

Instituto de Ciencias del Seguro

VIABILITY OF PATENT INSURANCE IN SPAIN

Elena F. Pérez Carrillo
Frank Cuypers

FUNDACIÓN MAPFRE



MINISTERIO
DE INDUSTRIA, ENERGIA
Y TURISMO



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PRESENTATION

Since 1975 the FUNDACIÓN MAPFRE has involved itself in activities serving the general interests of society in different areas of business and culture along with activities aimed at improving the economic and social conditions of the least advantaged members and sectors of society. Within this framework, the FUNDACIÓN MAPFRE's Institute of Insurance Science promotes and undertakes educational and research activities in the fields of insurance and risk management.

In the area of education, its activities include specialized, post-graduate academic training carried out in association with the Pontifical University of Salamanca and courses and seminars for professionals held in Spain and Latin America. These activities have been expanded into other geographic regions thanks to cooperation with a series of institutions in Spain and other countries and an Internet training programme.

The Institute offers grants for research in risk and insurance science and operates a specialized insurance and risk management Documentation Centre as support for its activities.

The Institute routinely sponsors and draws up reports and publishes books dealing with insurance and risk management to improve our understanding of these fields. Some are intended as reference materials for those starting out in the study or practice of insurance affairs, while others are intended as information sources for undertaking research into specialized issues in greater depth.

One of these activities is the publication of this volume, the outcome of research carried out by Drs. Pérez Carrillo and Cuypers in 2011 and 2012, under the guidance of José Antonio Aventín Arroyo.

For some years now our activities have been carried on primarily over the Internet, to allow users from all over the world to access our materials themselves quickly and easily via the latest generation web devices at

www.fundacionmapfre.org/cienciasdelseguro

Elena F. Pérez Carrillo is Secretary of the Board of the Centro de Responsabilidad Social, Gobierno Corporativo y Protección del Inversor [Centre for Social Responsibility, Corporate Government, and Investor Protection] and Technical Director of the Centro de Estudios y Documentación Europeos [Centre for European Study and Documentation], both at the University of Santiago de Compostela. She took her degree at the University of Valladolid and earned her doctorate in law at the University of Santiago de Compostela, with additional study at a number of universities in Europe: Oxford, London, Paris Sorbonne, Strasbourg, Heidelberg, and Hamburg funded by grants from both the public and the private sectors, e.g., a grant from the Fundación Mapfre Estudios [Mapfre Study Foundation] in 1999. She has pursued her academic and professional career in the fields of insurance, corporate, industrial property, and European law from the vantage point of professor of business law, researcher, and international forensic specialist (Ariño y Asociados, Bertin Ware Solicitors). She is the author of some 70 works on topical legal issues spanning treatises, collections, and papers.

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For Rebeca Villalba Pérez

*The patent system
adds the fuel of interest
to the fire of genius.*

Abraham Lincoln

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The authors thank the FUNDACIÓN MAPFRE for giving them the opportunity to undertake and complete this study.

FOREWORD

“Implicit in the nature of innovation is the mad rush to make major changes and thus be able to take great leaps. The best way for a country to move forward into a better future is for it to accept, once and for all, that only by innovating will it be able to catch up with the more prosperous countries”

Joseph A. Schumpeter

[T.N.: retranslated from the Spanish]

One of the FUNDACIÓN MAPFRE's main goals is to improve people's wellbeing by undertaking action in the general interest in different fields. In times of crisis the common interest is directly related to economic growth, possible only by increasing a country's production capacity. It is therefore necessary to foster talent and creativity with a view to expanding the spectrum of activities in an efficient manner and eliciting synergies among different sectors of society that will help to improve its standing.

Hand in hand with opening up foreign markets, strategies and policies conducive to turning know-how into value can be expected to contribute the most to growth and job creation in the coming years. It follows that, in today's climate of crisis, putting research and development to industrial use and protecting their fruits by means of intellectual property rights are to be considered essential factors for recovery.

Lawsuits to defend industrial property rights, including patents, against attack or infringement are extremely costly and complicated, placing them beyond the reach of small and medium-sized enterprises (SMEs). This being the case, legal expenses insurance for patents would hold out the possibility of fostering the culture of innovation and boosting research and development, and with this in mind, the European Commission recently pointed out that legal expenses insurance schemes for intellectual property are growing more and more important, though they have not made as much progress as might reasonably be hoped for.

In 2011 the FUNDACIÓN MAPFRE's Institute of Insurance Science decided to make a further contribution in this direction by sponsoring a study analysing the viability of patent insurance in Spain. The purpose of this study was to establish whether insurance techniques might help make patenting more accessible, or to put it another way, bring greater certainty to persons who

have made a discovery or an invention so that they can protect it by means of a patent.

In setting up the mandate for this study, we have had the assistance of Luis Hernando de Larramendi, Partner in the Elzaburu Firm and a Patron of the FUNDACIÓN MAPFRE, who has encouraged the project from its inception; we have also had the help of José Antonio Aventín Arroyo, Managing Director of Mapfre Empresas until December 2012, who has guided the work along and has been a beacon for the authors thanks to his deep knowledge of the insurance sector and his long business experience. Still, it is the authors, Elena Pérez Carrillo, Doctor of Law and a research fellow at the University of Santiago de Compostela, and Frank Cuypers, actuary and insurance consultant, who have produced the study the reader now has in his or her hands. It has taken them nearly two years of hard, diligent work to access all the different sources, compile all the varied information, conduct interviews at the Patent Offices of the different countries, and contact participants in the insurance business in the different national markets in order to put together the proposal formulated here: a legal expenses insurance for patents directed at innovative SMEs and lone inventors. Our thanks to all of them for their efforts and our congratulations on the outstanding quality of their work.

I am sure that this study will help make patent the actual meanings of the words patent and insure in Spanish according to the Royal Academy of the Spanish Language: means of making something discernible, clear, and perceptible, in a manner free from danger, injury, and risk.

Andrés Jiménez Herradón
President
Institute of Insurance Science
FUNDACIÓN MAPFRE

RESEARCHERS, BOTTOMRY AND PATENT INSURANCE

Seagoing trade in the Mediterranean in antiquity and Spain's galleon trade with the Indies after their discovery were made possible by two closely related instruments designed to keep the risks of shipwreck and lost cargo at bay.

The first was bottomry, dating back to the period when Rome dominated the Mare Nostrum, in which a ship owner could borrow capital that he used to purchase wares, and he had to pay the loan back, with sizeable interest, only if his ship reached port safely. Accordingly, it was the lender who bore the risk when the ship or its cargo was lost.

In marine insurance terms, the interest payable in bottomry if a ship reached port becomes the premium a ship owner pays out in advance, collecting compensation for losses sustained only in the event the ship or its cargo fails to make port, with the insurer bearing the risk attaching to the transaction.

In the times we live in today, researchers, especially university researchers, face many risks, some inherent to research activity as such, others intrinsic to when the results of the research are brought forth into the marketplace.

In the process of doing research, researchers run the risk of making the wrong choice of research path, of not being able to accomplish what they set out to do, of being beaten to the punch by someone else, and so on.

When research is successful, bringing its fruits onto the market requires first obtaining exclusive commercial rights to the invention, conferred only by the legal institution of the patent right.

But the cost of patenting, particularly when worldwide, which should be a given for all major research achievements, is dauntingly high.

Then again, overcoming the objections, oppositions, warnings, and subterfuges of all kinds that may be arrayed by the holders of other patent rights and afterwards, once the invention has been brought to market, defending it against third parties who infringe, encroach on, or hijack the patented subject matter in turn requires sufficient financial muscle to be able to hire the specialized technical and legal assistance so essential to being able to survive and prosper.

Today, conducting research and then marketing research accomplishments are as important to the economic prosperity of a country, of a country like Spain, as the discovery of the Americas and establishing safe commercial sea routes were in their day.

And could the legal instruments of bottomry and insurance, suitably updated, not have a role to play in achieving this objective?

By means of the equivalent of bottomry, the lender, a role that would necessarily have to be filled by the government, would finance patenting to protect inventions, using funds that would only have to be returned if marketing the product safely reaches the port of commercial success.

By means of insurance, here not marine insurance but patent insurance, researchers would be empowered to sail the seas of the marketplace amid the many dangers of reefs, storms, enemy powers, and buccaneers, here, competitors and patent trolls.

It is these considerations that were behind the FUNDACIÓN MAPFRE's proposal to carry out this study, the culmination of papers presented at the Fifth Meeting of Research Teams, Institutions, and Businesses, held at the CSIC Headquarters Building in Madrid on 6 April 2011, enthusiastically promoted by the researcher and entrepreneur Dr. Celia Sánchez-Ramos Roda, the driving force behind the Computational Neuroscience and Neurorobotics Team at the Madrid Complutense University.

A better outcome could not have been hoped for, with the legal acumen of Dr. Elena F. Pérez Carrillo, of the University of Santiago, renowned for its scientific yet at the same time practical approach, joining forces with the experience of that learned mathematician, actuary and international business consultant, Dr. Frank Cuyper; and as a result the study presented here has succeeded in setting forth both an overview of what has been published on this subject in the field of comparative law and the practical experience gleaned in the different countries, and a precise actuarial analysis that will provide a solid footing for any insurance company to directly implement this type of initiative in Spain.

Whether or not this actually comes to pass, the fact is that this publication will be useful in making researchers, entrepreneurs, not only the small and medium-sized enterprises that account for the lion's share of Spain's economic activity but large industrial concerns too, as well as insurance professionals and industrial property law practitioners, aware of a reality and a potential. The reality of the difficulties exploiting a patent can entail, the potential for insurance, which has done so much to alleviate the exigencies of our day-to-day existence by spreading –socializing – the costs among many, to one day also do the same for innovation and patents.

Before bringing these introductory remarks to a close it behoves me to express due appreciation to the FUNDACIÓN MAPFRE and its Institute of Insurance Science, which have rightly recognized the concerns surrounding this subject and, over the course of a year and a half, brought this project to its fruition under the guidance of Mercedes Sanz Septién and María José Albert, pillars

of the Institute, with the technical supervision of that outstanding professional, José Antonio Aventín, who, with his efforts over these many years, has helped make Mapfre what it is today.

Madrid, May 2013

Luis Hernando de Larramendi
Member, Board of Patrons, FUNDACIÓN MAPFRE
Member, Board of Patrons, Alberto de Elzaburu Foundation

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CHAPTER 1

CRITICAL ASSESSMENT OF THE CURRENT STATUS

1. FRAMEWORK FOR A STUDY ON PATENT INSURANCE FOR SMES IN SPAIN

Know-how is a key component of being competitive in today's society¹: safeguarding it is essential to growth and to generating value for consumers, producers, and society as a whole. Putting know-how to work is an especially difficult challenge for SMEs and other small innovators that lack the deep financial resources needed to enforce their intangible assets against infringement. Let us look at some figures:

- Medium-sized enterprises make up 2.82% of the business sector in Spain (as opposed to 3.87% in the 27-member European Union), with small businesses and microenterprises accounting for the lion's share, 96.7% (as opposed to 95.3% in the 27-member EU)².
- SMEs encompass all these types of businesses and account for 67.9% of the gross value added (GVA) in Spain, as opposed to 57.7% in Europe, on average.
- SMEs account for 83.1% of all employment in Spain, as opposed to the Community average of 77.5%³.

Businesses, entrepreneurs, and organizations generally all make use of a variety of strategies to develop their market presence. They use highly diverse means to attain growth, in such areas as innovation, communications, attracting talent, corporate responsibility and environmental policy, as well as cost and product quality policy. Their growth prospects depend on their ability to adapt their business model to the pace of change, uncertainty management, and

¹ Government of Spain: *Plan de Promoción de la Propiedad Industrial en España, 2010-2012* [*Plan for Promoting Industrial Property in Spain*] (Ministry of Industry, Tourism, and Trade).

² Government of Spain: *Plan integral de Política Industrial, 2020* [*Comprehensive Industrial Policy Plan, 2020*] (Interministerial Industrial Policy Board).

³ Government of Spain: *Plan integral de Política Industrial, 2020* [*Comprehensive Industrial Policy Plan, 2020*] (Interministerial Industrial Policy Board).

consumer preferences⁴. In the coming years strategies and policies designed to turn know-how into value – together with the opening up of markets abroad – are expected to be key drivers for recovering growth and boosting employment. Consequently, **R&D, protection of output by means of intellectual property rights (IPRs), and bringing this to bear on production are viewed as pillars for recovery in the current climate of crisis**⁵.

Litigation to defend patents from attack or infringement is expensive and complex and basically prohibitive for SMEs. This being the case, **patent legal expenses insurance offers the possibility of enhancing the dynamics of innovation and strengthening R&D**, and as the European Commission has recently pointed out⁶, “*insurance schemes against IP litigation are becoming increasingly significant*”.

1.1. Industrial property and economic development

The speed of technological progress has changed how business is done and how goods and services are distributed, procured, and consumed. In tandem with the development of new business models, traditional models must adapt. The increasingly sophisticated technical apparatus underpinning the production systems of the future depend on thousands of patents. The development of new plant and innovative pharmaceuticals and medical instruments require effective protection of labour and investments in R&D. This has been highlighted in a number of different areas:

- Internationally
 - The Organization for Economic Cooperation and Development (OECD)’s 2005 report⁷ emphasized the essential role of industrial property (IP) in business and economic growth and underlined that much of a company’s market valuation can be traced to its intangible assets in the form of patents, trademarks, and designs, which have significant economic value in enabling businesses to obtain financial resources and gain access to venture capital.

