature of regulatory competition is dependent on the particular institutional environment or ‘framework’ which defines the relevant relationships between the different levels of rulemaking. Systems which approximate to the model described above in terms of ‘competitive federalism’ tend to give rise to a *race to converge* which could be either a race to the top or to the bottom; an optimal outcome is not guaranteed.”).

¹⁰⁵³ *Id.*

¹⁰⁵⁴ WIPO, *Licensing of Intellectual Property Assets; Advantages and Disadvantages*, at 6, <https://www.wipo.int/export/sites/www/sme/en/documents/pdf/licensing.pdf>.

APPENDIX A

The U.S.-China Trade War

On August 18, 2017, the Office of the U.S. Trade Representative (hereinafter ‘USTR’) launched an investigation under Section 301 of the Trade Act of 1974¹⁰⁵⁵ of China’s acts, policies, and practices related to technology transfer, IP, and innovation.¹⁰⁵⁶ On March 22, 2018, the USTR issued a report¹⁰⁵⁷ (the ‘Section 301 Report’) citing instances of ‘forced’ technology transfer and failure to protect U.S. IPRs from infringement or theft.¹⁰⁵⁸ According also to a broad range of experts and reports previously released by the International Trade Commission and the bipartisan Commission on Theft of American Intellectual Property, China has repeatedly forced foreign multinationals to transfer sensitive technologies to Chinese indigenous firms in order to get Chinese market access.¹⁰⁵⁹ The Section 301 Report first affirms that “the Chinese Government

* During my three-month internship at the Embassy of Italy in Washington DC, from September to December, 2018, I had the opportunity to make research and investigate more closely the U.S.-China trade war. More specifically, I analyzed the U.S. companies’ point of view on Trump’s tariff policy.

¹⁰⁵⁵ ‘Section 301’ refers generally to Chapter 1 of Title III of the Trade Act of 1974 (codified as amended in 19 U.S.C. §§ 2411-2417). Section 301(b) of the Trade Act as amended provides that “the Trade Representative shall take all appropriate and feasible action authorized under [Section 301(c)], subject to the specific direction, if any, of the President regarding any such action . . . to obtain the elimination of [the] act, policy, or practice” covered in the investigation.

¹⁰⁵⁶ Office of the U.S. Trade Representative Executive Office of the President, Update Concerning China’s Acts, Policies and Practices Related to Technology Transfer, Intellectual Property and Innovation, (Nov. 20, 108), at 3.

¹⁰⁵⁷ Office of the U.S. Trade Representative, Findings of the Investigation Into China’s Acts, Policies, And Practices Related to Technology Transfer, Intellectual Property, and Innovation Under Section 301 of the Trade Act of 1974, (March 22, 2018).

¹⁰⁵⁸ Lee Branstetter, *China’s “Forced” Technology Transfer Problem - And What to Do About It*, Carnegie Mellon University & Peterson Institute for International Economics, (May 31, 2018), at 1. More specifically, the Section 301 Report found that:

1. China uses foreign ownership restrictions, such as joint venture (JV) requirements and foreign equity limitations, and various administrative review and licensing processes, to require or pressure technology transfer from U.S. companies.
2. China’s regime of technology regulations forces U.S. companies seeking to license technologies to Chinese entities to do so on non-market based terms that favor Chinese recipients.
3. China directs and unfairly facilitates the systematic investment in, and acquisition of, U.S. companies and assets by Chinese companies to obtain cutting-edge technologies and intellectual property and generate the transfer of technology to Chinese companies.
4. China conducts and supports unauthorized intrusions into, and theft from, the computer networks of U.S. companies to access their sensitive commercial information and trade secrets.

(See Notice of Determination and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation, 83 Fed. Reg. 14, 906-09 (Apr. 6, 2018). See *also* Presidential Memorandum on the Actions by the United States Related to the Section 301 Investigation, WHITEHOUSE, (March 22, 2018), <https://www.whitehouse.gov/presidential-actions/presidential-memorandum-actions-united-states-related-section-301-investigation/>.

¹⁰⁵⁹ See Branstetter, *supra* note 1058, at 1-2.

uses foreign ownership restrictions, such as formal and informal joint ventures requirements, and other foreign investment restrictions to require or pressure technology transfer from U.S. companies to Chinese entities.”¹⁰⁶⁰ The Section 301 Report further asserts that “the Chinese government uses its administrative licensing and approvals processes to force technology transfer in exchange for the numerous administrative approvals needed to establish and operate a business in China.”¹⁰⁶¹ Moreover, China’s misappropriation of foreign technology violates the World Trade Organization (‘WTO’) principles and is furthered by non-transparent and implicit non-written practices that are almost impossible to persecute. The U.S. worked closely also with the EU and Japan, who share many of the U.S.’ concerns on China’s acts.¹⁰⁶²