⁴ Government of Spain: *Plan de Promoción de la Propiedad Industrial en España, 2010-2012 [Plan for Promoting Industrial Property in Spain 2010-2012]* (Ministry of Industry, Tourism, and Trade).

⁵ Pérez Carrillo, EF: *Innovación, competitividad sostenible y lucha contra la crisis: a propósito de varios documentos estratégicos de la Unión Europea [Innovation, sustainable competitiveness, and battling the crisis: on various strategic documents of the European Union]*, *Actas de Derecho Industrial y Derechos de Autor*, pp. 567-578.

⁶ European Commission: *Communication from the European Commission: A Stronger European Industry for Growth and Economic Recovery – Industrial Policy Communication Update*, COM 582, 2012.

⁷ OECD: *Intellectual Property as an Economic Asset: Key Issues in Valuation and Exploitation. Background and Issues*, Paris, 2005.

- The World Economic Forum (WEF)'s Global Competitiveness Report (2012-2013)⁸ relates the standing of countries in competitiveness rankings with factors that include the number of patents filed and exploited.
- In Europe
 - The objectives of smart, sustainable, and inclusive growth with the change of decade are reflected by the European Union's Europe 2020 strategy⁹, which includes increasing R&D spending to 3% of GDP in 2020.
 - Within that strategy, the European Commission's flagship Innovation Union initiative calls for an integrated approach to research, innovation, and investment strategy that will yield social benefits. **Boosting creativity and innovation creates growth and jobs**¹⁰.
 - The European Council¹¹ has called for future EU funding programmes to focus on the Europe 2020 priorities, on social issues, and on how to tackle them by means of technology. The Council has indicated that funding programmes should boost collaborative research, streamline funding instruments, radically simplify access to them, shorten commercialisation times, and continue to foster excellence. It has also advocated adopting strategies to enhance both national and EU funding for research and innovation.
 - The European Parliament has underscored the importance of **increased support for SMEs and the general public by national Patent Offices** by making available measures to prevent infringement of intellectual property rights¹².

⁸ World Economic Forum: The Global Competitiveness Report 2011-2012, available at http://ww3.weforum.org/docs/WEF_GCR_Report_2011-12.pdf (last accessed on 15 September 2012).

⁹ Since 2010, the Communication from the Commission entitled *Europe 2020: A strategy for smart, sustainable and inclusive growth*, COM(2010) 2020 has been the key reference document for broad EU structural and market policies. The document sets forth a series of strategic recovery initiatives based on Community priorities and follow-up indicators. The first of these initiatives is innovation as a foundation for economic recovery.

¹⁰ European Commission: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. *A Single Market for Intellectual Property Rights. Boosting creativity and innovation to provide economic growth, high quality jobs and first class products and services in Europe*. COM(2011) 287 final.

¹¹ European Council: *Conclusions of the Council on the Europe 2020 Innovation Union flagship initiative* (last accessed on 26 November 2010).

¹² European Parliament: Resolution of 22 September 2010 on enforcement of intellectual property rights in the internal market, paragraph 40. Luxembourg, OOPEC. (European Parliament). Recognises the need for the use of existing institutional structures in the Member States in the fight against counterfeited goods, and therefore calls on the national patent and other intellectual property offices to provide greater support and training to small and medium-sized enterprises and to the public.

- Nationally
 - Spain's current plan for promoting intellectual property observes that know-how is the main key to enhanced competitiveness for both businesses and government agencies, what has come to be called institutional competitiveness. For this reason the plan points out that *know-how cannot be spoken of as a competitiveness factor without addressing protection and certainty in monetizing it so as to create value for consumers, producers, and society as a whole*. IPRs play an important role on three separate levels: in business, for consumers, and in the system of the market economy itself¹³: The Government of Spain recognizes that IPRs are a vital pillar for the creation of value in the current economic environment: where know-how has turned into a driving force for growth, particularly in a situation in which major challenges are faced. An understanding of the development and operation of the IP system is basic to being able to act on certain key aspects relating to growth and economic development based on intensive knowledge and innovation sectors¹⁴.
 - In its analysis of competitiveness, the World Economic Forum (WEF) pointed to certain weaknesses of Spain:
 - Insufficient investment in research, development, and innovation.
 - Absence of innovative business solutions to transform the economy.
- Economic doctrine

Many publications in this area have demonstrated the multiplier effect of innovation on the economy and emphasized the **need to set up efficient mechanisms for effectively safeguarding the results of research through registration as IPRs**.

- In 2001 Lanjouw and Schankerman¹⁵ concluded that little research had been carried out in one area of the intellectual and industrial property (IP) economy, i.e., the difficulties involved in defending IPRs, namely, the cost of enforcement, which represented an important area for joint research in the combined fields of law and the economy.

¹³ Government of Spain-SPTO: *Plan de Promoción de la Propiedad Industrial en España, 2010-2012 [Plan for Promoting Industrial Property in Spain 2010-2012]*, 2010, http://www.planpi.es/pdf/plan_pi.pdf (accessed 12 June 2012). Also, Fundación COTEC para la Innovación Tecnológica [COTEC Foundation for Technological Innovation]: *Tecnología e Innovación en España, Informe COTEC 2012 [Technology and Innovation in Spain, 2012 COTEC Report]*, Madrid, 2012.

¹⁴ Government of Spain-SPTO: *Plan de Promoción de la Propiedad Industrial en España, 2010-2012 [Plan for Promoting Industrial Property in Spain 2010-2012]*, 2010, http://www.planpi.es/pdf/plan_pi.pdf (accessed 12 June 2012).

¹⁵ Lanjouw JO, Schankerman M: Characteristics of patent litigation: a window on competition, *RAND Journal of Economics* vol. 32, no. 1, Spring 2001, pp. 129-151.

- In 2002 Dixon and Greenhalgh¹⁶ underlined that incentives to inventing depended on net earnings (after the costs of registering and enforcing industrial property rights) and that where the legal system was inadequate to protect inventors' rights, or where available solutions were too costly, IPRs were not a genuine incentive to research or innovation.

1.2. Patents and “small inventors”, including SMEs

Small inventors such as SMEs and university researchers could be expected to take advantage of patents to obtain funding to enable them to continue their innovative activities, for instance, through agreements with large companies or by means of licensing agreements. However, the fact is that once an invention has been patented, financially weak patent holders are at a disadvantage when it comes to defending their inventions in court, since enforcement litigation is complex and expensive. For this reason, **as organizations SMEs are more inclined to protect their work by means of trade secrets¹⁷ rather than by publishing patents, which, if infringed, they would not be able to enforce in court, because they lack the necessary resources.** This situation has been described for all jurisdictions generally¹⁸ and for Europe specifically¹⁹ and holds true for Spain.

SMEs are at a disadvantage not only when it comes to litigating but also when it comes to concluding out-of-court settlements, because the possibility of reaching agreement with infringers rises when adversaries have similar levels of financial resources²⁰. Even in Europe, where the cost of litigating is

¹⁶ Dixon P, Greenhalgh CH: *The economics of intellectual property: a review to identify themes for future research*, November 2002.

¹⁷ Kingston W: *Enforcing Small Firms' Patent Rights*, European Commission Study Contract No. EIMS 91/173: Patent Defence in Europe: ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies_enforcing_firms_patent_rights.pdf (last accessed on 25 September 2012).

¹⁸ Cohen WM, Nelson RR, Walsh J: Appropriability conditions and why firms patent and why they do not in the American Manufacturing sector. *NBER Working Paper*, National Bureau of Economic Research, Cambridge, Massachusetts, 1999.

¹⁹ There have been numerous studies, and the conclusion is practically unanimous. See as representative Arundel A, Kabla I: What percentage of innovations are patented? Empirical estimates for European firms. *Research Policy* 27:127-141, 1998. Hermansson CH: Patents and SMEs, Managing intimidation activities from financial strong actors (Thesis) Handelshögskolan, University of Gothenburg, 2010.

²⁰ Arundel A, Kabla I: What percentage of innovations are patented? Empirical estimates for European firms. *Research Policy* 27:127-141, 1998; Kingston W: *Enforcing Small Firms' Patent Rights*, European Commission Study Contract No. EIMS 91/173: Patent Defence in Europe, 2001: ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies_enforcing_firms_patent_rights.pdf. Da Rin M, Hege U, Llobet G, Walz U: The law and finance of venture capital financing in Europe: Findings from the Ricafe Research Project, *European Business Organization Law Review* 7, pp. 525-547, 2006.

comparatively lower than in the United States, costs can be excessive for small entities forced to defend their patents against large industrial corporations²¹.

2. PATENTS OF INVENTION

IPRs, including patents, reward inventions and other innovations by conferring an exclusive right for a limited period of time (the said exclusive right permits monopolization of use of the protected invention against all other operators, who cannot contravene the patent holder's peaceful use of the patent right during that time).

Thus, a patent grants its holder a limited monopoly for 20 years from the filing date. It confers a "right", constitutes "intangible property", and property, tangible or intangible, is known to be fundamental to the operation of a market economy. However, in itself a patent is not a right to a commercial monopoly to exploit the invention (which could be covered by one or more patents or other types of IPR) but **only a legal right entitling the holder to prevent third parties from implementing the claims of the invention, at his own expense**. The purpose of the patent system, primarily as it relates to promoting innovation and growth, is eroded where enforcing that right is not quick, simple, and economically feasible. Indeed, where defending their patent rights entails extremely expensive litigation for SMEs, the incentive to innovate, invent, and patent is considerably reduced.

2.1. General aspects, social goals, and requirements to achieve them

The patent system is based on setting rules governing the exploitation of patented inventions: an inventor makes his invention public and available to society through a regulated procedure in exchange for reserving his right to exploit it directly or by means of agreements with third parties (licenses, assignments, or the like) and for preventing others from benefiting from his work, investments, and published results without giving fair compensation. After 20 years these rights pass into the public domain.

Annex 1 summarizes the patent system, explaining the legal aspects of this situation in greater detail.

²¹ Cuypers F: *Seguros de patentes y patentes de seguros: reflexiones y estrategias [Patent insurance and insurance patents: thoughts and strategies]*, in Couto Gálvez RM, Sánchez-Ramos Roda C (coords.), *Seguros y Patentes [Insurance and Patents]*, Colección Propiedad Intelectual e Industrial de la obra científica, Madrid, Complutense University, Elzaburu, 2012, pp. 126-129, more specifically p. 122.

2.1.1. Virtuous circle of innovation

The results of research having industrial applicability may be protected by means of patents. In this way, knowledge of their industrial applications facilitates the development of new innovations. In other words, they contribute to the dissemination of know-how, hence the benefits of the patent right go beyond those conferred on the patentee, extending to the societies in which innovators carry on their activities: they thus contribute to job creation, commerce, excellence, and new inventions. Detractors warn that patents may act as barriers to freedom of competition, causing competitors who do not possess the right to exploit them to lose market share, but the fact is that social and economic agents as a group benefit from the publication of new, patented technical opportunities. Thus, patents give rise to a virtuous circle of innovation which, in the long term, offsets the effect of the initial restraint ensuing from the period of exclusive rights²². Additionally, quality patents help attract investment for the production cycle; generate new goods and services to meet the demands of science, business, and consumers; and foster growth and employment. The virtuous circle of IPRs is the basis for implementing public policies intended to incentivize innovation.

2.1.2. Need for quality patents

Being able to attain these benefits requires a system of **quality IPRs** consistent with the objectives of fomenting innovation and disseminating know-how and technical advances.

In this respect, IPRs should not be viewed from the perspective of the technical and legal requirements for grant²³ but should be assessed in the context of innovation that is industrially applicable and truly productive, the kind that benefits industry and society the most. That is, protection should be afforded first of all to those patents that represent genuine technical advances and can be applied to industry effectively to enhance competitiveness.

²² European Commission: Commission Notice: Guidelines on the application of Article 81 of the EC Treaty to technology transfer agreements, OJ C 101 of 27 April 2004, p. 2.

²³ Proper operation of the system calls for rewarding with IPRs only those inventions that fulfil legal requirements and enable businesses and society in general to have ready access to information concerning the said rights. Where the mechanism for managing patents does not function properly, the system's benefits are lost, to the detriment of inventors, their companies and their licensees, the nation (here, Spain), the economic area in which they are active (here, the European Union), and society as a whole. In practice these problems result in lost sales revenues and royalties and litigation expenses; research delays because of uncertainty concerning the status of the patented technology; and wasted money of taxpayers who have funded support initiatives for businesses, such as start-ups, etc. See Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, p. 11, at http://www.hm-treasury.gov.uk/d/contra_vision_ltd_336_p7_131kb.pdf (last accessed on 20 September 2012).

Addressing this question requires a certain understanding of how the patent system operates (prosecution of applications, content, ownership, etc.), and these aspects are briefly explained in Annex 1. It also requires taking Spain's R&D system into account, summarized in Annex 3.

2.1.3. Access to the legal system to enforce patented innovation

As Lanjouw and Schankerman²⁴ and Dixon and Greenhalgh²⁵ have pointed out in their influential studies, the risk of patent litigation increases in inverse proportion to the volume of an owner's IPR portfolio. Where the patent owner is an SME or a lone researcher (who have limited financial resources for defending themselves), the likelihood of infringement increases three or four-fold.

Furthermore, Llobet and Suarez²⁶, Lerner²⁷, and Choi²⁸ have explained, from differing perspectives, that the number of lawsuits brought by a patent owner to defend its patents gives the market information about its operating and enforcement strategies vis-à-vis infringement of its rights, and hence companies that are not prepared to take action against infringers will be prone to more "attacks", decreasing their ability to benefit from their R&D investments.

Materialization of patent benefits by all knowledge creators demands a legal system that is conducive to defending IPRs in the courts at costs that are not beyond the reach of SMEs and researchers. Where the system fails to provide definite, thorough-going solutions, private resources, one's own or provided by others, are needed to be able to meet the high cost of litigation to enforce rights.

2.2. Patents by the numbers

The influence of the patent system on the competitiveness of companies and countries has been discussed not only in the strategic and theoretical papers mentioned earlier but also in empirical data-based assessments.

²⁴ Lanjouw JO, Schankerman M: Characteristics of patent litigation: a window on competition, *RAND Journal of Economics* vol. 32, no. 1, Spring 2001, pp. 129-151. By these same authors, Protecting intellectual property rights: are small firms handicapped? *Journal of Law and Economics*, 2004.

²⁵ Dixon P, Greenhalgh CH: The economics of intellectual property: a review to identify themes for future research, November 2002.

²⁶ Llobet G, Suárez J: *Patent Litigation and the Role of Enforcement Insurance*, Centro de Estudios Monetarios y Financieros, 2008; *Financing the Protection of Innovators*, Centro de Estudios Monetarios y Financieros, 2005; *Patent Defense Financing*, Centro de Estudios Monetarios y Financieros, 2004.

²⁷ Lerner J: Patenting in the shadow of competitors, *Journal of Law and Economics*, 38, pp. 463-488, 1995.

²⁸ Choi JP: Patent litigation as an information-transmission mechanism, *American Economic Review*, 88, pp. 1249-1263, 1998.

- By way of example for the business sector, a survey carried out for *The Economist*²⁹ in 2007 reported that in the framework of a forecast for the next two years, 53% of respondents affirmed that IPR use would be very important or even crucial to their business models and 35% considered this to already be the case at the time of the survey.
- According to national offices worldwide, most patent filers belong to a small group of countries, ordinarily the most highly industrialized or those in the throes of rapid growth. There is a significant correlation among the number of patent applications, the gross domestic product (GDP), and spending on R&D. According to World Intellectual Property Organization (WIPO) statistics:
 - China, Japan, and the USA have the highest GDPs and R&D spending and in 2008 these three countries were the source of 60% of patent filings worldwide, with a sharp upturn in the Republic of Korea.
 - Approximately 75% of total patent filings in 2008 came from five countries, Japan, the USA, the Republic of Korea, Germany, and China.
 - Japanese and USA nationals and companies owned around 45% of the 6.8 million patents in force in 2008.
 - The total share of patent filings in the so-called BRIC countries – Brazil, Russia, India, China – climbed from 6.7% of the world's total in 2004 to 11.1% in 2007 and to nearly 14% in 2008³⁰.

2.3. Patent data for Spain

The number of Spanish patents is relatively small in the context of the figures for other developed countries, some distance behind the leaders in technical innovation; this applies to the overall figures for international patent applications, European patents, and Spanish filings, and to R&D spending, as well³¹.

- By way of comparison, per million inhabitants, patent filings with the European Patent Office (EPO) from Spain accounted for 2% (2003 data) of the total for the European Union. Spain is still below an acceptable level and, with Greece, Portugal, Hungary, the Czech Republic, the Slovak Republic, and Poland, far below the European average³².

²⁹ Intelligence Unit: The value of knowledge: European firms and the intellectual property challenge, *The Economist*, January 2007.

³⁰ Government of Spain-SPTO: *Plan de Promoción de la Propiedad Industrial en España, 2010-2012* [Plan for Promoting Industrial Property in Spain 2010-2012], 2010, p. 6.

³¹ For all categories, Eurostat 2008, <http://europa.eu> (last accessed on 20 April 13).

³² Government of Spain: *Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica 2008-2011* [National Plan for Scientific Research, Development, and Technological Innovation 2008-2011].

- Trends:
 - The total number of patent filings having effect in Spain doubled in the period from 1997 to 2007³³. *Spanish Science and Technology System Indicators 2009*³⁴ showed that **national patent filings had followed an upward trend throughout the period 2000-2009**: of the total patent filings having effect in Spain, applications filed with the Spanish Patent and Trademark Office (SPTO) grew by 19.3% between 2000 and 2007. Applications taking the European route via the European Patent Office (EPO) grew by 4.6% during that same period, while filings under the Patent Cooperation Treaty (PCT) at WIPO underwent the largest increase (76.9%).
 - Having in mind this disadvantaged starting point just described above, the recent report on innovation and technology in Spain (2012)³⁵, based on OECD data for 2009, and the more recent data from the Instituto Nacional de Estadística (INE) [National Statistics Institute (NSI)], from 2010, have already revealed the effects of the global financial crisis and the public debt crisis on Spain's innovation system: they show worsening figures for patent filings by Spanish owners and/or patents granted by the EPO, and faced with what appears to be the trend for the coming years, they recommend fostering innovation and R&D as cornerstones for building sectors that will supply economic growth, new start-up creation, and job creation in the future³⁶.

3. PATENT INSURANCE

Insuring the risks attaching to registering, developing, exploiting, and defending IPRs is a strategic instrument for promoting and profiting from R&D+i and IP systems, including patents. As noted by Aventín Arroyo, *Complementing the general interest in protection for patents, as a means of*

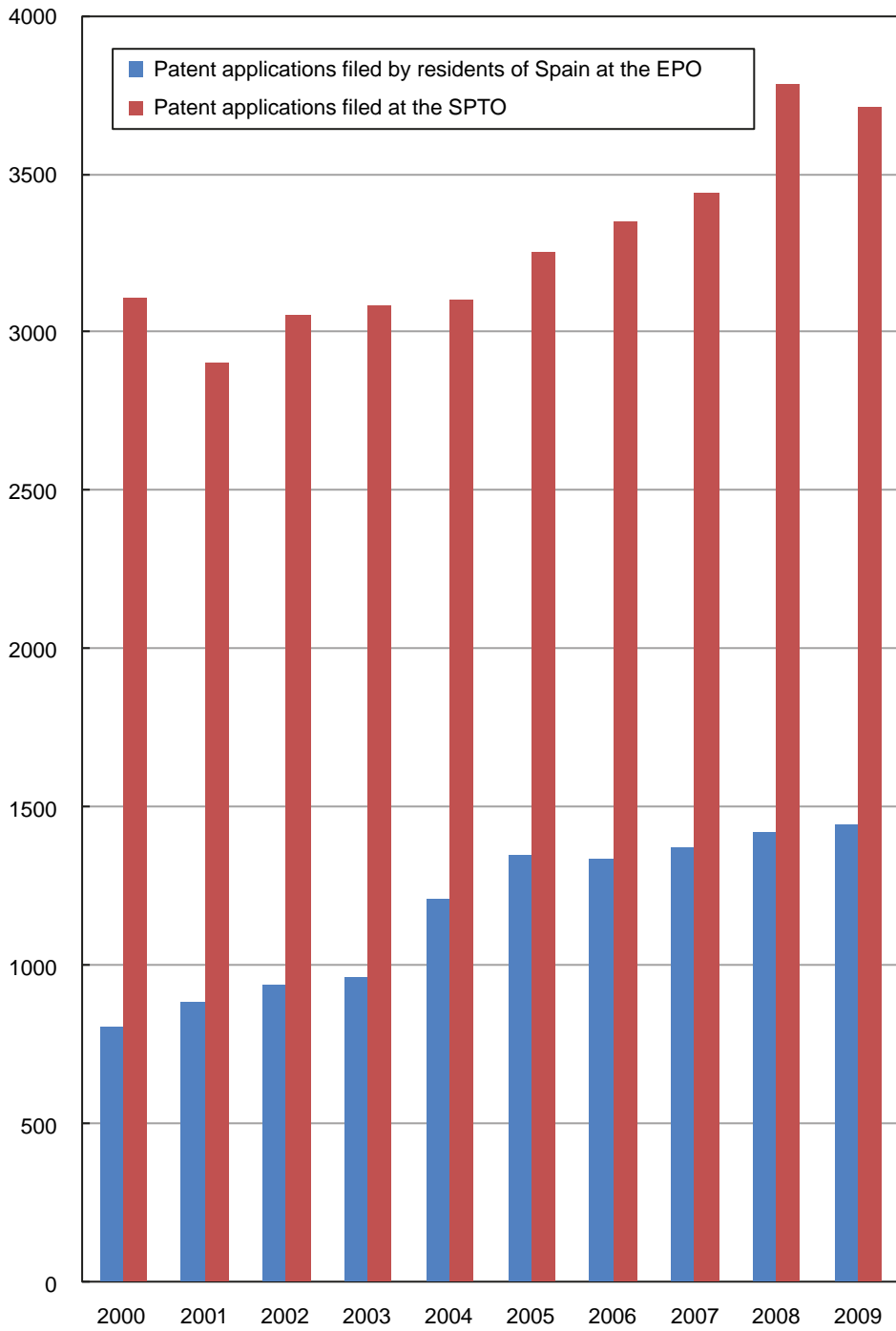
³³ Government of Spain: *Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica 2008-2011* [National Plan for Scientific Research, Development, and Technological Innovation 2008-2011].

³⁴ Government of Spain: *Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica 2008-2011* [National Plan for Scientific Research, Development, and Technological Innovation 2008-2011].

³⁵ Fundación COTEC para la Innovación Tecnológica [COTEC Foundation for Technological Innovation]: *Tecnología e Innovación en España, Informe COTEC 2012* [Technology and Innovation in Spain, 2012 COTEC Report], Madrid, 2012.

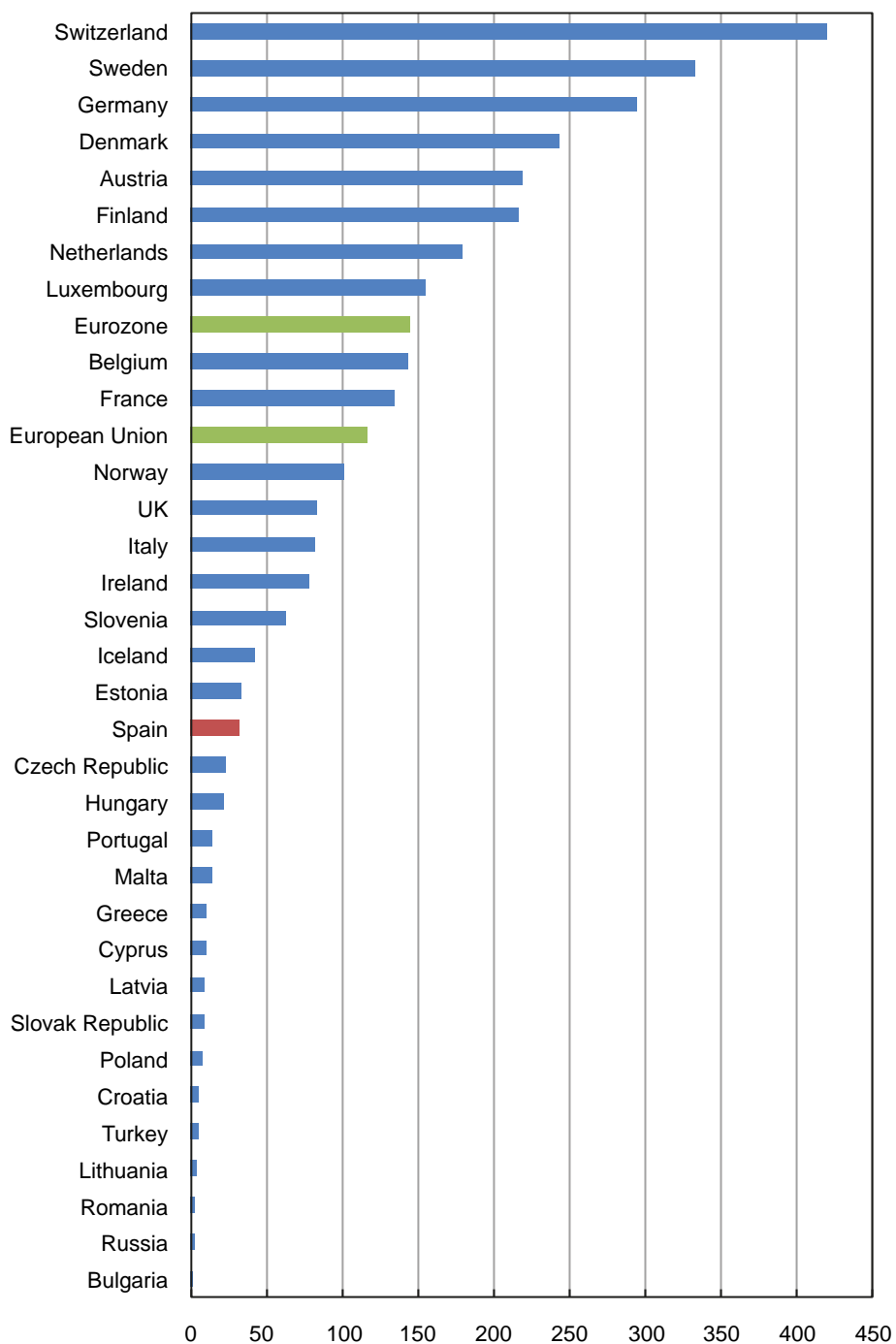
³⁶ Opinions by the panel of experts used to draw up the COTEC index were compiled at the end of 2011, and the figures for government spending on R&D and innovation under the 2012 Draft National Budget in the month of March. See Fundación COTEC para la Innovación Tecnológica [COTEC Foundation for Technological Innovation]: *Tecnología e Innovación en España, Informe COTEC 2012* [Technology and Innovation in Spain, 2012 COTEC Report], Madrid, 2012.