The Government of China responded to the action in investigation by imposing retaliatory tariffs on a substantial percentage of U.S. goods exported to China.¹⁰⁶³ As a result of China’s failure to address the U.S.’s concerns, on June 6, 2018, the USTR announced plans to impose tariffs on up to approximately \$50bn of Chinese imports, as part of the U.S. response to China’s unfair trade practices.¹⁰⁶⁴ The first of the U.S. tariffs was of \$34bn and mainly affected agricultural products.¹⁰⁶⁵ The USTR provided right after notice of another proposed action in the form of additional 25% *ad valorem* duty on products of China with an annual trade value of approximately \$16bn.¹⁰⁶⁶ The USTR published a list of the specific tariff subheadings to be subject to increased duties and requested comments on any aspects of the proposed supplemental action.¹⁰⁶⁷ Some commentators noted the complexity of the rules concerning the determination and the application of dutiable value.¹⁰⁶⁸ Others pointed out that

¹⁰⁶⁰ Section 301 Report, *supra* note 1053, at 19. (Accordingly, These requirements prohibit foreign investors from operating in certain industries unless they partner with a Chinese company, and in some cases, unless the Chinese partner is the controlling shareholder.”).

¹⁰⁶¹ *Id.*

¹⁰⁶² See Office of the USTR, *supra* note 1056, at 4.

¹⁰⁶³ Notice of Determination and Request Request for Public Comments Concerning Proposed Modification of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation, Federal Register, 83 Fed. Reg. 20, 459-60 (July 17, 2018).

¹⁰⁶⁴ *Id.*, at 5; see also Notice of Action and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation, 83 Fed. Reg. 28710 (June 20, 2018); Notice of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation, 83 Fed. Reg. 40823 (Aug. 16, 2018).

¹⁰⁶⁵ Jane Pong et al., What’s at Stake in US-China Trade War, FINANCIAL TIMES, (July 19, 2019), <https://ig.ft.com/us-china-tariffs/>.

¹⁰⁶⁶ See USTR’s Notice of Action, *supra* note 1064.

¹⁰⁶⁷ *Id.* The list of goods affected by taxation ranges from autoparts to food ingredients to construction material.

¹⁰⁶⁸ See Comment of The Antiquarian Booksellers’ Association of America (ABAA) Concerning Proposed Modification of Action Pursuant to Section 301: China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property and Innovation, Washington DC, (Aug.6, 2018).

diplomacy and trade negotiations are a better course to resolve trade imbalances as opposed to the increase of tariffs.¹⁰⁶⁹ Finally, still other companies asked the USTR to balance the goal of protecting U.S. IPRs from unfair trade practices with the need to assist U.S. companies most at risk of retaliation by China and other foreign companies.¹⁰⁷⁰ The USTR Robert Lighthizer explained that the value of the tariffs imposed was proportionate to the U.S. estimates of the economic damages caused by China's alleged IP theft and the forced transfer of technology.¹⁰⁷¹ On August 22, 2018, the Office of the USTR released its finalized list of Chinese goods to be subject to a 25% tariff.¹⁰⁷² On September, Trump threatened tariffs on an additional \$267bn worth of imports if China retaliates; the Government of China responded by announcing new trade tariffs on \$60bn of US goods.¹⁰⁷³

The U.S.-China trade war is far from ending and its impact on the economy is still unclear. Although the trade war involves the two world's largest economic powers, President Trump's chief economic adviser, Larry Kudlow, says the economic consequences of the tariffs will be "so small" that it's "worthwhile doing."¹⁰⁷⁴ Many economic experts assert that the U.S. Government is properly taking actions against China's unfair practices, but is doing it in the wrong way.¹⁰⁷⁵ Accordingly, Trump's tariffs harm U.S. consumers and business and increase the U.S. trade deficit with China.¹⁰⁷⁶ The OECD affirmed that, even if the two

¹⁰⁶⁹ See Comment of BIFMA Concerning Proposed Modification of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property and Innovation, Washington DC, (Aug.17, 2018).

¹⁰⁷⁰ See Comment of Milwaukee Tool Concerning Proposed Modification of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property and Innovation, Washington DC, (Aug.1, 2018).

¹⁰⁷¹ *What's Intellectual Property and Does China Steal It?*, WASHINGTON POST, (March 22, 2018), https://www.washingtonpost.com/business/whats-intellectual-property-and-does-china-steal-it-quicktake/2018/03/22/83b980b8-2dd1-11e8-8dc9-3b51e028b845_story.html.

¹⁰⁷² David Lawder, U.S. *Finalizes Next China Tariff List Targeting \$16 Billion in Imports*, REUTERS, (Aug.7, 2018), <https://www.reuters.com/article/us-usa-trade-china/u-s-finalizes-next-china-tariff-list-targeting-16-billion-in-imports-idUSKBN1KS2CB>.

¹⁰⁷³ Andrew Walker, *China Hits Back at Trump With Tariffs on \$60bn of US Goods*, BBC NEWS, (Sept., 18, 2018), <https://www.bbc.com/news/business-45555749>.

¹⁰⁷⁴ Henry A. Lowenstein, U.S.-China Trade War: The Consequences, THE NEW YORK TIMES, (May 13, 2019), <https://www.nytimes.com/2019/05/13/opinion/letters/us-china-trade.html>.