Table 1
Patent filings



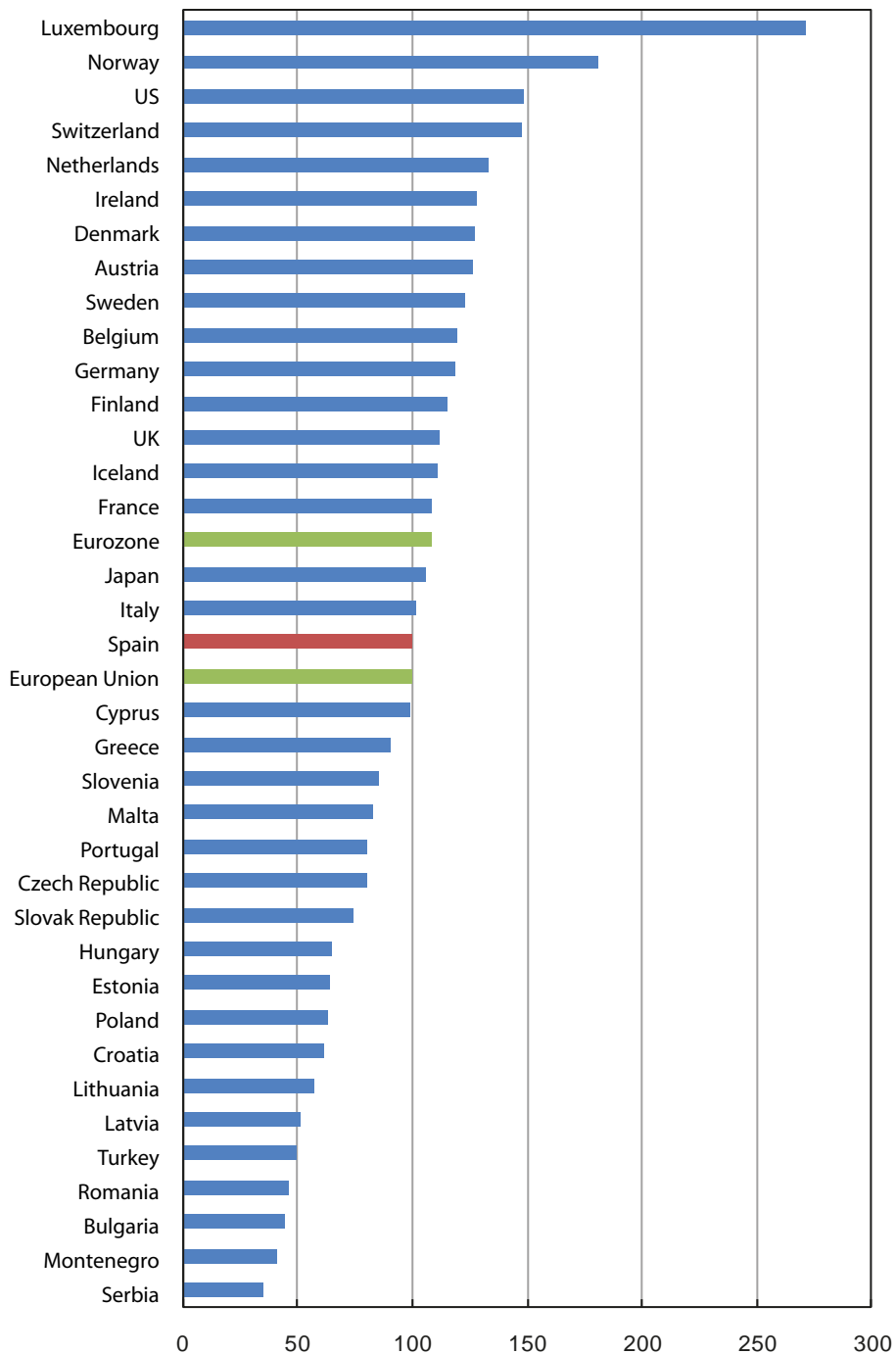
Source: Eurostat, SPTO.

Table 2
Number of patent applications filed at the SPTO in 2009 per million inhabitants



Source: Eurostat

Table 3
Per capita GDP at purchasing power parity in 2008



Source: Eurostat

Table 4
R&D spending on GDP in 2012

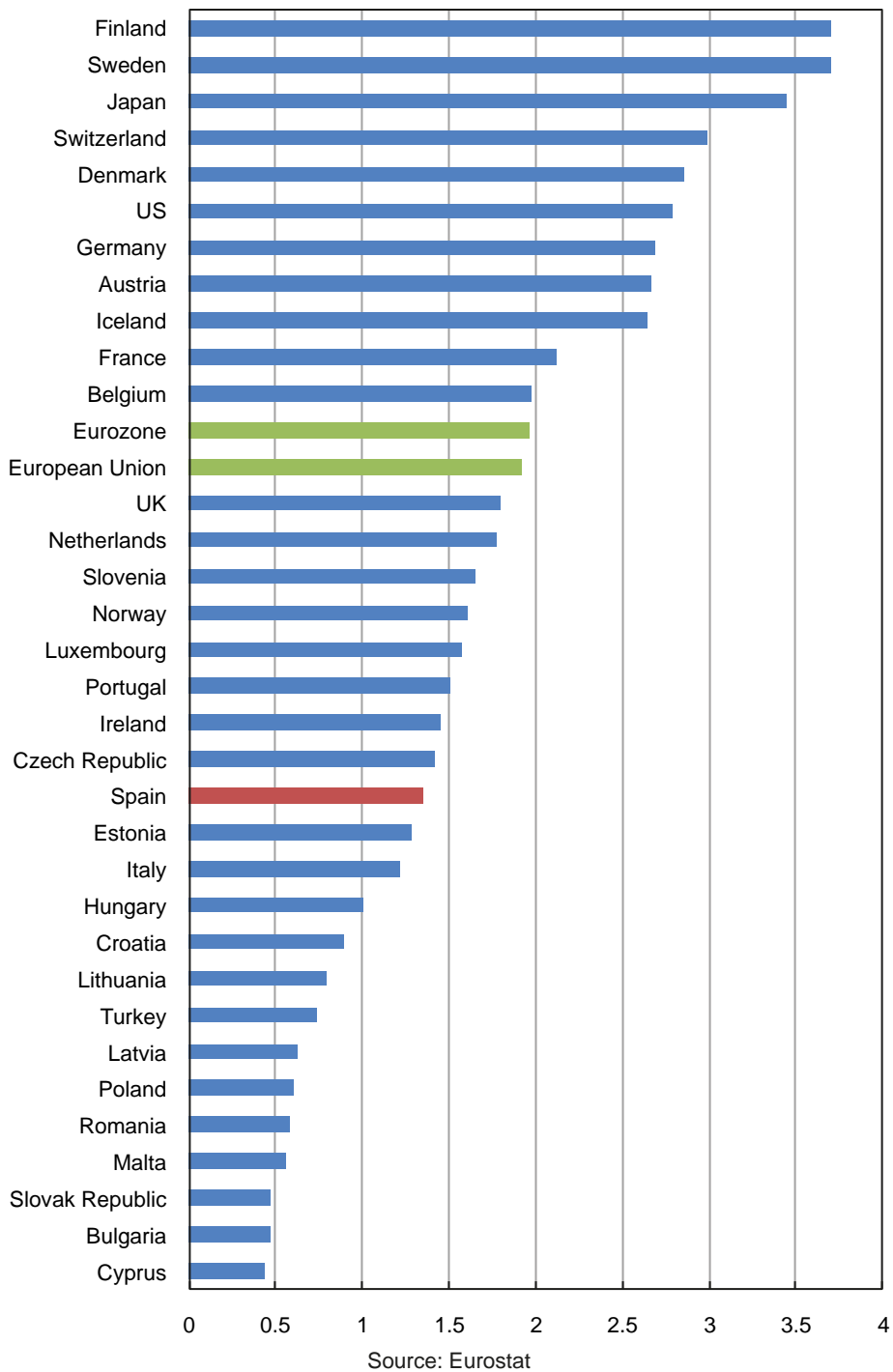
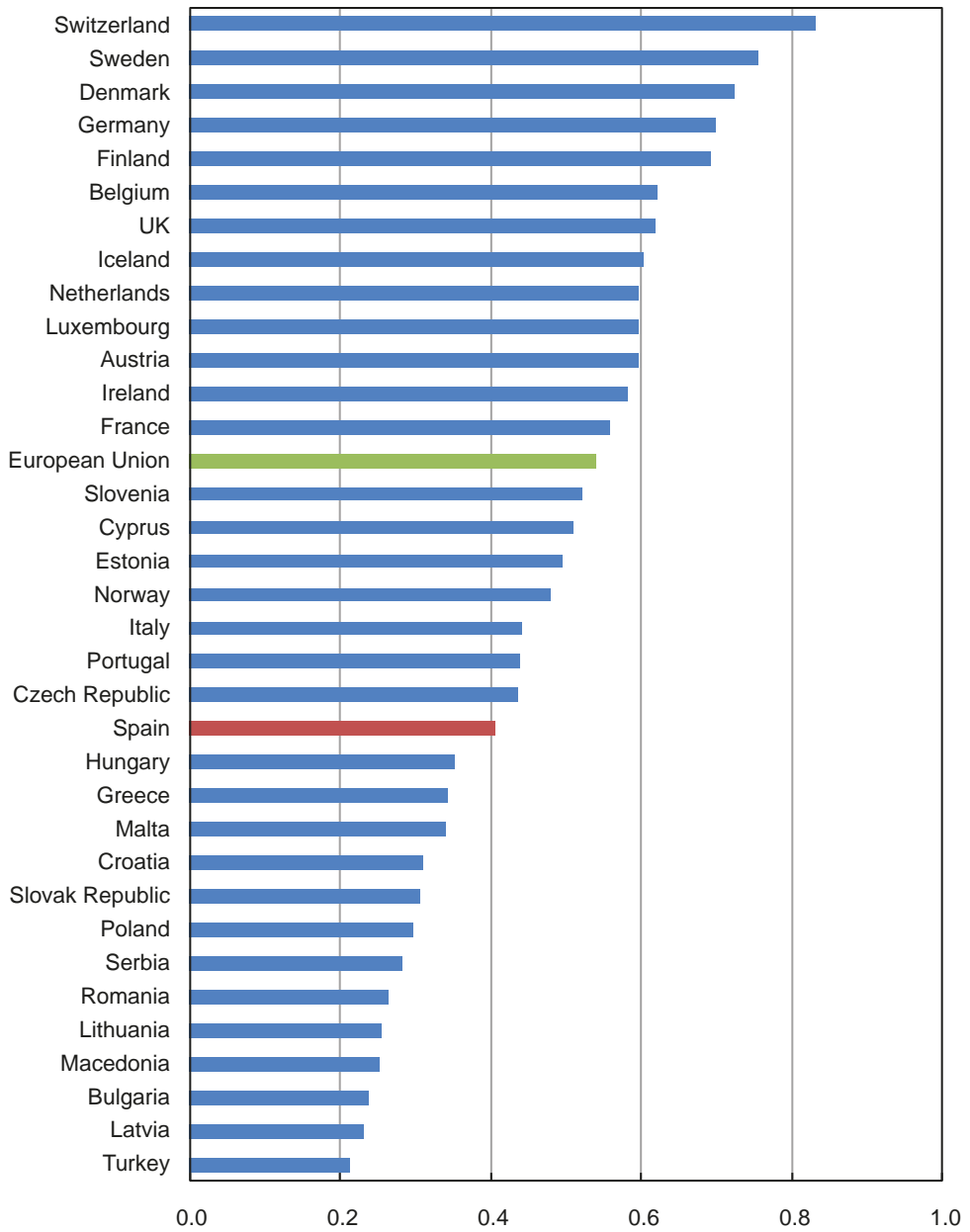


Table 5
Levels of innovation in European countries



Source: European Commission, Innovation Scoreboard, 2011

*fostering and developing innovation and creativity, the individual interest in patent insurance lies in the financial security it offers holders, as an instrument for reducing defenselessness, thereby contributing to the overall interest in technological development and innovation*³⁷.

3.1. Types

By way of a first conceptual approximation, patent insurance is a financial instrument that offers a guarantee against a range of patent-related risks (depending on the coverage afforded by each policy). **Here it is considered and assessed as a mechanism for supporting research** and protecting patented research results.

Different types of risk may be insured, and depending on the insurance agreement, they may be covered by a single combined policy or by complementary policies. Before embarking on an analysis of the different covers, let us first discuss the main protection modalities.

a) By insurance sector

- Legal expenses (or legal protection) insurance is intended to counter certain perceived deficiencies (high cost, duration, complexity) in the mechanisms for settling IPR-related conflicts. For instance, where an IPR, e.g., a patent, is infringed by a third party, or where R&D activities unintentionally infringe (or are accused of infringing) third-party patents.
- Indemnity insurance covers the insured against damage awards – even covering civil liability – arising from a range of claims relating to patent rights: losses sustained in the event a patent is cancelled, contractual liabilities vis-à-vis licensees, damage awards to third parties, and the like. As it currently exists in the marketplace, IPR and patent insurance only rarely covers any of these indemnities.

b) By policy and insurance management modality

- *Commodity* or **standard** insurance policies cover perils that can be calculated based on statistical approximations to risk and on expert studies. The documents making up application forms and policies for this type of insurance are relatively straightforward and managing each individual policy requires relatively few resources.