¹⁰⁷⁵ Jared Bernstein, *The Problem — And Consequence — Of Trump's Trade War With China*, WASHINGTON POST, (May 13, 2018), https://www.washingtonpost.com/outlook/2019/05/13/problem-consequence-trumps-trade-war-with-china/?noredirect=on&utm_term=.39a7856fed86.

¹⁰⁷⁶ *Id*; see also Finbarr Berningham, *US Trade Deficit With China Narrows, As Effects of Trade War -Induced Export Front- Loading Begin to Fade*, SOUTH CHINA MORNING POST, (Feb. 7, 2019), <https://www.scmp.com/economy/china-economy/article/2185292/us-trade-deficit-china-narrows-effects-trade-war-induced>. See also Harry Broadman, *The Coalition-Based Trade Strategy Trump Should Pursue Toward China*, FORBES, (Apr.9, 2019), <https://www.forbes.com/sites/harrybroadman/2018/04/09/the-coalition-based-trade-strategy-trump-should-pursue-toward-china/#1137f8007b9e>. Broadman, a former U.S. trade negotiator, believes that it would be more efficient for the U.S. Government to build a coalition of some of the major trading powers of the world, such as the EU, Japan, Australia, to support the U.S. in its

economic powers sign a trade agreement in the near term, “risks still remain that other restrictive measures could be implemented later in 2019, including new restrictions in specific trade-sensitive sectors such as cars and car parts.”¹⁰⁷⁷

Despite economic expert’s predictions, is still uncertain who will be the winner and the losers of the U.S.-China trade war. Trump’s recent decision to blacklist Huawei takes the trade war to a dangerous new level ¹⁰⁷⁸ On May, 15, 2019, Trump signed an executive order barring U.S. companies from buying technological parts and components from sources the administration deems a national security threat.¹⁰⁷⁹ The world’s second-largest smartphone maker has been added to the so-called Entity List, including a set of companies that U.S. firms cannot sell technology to without a specific authorization from the U.S. Government.¹⁰⁸⁰ Scott Kennedy, a China expert at the Center for Strategic and International Studies, affirmed “this action is potentially devastating not only to Huawei the company but to the networks around the world that run on Huawei equipment. This action certainly now puts the entire economic relationship up on the table.”¹⁰⁸¹ So, there’s nothing to do but stand and see what happens.

campaign *vis a vis* China and its future as a member of the WTO, to make the approach with China more effective.

¹⁰⁷⁷ Charles Wallace, *US-China Trade War Hurting The Global Economy*, FORBES, (March 20, 2019), <https://www.forbes.com/sites/charleswallace1/2019/03/20/us-china-trade-war-hurting-the-global-economy/#272830695756>.

¹⁰⁷⁸ Julia Horowitz, *Blacklisting Huawei Takes the US-China Trade War to a Dangerous New Level*, CNN BUSINESS, (May 16, 2019), <https://edition.cnn.com/2019/05/16/business/huawei-trade-war/index.html>.

¹⁰⁷⁹ *Id.*

¹⁰⁸⁰ Eric Levitz, *Trump’s Huawei Ban Is a Bigger Deal Than His Trade War*, INTELLIGENCER, (May 18, 2019), <http://nymag.com/intelligencer/2019/05/trumps-huawei-ban-is-a-bigger-deal-than-his-trade-war.html>.

¹⁰⁸¹ David J. Lynch, *Are the U.S. and China Heading for a Deal- or a Divorce?*, WASHINGTON POST, (May 16, 2019), https://www.washingtonpost.com/business/economy/are-the-us-and-china-heading-for-a-deal--or-a-divorce/2019/05/16/ce7e8e14-780c-11e9-bd25-c989555e7766_story.html?utm_term=.5e76bf374597.

LIST OF ABBREVIATIONS

DOJ- Department of Justice
EC- European Commission
ECT- European Community Treaty
ECJ- European Court of Justice
EU- European Union
FRAND- fair, reasonable, and non-discriminatory
FTC- Federal Trade Commission
FTCA- Federal Trade Commission Act
HM Guidelines- U.S. Horizontal Merger Guidelines
IP- Intellectual Property
IPRs– Intellectual Property Rights
OECD- The Organization for Economic Co-operation and Development
R&D– Research & Developments
RPM- Minimum Resale Price Maintenance
SEPs- Standard Essential Patents
SOS- Standard Settings Organizations
SMP Guidelines- U.S. Significant Market Power Guidelines
TFUE- Treaty on the Functioning of the European Union
2004 TTBER- EU 2004 Technology Transfer Block Exemption Regulation
TTBER- EU 2014 Technology Transfer Block Exemption Regulation
TTBER Guidelines- EU 2014 Technology Transfer Block Exemption Regulation
accompanying Guidelines
U.S.- United States
U.S. IP-Antitrust Guidelines- 2017 Antitrust Guidelines for the Licensing of
Intellectual Property
U.S. 1995 IP-Antitrust Guidelines- 1995 Antitrust Guidelines for the Licensing of
Intellectual Property
USTR- U.S. Trade Representative
VBER- Vertical Block Exemption Regulation
WTO- World Trade Organization

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