³⁷ Aventín Arroyo JA: *La esencia de la actividad aseguradora y su potencialidad para ofrecer remedios a los innovadores. Experiencias y posibilidades* [Essentials of insurance and its potential for providing innovators with remedies. Experience and prospects], in Couto Gálvez RM, Sánchez-Ramos Roda C (coords.), *Seguros y Patentes* [Insurance and Patents], Colección Propiedad Intelectual e Industrial de la obra científica, Madrid, Complutense University, Elzaburu, 2012, pp. 107-139, quote taken from p. 107.

- Insurance covers that require in-depth, individualized study of each risk underwritten (due diligence), or *ad hoc* insurance are arranged on the basis of specific research and calculations. Underwriting and management costs are high.

c) *By insured risk cover*

- **Single risk policies** are based on a clearly defined cover that does not require extensive exclusion provisions.
- **Multiple risk policies** combine coverage of several risks, which increases the cost of the product and requires detailed exclusion clauses so that courts will not interpret policies more broadly than intended by the insurer on underwriting. They are mainly sold in the United States.

3.2. Experience and comparative studies

Theoretical studies and practical experience dealing with this branch of insurance for IPR-related perils are limited and have not been widely disseminated but rather generally restricted to specialized forums. **Generally speaking, technical articles have lauded patent insurance policies for their support of innovation.** Further, these products are also usually regarded as being underdeveloped in the marketplace for *commodity* or standard insurance³⁸, hence if a suitable formula can be found, they could occupy a market niche with growth potential for insurance underwriters who develop these products.

The sluggish development of standard patent insurance is ascribable to:

- Difficulty in assessing the risk of IPR infringement and more specifically, patent infringement. In addition to risks attaching to third-party conduct (infringement, breach, abuse of power, etc.), there are risks relating to flaws in the system for granting patents itself, which may lead to a patents being invalidated.
- Absence of a reliable statistical basis for precise actuarial calculations relating to:
 - Patents filed, patents granted, applications opposed and/or appealed, licensed patents, patenting sectors, etc.
 - The number of claims filed at the courts of first instance, out-of-court settlements, appeals, and/or settlement agreements at the first and second instances, preliminary measures, cessation actions, etc. as well as the cost of each (it should be noted, however, that statistical efforts

³⁸ Rutsaert J-M: *Legal protection insurance, the problems to be solved*; available at ftp://ftp.cordis.europa.eu/pub/patinnova99/docs/3_7_rutsaert.pdf (accessed on 30 September 2012).

that could alter this situation in the short term are under way, for instance, in Europe, by the European Observatory on IPR infringement)³⁹.

- The highly fragmented nature of the boundaries to temporary and territorial aspects relating to IPRs.

More widespread availability of standard patent insurance would entail coming up with a suitable formula for selecting covers and product structure. Appropriate definitions of exclusions, limits, rate settings and margins for deductibles and self-insurance are also essential to a viable product and will need to be designed aptly for each market⁴⁰.

Despite the factors acting as stumbling blocks to implementation of IPR insurance, some **comparative experience and studies** do exist and should be taken into account, inasmuch as they show that some steps have already been taken along the path to more widespread availability of standard patent insurance for small inventors.

3.2.1. United States (USA)

Different modalities of insurance against risks specifically relating to different types of patents has existed in the USA since the late 1980s. Intellectual Property Insurance Services Corporation (IPISC)⁴¹ of Louisville, Kentucky were pioneers in offering this type of insurance to the USA market. Around 1987 a second company, *Litigation Risk Management, Inc.* in Texas started selling patent insurance through an affiliate by the name of Anco⁴². At the present time there are many other underwriters of patent-related risks⁴³.

³⁹ Pérez Carrillo EF: Lucha contra piratería. Obtención de pruebas y medidas cautelares: Reflexiones a propósito de las reformas de la Directiva 2004/48/CE, del Observatorio Europeo de las vulneraciones de los derechos de propiedad intelectual y del Tratado ACTA [Anti-piracy. Compiling evidence and interlocutory measures: considerations on revisions to Directive 2004/48/EC by the European Observatory on Infringements of Intellectual Property Rights and ACTA], *Actas de Derecho Industrial y Derechos de Autor*, XXXII, 2012, pp. 433-450.

⁴⁰ CJA Consultants Ltd: *The possible introduction of an insurance against costs for litigation in patent cases*, see http://ec.europa.eu/internal_market/indprop/docs/patent/studies/pli_report_en.pdf (last accessed on 21 September 2012). Also, concerning the importance of self-insurance and deductibles on , Llobet G, Suárez J: *Patent litigation and the role of enforcement insurance*, Centro de Estudios Monetarios y Financieros, 2008.

⁴¹ Intellectual Property Insurance Services Corporation: Terms of Use, <http://www.patentinsurance.com/termsfuse/> (last accessed on 25 September 2012).

⁴² Anco Insurance: <http://www.anco.com/> (last accessed on 25 February 2012).

⁴³ See Technology Insurance: Intellectual Property Insurance (relating this coverage to E&O and D&O). From 2010, InsureCast: http://www.insurecast.com/html/intellectualproperty_insurance.asp (last accessed on 25 February 2012).

Nevertheless, only a small percentage of patent holders are aware of the existence of this type of insurance⁴⁴.

Patent insurance began to grow starting in 1985 as an indirect effect of the interpretation by the courts of companies' general civil liability policies. The creation of specific patent insurance was intended to prevent the insured from being able to claim patent-related damages under the advertising-related injury section in general civil liability policies⁴⁵.

The beginnings of patent risk coverage date back to the 1970s, when advertising-related injury coverage in commercial multiple risk general civil liability policies and certain directors and officers liability insurance (D&O insurance) policy covers were drawn up in very open terms and were broadly interpreted by the courts.

- Specifically, in 1976, together with advertising injury protection, the ISOCGO policy included a piracy cover that was interpreted by the courts to afford protection against patent, trademark, and copyright infringement. Successive changes to the terms of general civil liability expressly reduced the scope of coverage, and specific exclusions of IPR-related risks were added. In 1986 the terms replaced the exclusion of *unfair appropriation of ideas relating to or known from acts of advertising* with *patent infringement*. Soon the patent infringement exclusion became standard in USA commercial general civil liability policies⁴⁶.
- Around the same time D&O insurance policyholders had also asked the courts for broad interpretations of their policies to cover liability and damages ensuing from IPR malpractice by the corporations they were managing.

Both these circumstances prompted the insurance sector to structure a product offering specific coverage for a risk separate from perils related to general civil liability and D&O liability at the beginning of the 1990s⁴⁷. In the USA today there are not only various types of insurance products but also patents for the respective insurance methods⁴⁸.

⁴⁴ Anco Insurance: <http://www.anco.com/> (last accessed on 25 February 2012).

⁴⁵ Gauntlett DA: Changing winds, recent decisions favor policyholders in intellectual property coverage claims, 5, Coverage, 24, 25, 1995. Fensenthal E: Business of AIG offer insurance policy for defendants in patent cases, *Wall Street Journal*, Jan 7, 1997. Also relevant for an understanding of the situation: Khan Z: Property rights and patent litigation in early nineteenth-century America, *The Journal of Economic History*, vol. 55, no. 1 (Mar., 1995), pp. 58-97.

⁴⁶ Fireman's Fund Insurance Companies v Atlantic Richfield, Court of Appeal, California, 5th District (accessed on 21 December 2001).

⁴⁷ Lobet G, Suárez J: *Financing the protection of innovators*, Centro de Estudios Monetarios y Financieros, 2005.

⁴⁸ Patents filed for patent insurance methods: Wang H-T, Wang D, Lu A: TW200929051 (A) – System of a underwriting estimate for patent insurance and method thereof, priority from 2007

IPR litigation, patent litigation in particular, can be extremely expensive in the USA jurisdiction, with costs to each litigant ranging from several hundred thousand to several million dollars⁴⁹. By the same token, the high expense of the USA legal system is a hurdle to claims by individuals and SMEs. These circumstances called for an in-depth analysis of the different aspects connected with patent litigation that could put the brakes on growth by innovative companies.

- A study funded by the American Intellectual Property Law Association (AIPLA) reported that approximately half of the costs of IP litigation are incurred at the start of the dispute⁵⁰ and that most disputes ended in a settlement before or during trial.
- Early in this century, the USA National Bureau of Economic Research sponsored a seminal research report whose authors, Jean O. Lanjouw and Mark Schankerman, concluded that risk associated with the need to protect patent holders' rights was based more on threatening legal action than on the actual court proceedings themselves and hence that enforcement against infringement required abundant financial resources (investigations, fees of counsel and experts, deposits and security), even though in most cases the parties in a dispute come to a settlement shortly after the complaint is filed and nearly always before the pre-trial hearing.

The results of these assessments empirically demonstrated that high initial legal costs (either enforcement against infringement of a right holder's patent or defense against a claim of infringement) meant that court proceedings were

claimed (Taiwanese applicants filing with the Taiwan Patent Office). Available at http://worldwide.espacenet.com/publicationDetails/biblio?DB=worldwide.espacenet.com&II=0&ND=3&adjacent=true&locale=en_EP&FT=D&date=20090701&CC=TW&NR=200929051A&KC=A; Malackowski JE, Block R, Carter AW, Clifford A, Conroy R, Hill MO, Lasinski M: US2010169127 (A1) – System and method for managing intellectual property-based risks. More examples available for viewing at http://worldwide.espacenet.com/publicationDetails/biblio?DB=worldwide.espacenet.com&II=4&ND=3&adjacent=true&locale=en_EP&FT=D&date=20100701&CC=US&NR=2010169127A1&KC=A1; http://worldwide.espacenet.com/searchResults?DB=worldwide.espacenet.com&locale=en_EP&query=insurance+patent&ST=singleline&compact=false. All these links verified on 20 September 2012.

⁴⁹ It is estimated that approximately 19 per mille of the patents granted in the USA are involved in litigation, with a mean cost of 1.5 million dollars in 2001 and 2 million dollars in 2003. See Lanjouw JO, Schankerman M: Characteristics of patent litigation: a window on competition, *RAND Journal of Economics* vol. 32, no. 1, Spring 2001, pp. 129-151. This study was funded by the AIPLA and has been widely cited, e.g., in Llobet G, Suárez J: *Financing the protection of innovators*, Centro de Estudios Monetarios y Financieros, 2005.

⁵⁰ In the past this 2001 study was available on the website of the American Intellectual Property Law Association (AIPLA) [<http://www.aipla.org>]. An excerpt was published as Lanjouw JO, Schankerman M: Characteristics of patent litigation: a window on competition, *RAND Journal of Economics* vol. 32, no. 1, Spring 2001, pp. 129-151. Also of interest here, by these same authors, Protecting intellectual property rights: are small firms handicapped? *Journal of Law and Economics*, 2004.

not an affordable option for enforcing patent rights, especially for inventors with limited financial means (SMEs, individuals, research centres)⁵¹. Thus, in the event of infringement or threatened infringement against SMEs, these companies may opt not to mount a defense, thereby sending the market a message as to their weakness. The mechanism of insurance affords a unique opportunity to obviate that weakness.

At the present time insurance commercially available in the USA includes two main types of standard policies as well as multiple risk policies that include these risks along with other covers.

- **First party pursuit** or enforcement insurance for the insured's own patent, whose covers usually also include defense against nullity proceedings.
- **First party defense** insurance against infringing a third-party patent.

A priori neither of these two types of policy ordinarily covers damages payable by the insured, rather, additional coverage of damages is usually included as part of strict exclusions in the standard products or as unique, optional riders involving *ad hoc* evaluations, specially negotiated and specifically worded.

We have already seen that Lanjouw and Schankerman have reported that there is no mass consumption of these products⁵², notwithstanding the advantages they offer and even though the standard products are known in the USA. The reason is probably their cost. Premiums range between 1 % and 5 % of the insured amount (typically in the range of \$500,000 to \$10,000,000). Policies include large deductibles, co-insurance, or self-insurance. For instance, a policy covering a single patent with an insured limit of \$1,000,000 would have a deductible of \$50,000 and co-insurance of around 15 % (2010 data)⁵³. These costs are related to the high expense of the patent system and the legal system in the USA and also to the broad nature of the covers, not only in *ad hoc* insurance but also in standard insurance.

Still and all, significant benefits attach to holding patent insurance in the USA. **SMEs⁵⁴ ordinarily find themselves in a weak negotiating position, to the point where they may have to either grant licenses with unfavourable**

⁵¹ Lobet G, Suárez J: *Financing the protection of innovators*, Centro de Estudios Monetarios y Financieros, 2005.

⁵² Lanjouw JO, Schankerman M: Characteristics of patent litigation: a window on competition, *RAND Journal of Economics* vol. 32, no. 1, Spring 2001, pp. 129-151 and Protecting intellectual property rights: are small firms handicapped? *Journal of Law and Economics*, 2004.

⁵³ Intellectual Property Insurance Services Corporation: Terms of Use, <http://www.patentinsurance.com/termsofuse/> (last accessed on 25 September 2012).

⁵⁴ R&D and patenting activity by SMEs has been helped by the 1980 Bayh-Dole Act or University and Small Business Patent Procedures Act, codified in 35 USC §200-212 and implemented by 37 CFR 401.

terms or even tolerate infringement of their IPRs because they lack the wherewithal to take action, and in such cases insurance can be especially beneficial by strengthening their negotiating position, so insurance is viewed as a good underpinning for reaching out-of-court settlements. For this reason many IPR practitioners (industrial property attorneys) recommend that companies doing business in highly competitive or contentious sectors or are involved in sectors where there are dependent patents and patent families should take out **first party defense** coverage against patent infringement claims, while holders of a patent or a portfolio of patents who thereby benefit from a major competitive advantage should consider taking out **first party pursuit** insurance to protect their patents from third-party infringement. Because most policies tend to be extremely complex, certain specialized intermediaries offer patent holders advisory services to select the appropriate type of coverage.

3.2.2. European Union

In October 2012 the European Commission expressed its satisfaction at the fact that patent insurance was being implemented in the different countries⁵⁵. However, there is no single insurance product common to all the member countries, just preliminary work aimed at designing a viable insurance product to foster competitiveness and innovation by Europe's SMEs.

- As early as 1999 the Commission had the Dublin Professor W. Kingston draw up a study proposing ways for SMEs to be able to better protect themselves against infringement of their IPRs, and in this connection he came up with the idea of a "patent defense union", i.e., a voluntary association of innovative patent holding SMEs to pool their resources for purposes of defense. Economically, he proposed a mutual-type scheme making a common front for defending the patent rights of member SMEs. Although Kingston's proposal in that initial paper⁵⁶ did not design a commercial insurance, it did lay down the groundwork for future assessments

⁵⁵ European Commission: *Communication from the European Commission: A Stronger European Industry for Growth and Economic Recovery – Industrial Policy Communication Update*, COM 582, 2012.

⁵⁶ Kingston W: *Enforcing Small Firms' Patent Rights*, School of Business Studies, Trinity College, funded by the European Commission, Enterprise Directorate-General, study contract no. EIMS 98/173: Patent Defence in Europe, 2000; ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies_enforcing_firms_patent_rights.pdf. The Kingston report (ref. 12.2.3) was based on 600 mail questionnaires completed by SMEs, followed by a high proportion of telephone and/or personal interviews. Two-thirds of the SMEs surveyed reported that they had experienced infringement of some kind. Kingston favoured the establishment of a Patent Defense Union (PDU) based on a system of compulsory arbitration as a means of settling disputes. The PDU, with subscriptions totalling 1,000,000 euros could electively fund litigation, and its mutual structure would act to lower the risk of adverse selection. Professor Kingston concluded that the cost of settling patent disputes is too high for companies of all kinds, not just SMEs.

of the situation in Europe, including subsequent papers by Kingston himself in which he did consider insurance options as such⁵⁷.

- Somewhat later, in the framework of the Lisbon Strategy of the European Union, announced in 2000⁵⁸, patents were identified as a key instrument for knowledge-based economic competitiveness, and various conferences were organized to address how to promote patents among SMEs. The first, and perhaps most meaningful, of these, in that it laid the groundwork for delving deeper into possible insurance options, was held in Brussels on 25 April 2000, sponsored by the European Commission, and dealt with enabling SMEs to profit from and enforce their patent rights (and intellectual property rights generally).

The European Commission had observed that European SMEs often preferred to protect their innovations as trade secrets rather than take the risk of publishing them as patents, because they feared being unable to defend them against infringement by large companies.

In 2002, to tackle the problem of SMEs' lack of means to defend themselves against infringement of their R&D, and aware that the Danish Patent Office (DKPTO) was already promoting solutions in the form of commercial insurance⁵⁹, the European Commission had CJA Consultants Ltd. (CJA) draw up a report on insurance against the risk of possible patent litigation in Europe⁶⁰. In their conclusions, CJA noted the benefits of insurance on enhancing innovation and patenting but at the same time identified various deterrents to achieving widespread patent-related risk insurance among SMEs. Chief among these difficulties was the scant, inaccurate, and unreliable statistical base for the sector along with cost of managing high, arbitrary risks that have not been able to be technically assessed because a sufficient statistical basis was lacking. To overcome these problems, CJA proposed a *compulsory* insurance scheme (with *possible* exemptions) and pointed out

⁵⁷ Kingston W: Improving patents for smaller firms: insurance, incontestability, arbitration, *I.P.Q.* no. 1, pp. 1-19, 2007. Llobet G, Suárez J: *Patent Litigation and the Role of Enforcement Insurance*, Centro de Estudios Monetarios y Financieros, 2008; by these same authors *Financing the Protection of Innovators*, Centro de Estudios Monetarios y Financieros, 2005; *Patent Defense Financing*, Centro de Estudios Monetarios y Financieros, 2004. Also: Michael Edwards and Associates: *Scoping Study: Report of the Patent Enforcement Project Working Group*, June 16th 2004. Available at <http://www.patent.gov.uk/about/enforcement/finalreport> (last accessed on 31 August 2012).

⁵⁸ European Commission: *Europe 2020: A strategy for smart, sustainable and inclusive growth*, COM(2010), p. 2020.

⁵⁹ In 2002 Denmark held the Presidency of the EU, and for that reason its efforts exerted particular impact on the Continent as a whole. See <http://um.dk/en/politics-and-diplomacy/denmark-in-the-eu/the-danish-eu-presidency-2012/the-danish-presidency-in-2002/>.

⁶⁰ An initial commentary in Pérez Carrillo EF: El seguro y los litigios sobre derechos derivados de patentes en Europa [Insurance and litigation involving patent-related rights in Europe], *Actas de Derecho Industrial y Derecho de Autor*, XXIV, 2003, pp. 1291-1300.

that by operation of economies of scale, a compulsory scheme would remove the element of risk selection, lower the cost of patent enforcement, and decrease the amount of premiums payable on each policy.

- CJA's January 2003 report set out a series of specific recommendations, e.g., a European-wide compulsory insurance scheme with two types of coverage, an initial cover and a cover for legal expenses proper.
- The initial coverage would operate as compulsory insurance without risk assessment to a limit of 35,000 euros, to cover the cost of preliminary investigations into the validity of the patent and its infringement. A 5,000-euro deductible was recommended for this first cover.
- Legal expenses coverage (enforcement against infringement of the insured's patent, first party pursuit insurance) would be accepted or refused by the insurer based on calculation of a 50:50 chance of success. The insured could have additional coverage for defending against third-party claims of patent infringement (first party defense) with riders to cover damages. According to the proposal, product management and premium setting would be based on calculation of partial and total insured amounts for each risk component. CJA also recommended setting up a mediation scheme for settling disputes between the insurer and the insured⁶¹.
- The public consultation that followed the 2003 CJA report did not favour moving in the proposed direction⁶², mainly because the insurance sector was unanimous in its negative view of the mandatory scheme in which the first payment of the indemnity by the insurer was not based on technical assessments⁶³. Still, the Commission ordered a second report from the same consulting firm, which was completed three years later.

⁶¹ CJA Consultants Ltd.: *Possible insurance schemes against patent litigation risks*, see http://ec.europa.eu/internal_market/indprop/docs/patent/studies/pli_report_en.pdf (last accessed on 21 September 2012). The final report in January 2003 added that coverage should also include cases in which the insured is a defendant in the proceedings and public resources would also provide insurance for non-patentee parties at risk. Litigation costs would be covered by the insurance where there was at least a 50:50 chance of success.

⁶² A summary of responses drawn up in 2007 can be viewed at http://ec.europa.eu/internal_market/indprop/docs/patent/studies/consultation/summary_report_en.pdf. The highly critical response of the International Association of Legal Protection Insurance *Joint Position Paper of CEA and RIAD on the Final Study on the Feasibility of Possible Insurance Schemes against Patent Litigation Risks*, Brussels, December 2006, can be downloaded at <http://www.riad-online.net/61.0.html> (last accessed on 25 January 2012).

⁶³ Insurers rejected the idea that individuals and companies could insure assets having different values, qualities, and complexity for a single, fixed premium, and by certain researchers, who have asserted that failure to discriminate between unequal cases would have adverse consequences for inventors who hold patents with solid claims, with practically automatic preliminary insurance followed by a second cover where assessment yielded a 50:50 chance of success being overly optimistic. These were the conclusions of Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, pp. 35-36, at

- In 2006 CJA concluded that while IPR insurance was marketed in the EU and the USA, seemingly it had not been particularly successful anywhere in the world and that a suitable product had yet to be developed for SMEs. Furthermore, involvement by the public sector to sponsor the initial coverage and to promote compilation of basic statistics for risk assessment by insurers was advocated⁶⁴. The proposal for mandatory insurance was retained, with exemptions.

As we see it, the CJA report has contributed to debate, thought, and subsequent practice, but it is not clear to us whether it has taken into consideration the measures put forward following adoption of Directive No. 2004/48/EC, in particular in Articles 6 (Evidence), 7 (Measures for preserving evidence), and 8 (Right of information), altering the system of preliminary verification inquiries by means of interlocutory measures and facilitating the collection of information on possible patent infringements, though subjecting the party who has requested such measures to the need to post security. We think that if CJA had taken this into account, they would have been able to put an insurance solution to the need to have resources to cover security on the table.

Subsequent studies brought out in European Commission circles have added nuance, particularly regarding the issue of compulsory insurance, and have recognized that the European scheme will need the support of industry if it is to be viable.

- The 2007 report put together by the IPR (Intellectual Property Rights) Expert Group for the European Commission's Directorate-General for Enterprise and Industry⁶⁵ acknowledged that there was no economic basis for introducing an insurance mechanism mandatory for all European countries.

http://www.hm-treasury.gov.uk/d/contra_vision_ltd_336_p7_131kb.pdf. For additional reasoning against a compulsory scheme based on the right to free competition, see Da Rin M, Hege U, Llobet G, Walz U: The law and finance of venture capital financing in Europe: findings from the Ricafe Research Project, *European Business Organization Law Review*, 7, pp. 525-547, 2006.

⁶⁴ CJA Consultants Ltd.: *Possible insurance schemes against patent litigation risks*, see http://ec.europa.eu/internal_market/indprop/docs/patent/studies/pli_report_en.pdf (last accessed on 21 September 2012).

⁶⁵ IPR Expert Group: *Memorandum on removing barriers for a better use of IPR by SMEs*. Report for the Directorate-General for Enterprise and Industry, June 2007. See, in particular, p. 33, a voluntary insurance scheme for SMEs should be supplemented by tools designed to simplify the handling of IPR-related disputes, for instance, advisory services and solutions for alternative dispute resolution. The report also made reference to a highly relevant question (also for actuarial calculations, i.e., the accounting valuation of R&D and patents: large companies and retail bank groups use IPRs as primary guarantees and collateral for loans, corporate capitalization, and other legal transactions, but this know-how does not seem to be available to SMEs, which are not clear about the benefits of filing quality patents that they will be unable to enforce because of the high cost of litigation: consequently, they prefer to carry on their activity outside the IPR system. This report was drawn up in the framework of the Community's PRO INNO initiative (more information available at http://ec.europa.eu/enterprise/policies/innovation/support/pro-inno/index_en.htm

- In a Communication concerning industrial property in Europe in 2008, the Commission finally accepted that it was only feasible to promote a voluntary European patent insurance scheme⁶⁶.
- In 2008 the European Commission had a group of experts assess best practices for IPR enforcement – IPR implementation for SMEs. Within the group of experts, the Funding and Evaluation Subgroup considered ways to strengthen the opportunities for European industry to obtain patent insurance (and insurance for other IP rights) in Europe and looked at the case of Denmark, which will be discussed below. No clear conclusion was reached as to the requirements and structures for European IPR insurance, but it was noted that **access to patent insurance is one of the most important factors in helping SMEs to enforce their intellectual property rights**⁶⁷.
- In 2009 the recommendations set out in the conclusions of a Conference organized by the European Commission to promote use of IPRs by SMEs included the importance of promoting an insurance scheme that would meet the needs of SMEs⁶⁸.
- In 2011 the Commission's Green Paper on boosting R&D recognized the importance of strengthening the patenting process and the subsequent exploitation of patents as means of overcoming the competitiveness challenge, though it did not directly address the issue of insurance⁶⁹.
- In 2012, in the midst of debate to slow down the single European patent, the Commission expressed its satisfaction at the gradual success of national patent insurance schemes in certain Member States of the European Union⁷⁰.

The territorial nature of patent rights, their parallel, independent international growth outside the structures of the EU in the Member States does not, to our

⁶⁶ European Commission: *Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee. An Industrial Property Rights Strategy for Europe*. COM (2008) 465.

⁶⁷ Expert Group Report: *Industrial Competitiveness: Making IPR work for SMEs*, at <http://ec.europa.eu/enterprise/policies/industrial-competitiveness/intellectual-property-rights/expert-group-report/> (accessed on 30 September 2012).

⁶⁸ VV.AA.: Conference: *Making IPR work for SMEs* – 27th April 2009. Organized by the European Commission. Available at http://ec.europa.eu/enterprise/policies/industrial-competitiveness/files/ipr_conference_27_04_2009/conference_report_en.pdf (accessed on 12 January 2012).

⁶⁹ European Commission: *Green Paper – From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation Funding*. COM(2011), 48 final.

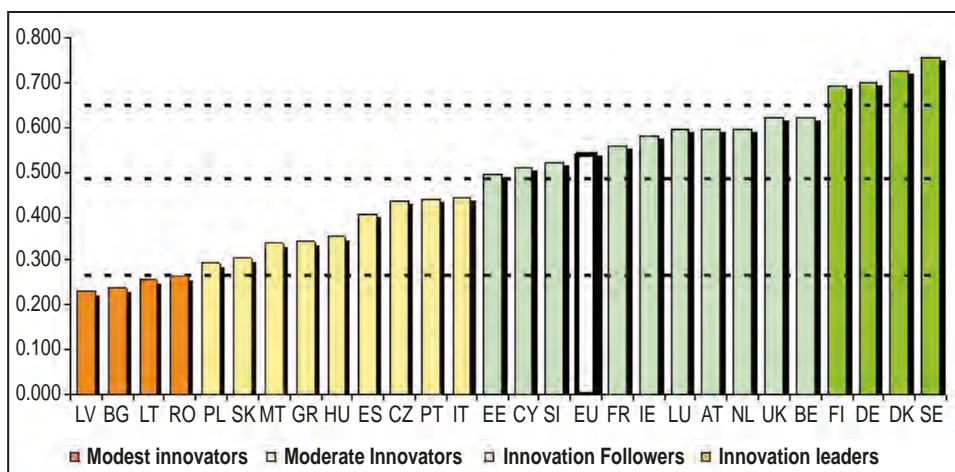
⁷⁰ European Commission: *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee on the Regions. A Stronger European Industry for Growth and Economic Recovery. Industrial Policy Communication Update*. COM 582 (2012).

mind, contribute to rapid implementation of a European insurance scheme as such. However, little by little, the route leading to patent insurance as an instrument for promoting R&D by SMEs and other inventors is taking shape in the Member States of the European Union and is even earning attention in studies that do not focus directly on insurance issues⁷¹.

3.2.3. Certain European countries

There follows below an analysis of certain studies and practices carried out in Member States of the European Union, particularly those at the top of the European innovation ranking (see Table 6⁷²).

Table 6
Innovation by country

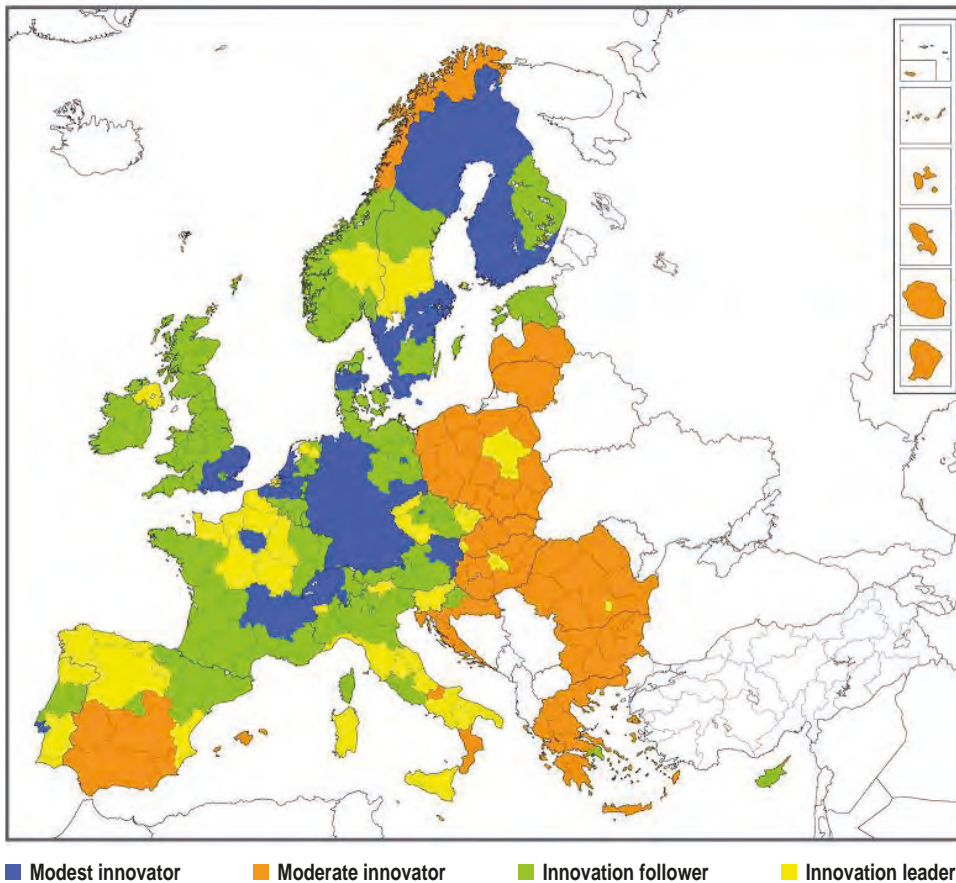


Source: EU Commission Scoreboard 2011

This breakdown is also depicted graphically on the following map according to the Innovation Scoreboard update in 2012, published in early 2013.

⁷¹ Harhoff D: *Economic Cost-Benefit Analysis of a Unified and Integrated European Patent Litigation System*. Institute for Innovation Research, Technology Management and Entrepreneurship (INNO-tec), 26 February 2009. Study carried out for the European Commission under Tender No. MARKT/2008/06/D (http://ec.europa.eu/internal_market/indprop/docs/patent/studies/litigation_system_en.pdf, accessed on 30 August 2012). The study mainly concerns integration of dispute resolution and litigation schemes in a future unified European system. Nevertheless, it takes account of and quotes studies on patent insurance, more specifically, the assessment carried out by CJA in 2003, and assumes that patent insurance schemes will end up being developed.

⁷² European Commission: *Innovation Union Scoreboard 2011* at http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm (accessed on 2 February 2012). See data on percentage R&D carried out by SMEs by EU country in the report.



3.2.3.1. Germany

Germany is in third place on the Innovation Scoreboard for 2011 (Table 6) and is the research leader (map 1). It is generally recognized as being powerful and respected, a country that rewards scientific and industrial achievement, and one of the European countries that expends the most effort on attaining the Lisbon Strategy (2000-2010) objective of national spending of 3% of GDP on R&D in 2010.

Germany's promotional strategy for high technology aims at integrating all the sectors involved in R&D around a public policy guiding all the activities of the federal government: promoting scientific freedom, boosting the growth of cooperative networks between research and industry, and supporting creative citizens interested in science⁷³.

⁷³ For an overview of this strategy see Bundesministerium für Bildung und Forschung: *The high-tech strategy for Germany*, http://www.fona.de/pdf/publikationen/bmbf_the_high_tech_strategy_for_germany.pdf.

Nevertheless, the National Insurers' Association's General Terms for legal defense insurance (ARB – *Allgemeine Bedingungen für die Rechtsschutzversicherung* 1994 and 1999)⁷⁴ explicitly excluded legal defense cover for patents of invention, trademarks, designs, and models or any other area of intellectual or industrial property rights. The reasons could be internal studies carried out by the local German insurance industry showing that on the whole the industrial sector was not prepared to pay the premiums for this type of insurance, which according to their calculations would be quite high. Even so, that same study acknowledged that it was an interesting product offered by certain insurers:

- Allianz underwrite first party defense policies with limited coverage, restricted to patents protected in Germany (after first considering, and rejecting, the possibility of extended coverage to include French patents).
- Gerling previously offered patent litigation insurance in Germany.
- Since 2008 a German consortium⁷⁵ has been selling insurance to patent holders (first party defense and first party pursuit policies) including interlocutory and interim measures (preliminary verification procedures), with coverage throughout Europe, having special clauses for SMEs (for defense against large multinationals). Annual premiums in 2008 were between 2,220 and 3,900 euros for first party defense coverage of 100,000 euros.

3.2.3.2. Denmark

Denmark, ranked second in the European Commission's Innovation Scoreboard 2011⁷⁶ (Table 6), is at the forefront of promoting and selling affordable insurance to protect innovation by SMEs⁷⁷. This country's approach was made clear in 2002, when it held the rotating presidency of the EU Council and announced various initiatives it had drawn up, particularly the influential and highly rated Danish report *Economic Consequences of Legal Expense Insurance for Patents*, June, 2001)⁷⁸.

⁷⁴ ARB 94: *Allgemeine Bedingungen für die Rechtsschutzversicherung* [General Terms for Legal Expenses Insurance]. See Section 3: Exclusions (2) (d) in the 1999 version at http://mieterschutzbund-berlin.de/data/downloads/91/rechtsschutz_arb_1994.pdf.

⁷⁵ Participating members of this consortium, the Gesellschaft für Marken und Patentrechtsschutzversicherung in Darmstadt, in collaboration with NRV – partners of the Nuremberg Insurance Group, the MAT Group in Stuttgart, and Mannheim Holding AG. More information at the consortium's website at www.patent-rechtsschutz.de.

⁷⁶ European Commission: *Innovation Union Scoreboard*, Luxembourg, 2011.

⁷⁷ Danish Patent Office (DKPTO): *Economic Consequences of Legal Expense Insurance for Patents*, June 2001. *A legal expense insurance for patents – A Danish idea for EU*. Both at www.dkpto.dk.

⁷⁸ The Danish report was sponsored by the Danish Patent Office and headed by one of its directors (John Horstead). It deals with the feasibility of patent insurance to promote research, innovation, and development by SMEs.

The Danish report noted that the high cost of litigation to settle patent disputes restricted investments by SMEs in R&D and caused them to patent less (compared with patenting by large corporations). It concluded that there was a need for temporary public subsidies to produce an insurance suitable for SMEs and emphasized that the effects of public sector aid would benefit society as a whole through the positive effects exerted on innovation, quantified by the report at between 6 and 21 billion euros in the EU overall.

After years of analyses and practical experience, another strategic document known as the Danish Strategy, entitled *Industry Policy in Denmark. New Trends in Industrial Property Rights*⁷⁹, underscored that Danish companies should not lose sight of the possibilities patent insurance afforded them to exploit their IP and suggested that the public sector should advance the potential of the IPR system and valuation methods that could help implement an insurance scheme.

A patent insurance has been available in Denmark since 2007 under the name of *PatentEnforcer* through a private underwriter (Lloyds of London). This scheme was the brainchild of Ian Lewis and Sam Bobo of the Samian insurers. The product was launched in Denmark with the support of the Danish Patent and Trademark Office, which promotes it (subsidies are precluded).

- The product was designed for Danish SMEs.
- It follows other policies that were not drawn up and marketed as standard insurance, whose costs were so high that purchasing them was prohibitive for SMEs.
- It is a voluntary insurance scheme operating on the basis of annual policies, renewable.
- The principal coverage has been designed along the following lines:
 - Cover of risks to patents having effect in Denmark owned by SMEs with billing up to DKK 250 m (around 32.5 million euros).
 - Annual premium (2009 data)⁸⁰ from 1,200 to 32,000 euros, depending on the coverage purchased.
 - The lower band of premium rates for policies purchased covers legal expenses for patent enforcement (first party pursuit), with coverage including fees of industrial property attorneys, lawyers, costs and disbursements and defense against counterclaims).
 - Indemnities range from DKK 1,000,000 (approximately 130,000 euros) to DKK 5,000,000 (650,000 euros) in aggregate.

⁷⁹ Danish Patent Office: *Industry Policy in Denmark. New Trends in Industrial Property Rights* at http://www.wipo.int/ip-development/en/strategies/national_ip_strategies.html#den and at <http://www.dkpto.dk/en/publications/reports/indu%5Fpolicy/index.htm> (last accessed on 23 December 2012).

⁸⁰ European Commission: Directorate-General for Enterprise and Industry, Centre for Strategy Services and Evaluation Services, *Making IPR work for SMEs*, Annex B: Best Practice Cases. 2009.

- The scope of coverage includes both granted patents and pending patent applications up to a maximum of 10 patent families per policy⁸¹.
- In addition to the basic coverage, SMEs may select different levels of protection according to their needs, in return for higher premiums.
 - Expanded territorial coverage can extend to jurisdictions outside Denmark, to the member states of the European Patent Convention or even worldwide. Coverage for the United States and Canada is subject to narrower terms and more expensive premiums.
 - The objects insured under these expanded covers may include all or some of the following perils:
 - **Enforcement** against verified or suspected infringement of the patent owned by the insured within the framework of the legal system of the country in which infringement takes place.
 - Defense against **counterclaims** brought by the infringer.
 - **Defense** against innocent infringement of IPRs by the insured (first party defense).

By way of risk retention, SMEs are required to cover 10% of legal costs, with a minimum of DKK 25,000 (approximately 3,250 euros) for Danish risks, with the amount increasing in the case of coverage of risks in other jurisdictions.

Another insurance company, Willis Danemark, has offered IPR coverage since 6 December 2011, focusing particularly on trademarks and copyright, though patent insurance is available as a rider. It basically covers legal expenses for **enforcement**, with the possibility of a further rider covering **defense**. The basic product is aimed at Danish patents, but extended geographical cover is also available.

These Patentenforcer and Willis Danemark private offerings enjoy non-financial support by the DKPTO, critical during the launch phase of insurance products⁸². The DKPTO provides non-monetary support benefiting Danish insurers and innovators through the following mechanisms:

- Making available information concerning industrial and intellectual property in Denmark to the public and to insurers (for instance, statistics).
- Making suggestions concerning aspects that might be deemed beneficial in an insurance product directed at SMEs.

⁸¹ European Commission: Directorate-General for Enterprise and Industry, Centre for Strategy Services and Evaluation Services, *Making IPR work for SMEs*, Annex B: Best Practice Cases. 2009.

⁸² European Commission: Directorate-General for Enterprise and Industry, Centre for Strategy Services and Evaluation Services, *Making IPR work for SMEs*, Annex B: Best Practice Cases. 2009.

The DKPTO's non-financial support has proven to be vital in paving the way for patent litigation insurance in Denmark and is deemed advantageous for all projects.

3.2.3.3. France

France stands mid to high in the ranking in the Innovation Scoreboard 2011 (Table 6). Studies on patent litigation insurance have been produced in this country since the 1980s. Specifically, the report by Arthur D. Little for the French Patent Office, the Institut Nationale de la Propriété Intellectuelle (INPI), reviewed the status of patent litigation in France⁸³ and suggested possible covers to aid SMEs in defending themselves.

In practical terms, a patent insurance policy to promote innovation was available between 1986 and 1994, that is, a product by the name of Brevetassur. Design and marketing of this product were a cooperative effort between public sector agencies, industry, and the insurance sector. It was intended to insure pending patent applications or patents having effect in France. Under this system, policies were to be bought within six months of filing the patent application. Coverage was 85% of legal costs, and premiums were high. It did not meet with much commercial success.

3.2.3.4. United Kingdom

Policies covering national and global risks exist for patents and are purchased and underwritten in Britain.

Insurers in the UK insurance market are divided in their approach to the most appropriate type of IPR insurance.

- Some offer quite broad covers, with sums insured that can be in excess of £2 million. These may be too expensive for SMEs⁸⁴.
- Others have opted for products with a premium rate per patent. This option can raise difficulties in the event of high claims.
- To a large extent practical experience with products that provide resources for patent litigation has involved products based on *ad hoc* evaluations, or due diligence, that can offer coverage for global markets and can often exceed the scope of standard insurance⁸⁵.

⁸³ Little AD: *What IP coverage should be used by companies?*, Institut Nationale de la Propriété Intellectuelle, May 2002.

⁸⁴ Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, p. 11, available at http://www.hm-treasury.gov.uk/d/contra_vision_ltd_336_p7_131kb.pdf.

⁸⁵ A summary and references for obtaining additional information are available in Michael Edwards and Associates: *Scoping Study: Report of the Patent Enforcement Project Working*

- International groups like Pearl (Canada) and IMF Ltd. (Australia), specializing in defending patents in exchange for a percentage of the profits of the proceedings of the lawsuit or of the IPR holder company, operate in this country. Also, the British Technology Group (BTG), partnered by the National Research and Development Council and the National Enterprise Board, privatized in 1992 (as BTG Limited), and subsequently publicly listed since 1995 (BTG plc), offers support for the management and guarantees for defending patents owned by institutions or members of the university community in Britain (mainly in the health care sector)⁸⁶.
- In addition, Lloyds, through one of its underwriters (Samian), developed the groundbreaking Danish patent insurance scheme for SMEs already mentioned above.

Commercial insurance for the standard risk of patent litigation for SMEs has been addressed in studies sponsored by the British government.

- A 2004 report proposal sponsored by the UK government after the consultation on CJA's 2003 organized by the European Commission called attention to "extensive opposition" to any form of mandatory insurance. This report was carried out in the framework of the Patent Enforcement Project (PEP)⁸⁷, which has resulted in some important conclusions:
 - The cost of patent litigation is a basic barrier preventing SMEs from benefiting from the patent system.
 - To address this problem, the PEP proposed a mechanism for protecting patents in the form of mutual insurance aimed at helping SMEs whose patents were infringed. This mutual association would manage the risk of its members (patent holders) either directly or by means of a captive insurance company formed by the mutual association.
- The mutual association was to be funded by dues, earnings on investments, and initially by a fund operated by the British government.
- Initially it was to provide coverage of up to £50,000 (with a £5,000 deductible payable by the policyholder) for any member of the mutual association that could furnish *prima facie* evidence that its patent was being infringed. The

Group, June 16th 2004. Available at <http://www.patent.gov.uk/about/enforcement/finalreport> (last accessed on 31 August 2012).

⁸⁶ A summary and references for obtaining additional information are available in Michael Edwards and Associates: *Scoping Study: Report of the Patent Enforcement Project Working Group*, June 16th 2004, pp. 10-11. Available at <http://www.patent.gov.uk/about/enforcement/finalreport> (last accessed on 31 August 2012).

⁸⁷ Michael Edwards and Associates: *Scoping Study: Report of the Patent Enforcement Project Working Group*, June 16th 2004, p. 13. Available at <http://www.patent.gov.uk/about/enforcement/finalreport> (last accessed on 31 August 2012).

deductible and mutual association funds would initially cover preliminary verification proceedings to ascertain the scope and validity of the patent and confirm the infringement.

- This proposed scheme did not afford protection against third-party liability except for counterclaims relating to the initial infringement of the insured's patent.
- The proposal was supplemented by an option for the mutual association to take out commercial insurance to cover its members in cases in which legal expenses exceeded the initial £50,000.
- A report by Haberman and Hill in 2003⁸⁸ put forward more ideas:
 - Means are needed to be able to achieve balanced competition between parties with differing levels of financial resources that face off in patent litigation. Insurance could be extremely helpful for this purpose.
 - Optimum levels of coverage are too expensive for many SMEs and private inventors, because patent litigation is unique in its complexity, its unpredictability, and the technical difficulties involved in evaluating the associated risk.
 - All insurance schemes should include, if only as options, coverage of both infringement of the insured's own patent and defense against third-party claims of infringement; this coverage should extend to costs of preliminary verifications before litigation proceedings and costs after the proceedings have started (court costs *per se*, fees, experts' fees, indemnities, enforcement of the judgment, etc.), as well as the risk of challenges to a patent's validity; and it should offer broad territorial limits to coverage, for Europe, the USA, and other countries.
 - Policies should preclude insurers from withdrawing or reducing their exposure if an updated patent assessment is carried out during the lifetime of the product (before, during, or after litigation) showing that there are greater risks than had been calculated at the time the policy was undertaken.
 - If low-cost mechanisms for patent enforcement were to come into effect as a result of substantive and procedural reforms to the law, the insured risk and the premiums could be lowered⁸⁹.
 - Lastly, as a means of reducing risk to levels acceptable to insurers and also holding down premiums for the insured, it was suggested that

⁸⁸ Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, pp. 35-36. Available at http://www.hm-treasury.gov.uk/d/contra_vision_ltd_336_p7_131kb.pdf.

⁸⁹ Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, pp. 35-36. Available at http://www.hm-treasury.gov.uk/d/contra_vision_ltd_336_p7_131kb.pdf.

coverage could be limited to disputes which, on being evaluated by independent experts, are rated as having a high likelihood of success, for instance, greater than 60 or 70%. This proposal would encourage inventors to obtain patents whose claims clearly stand apart from the prior art, would increase the chances of success of litigation on substantive grounds, and would make it possible to develop viable insurance.

In addition to the preceding theoretical studies, other practical initiatives by the UKPO, such as the creation of an Opinions and Advisory Service by the UK Patent Office, offering an initial assessment of the prospects for success in an IPR dispute, enabling rightholders to lessen the uncertainty in the early stages of a dispute and contributing to the establishment of a climate of legal certainty conducive to commercial insurance⁹⁰.

3.2.3.5. Sweden

In the 1980s the Swedish Inventors' Association (SIA) brought out a relatively inexpensive insurance scheme (several thousand Swedish kronas per patent per year)⁹¹. It covered defense costs up to 2 million Swedish kronas per litigation event. At first coverage was limited to disputes in the territory of Sweden, but the scheme eventually provided riders extending coverage to countries in Western Europe. This product was abandoned as a consequence of two major claims in the 1990s, after which the SIA no longer regarded the scheme as profitable.

In 1997 the Swedish Ministry of Industry, NUTEK, ordered a study to replace the previous experience⁹². This led to a proposal to include private actors to fund the project. In terms of cost, the Swedish Financial Services Authority estimated initial costs of at least 20 million Swedish kronas to achieve the same coverage as the former SIA product and that even so the scheme would have to be compulsory for new patent holders/filers. This project was never put into practice because of unwillingness on the part of the insurance sector.

3.2.4. Others

By way of a cursory overview, without attempting to go into great detail, information is available on insurance schemes and other commercial products

⁹⁰ IPR Expert Group: *Memorandum on removing barriers for a better use of IPR by SMEs*. Report for the Directorate-General for Enterprise and Industry, June 2007. See, in particular, p. 43 in relation to the cost of defending IPRs.

⁹¹ Larsson T: *Patentintrång-En fråga för staten?*, Vinnova, Sweden, 2003, p. 9.

⁹² Hermansson, CH: *Patents and SMEs, managing intimidation activities from financial strong actors*. A research paper by the Handelshögskolan, University of Gothenburg, 2010.

in Australia and Canada, with some support from those countries' Patent Offices, at least with respect to advertising their existence and answering questions. By contrast, in such other jurisdictions as Luxembourg, Ireland, and Israel, the respective Patent Offices appear to be on the sidelines of this market and have requested the results of this report for consideration in the framework of their jurisdictions⁹³.

There have also been other government initiatives, ordinarily coordinated by the respective national Patent Offices, which have not dealt with insurance products directly yet have nonetheless contributed to their implementation⁹⁴.

- The Henri Tudor Public Research Centre's Technology Watch Centre in Luxembourg provides multidisciplinary advice in the field of IPRs, including prior art searches and technical reports by sector highly focused on furnishing support to SMEs (particularly in matters of information) so that they are in a position to defend their patents.
- The Italian Patent and Trademark Office, in cooperation with the Ministry of Development's Bureau of Business Promotion and Internationalization Policies and with the Ministry of Foreign Affairs, support internationalization by SMEs in the form of advisory services and support in managing IPRs in other countries. There are offices in China, India, Taiwan, Vietnam, Korea, the United Arab Emirates, Russia, Turkey, Brazil, and the United States. According to our data, it has not gone so far as to fund individual claims, but it does offer an economic and legal intelligence service for IPR matters by way of assistance with respect to claims.
- The Austrian Wirtschaftsservice is a public sector financial entity whose purpose is to furnish support for SMEs. Since 2006 it has had a programme for financing and monitoring innovation and IPRs that encompasses actions to boost enforcement of rights owned by SMEs. It has offices abroad in China, the United States, India, and Russia⁹⁵.

3.3. Terms (available and/or projected) in today's insurance markets. Presentation and discussion

We have just seen that patent insurance exists in various countries. However, it does not offer the same coverage or have the same product structure in all cases.

⁹³ Other Offices, e.g., those of Britain and Denmark, have also asked to see the final report.

⁹⁴ Centre for Strategy Services and Evaluation Services, *Making IPR work for SMEs*, Annex B: Best Practice Cases, Directorate-General for Enterprise and Industry, European Commission, 2009.

⁹⁵ Michael Edwards and Associates: *Scoping Study: Report of the Patent Enforcement Project Working Group*, June 16th 2004, pp. 10-11. Available at <http://www.patent.gov.uk/about/enforcement/finalreport> (last accessed on 31 August 2012).

Every time an insurance policy is issued, the perils covered are set out in the contract signed by the parties: one agreeing to accept the risks, the other to pay the premium. The definition of the agreed upon perils or covers is based on legal and actuarial considerations. Let us now look at the main features present in the different policies currently available with a view to identifying which covers are suitable for a product to be launched in a new market, i.e., Spain, and which are unsuitable⁹⁶.

3.3.1. Perils - covers

Legally, risk is the source of insurance and defines and characterizes each branch in the insurance sector. It is an essential element in every insurance policy, an abstract, uncertain incident, with the insurance company offering a guarantee against materialization of a potential specific future event that can be analysed and quantitatively and qualitatively assessed, both in advance, that is, while the policy is being drawn up and concluded, and at the time it arises and subsequently during evaluation and adjustment. Defining the risks covered and relating them to the price the insured will pay as the premium based on the pricing calculations performed by the actuaries is at the core not only of insurance policies but of the insurance business itself.

While reliable statistics concerning risk occurrence in each branch are basic to setting coverage and pricing, in the case of IPRs there are no solid statistics on aspects closely bearing on technical calculations (claims, average costs, and so on). Insurers operating in the IPR insurance market are disinclined to make public detailed information on the underlying design of complex products like these, to the point where the methods employed have even been protected by patent in the USA. Consequently, analysing the risks covered by IPR insurance schemes entails serious difficulties. Even so, based on the policies that have been disclosed, the studies referenced, and legal and actuarial methods of interpretation, currently available covers in the IPR insurance sector can be said to fall into two main groups:

- A. Defensive or legal expenses covers. Some, but not all, are available as standard insurance policies.
- B. Coverage of indemnities for damages, available only as covers specially drawn up on the basis of specific thoroughgoing research into each individual case (due diligence).

This distinction between the two major categories is fundamental for the proposal set out later in Part II. Each can, in turn, be further subdivided into

⁹⁶ The materials reviewed have in many cases been gleaned from available policies or preliminary studies that have been cited. Most of the terms and conditions have been examined on the basis of the conditions in working documents through the FUNDACIÓN MAPFRE.

certain other types and subtypes. Along with these two categories is a third, mixed category, designated by the letter “C”, as per Table 7 below.

Table 7
Types of IPR insurance

<p>A. Legal expenses</p> <ol style="list-style-type: none">1. Against infringement of the insured's patent2. Countersuits and counterclaims3. Security4. Alleged infringement of third-party patents5. Litigation with licensees <p>B. Damages</p> <ol style="list-style-type: none">1. Own damage2. Third-party damages3. Licensee damages <p>C. Multiple risk and other covers (combined coverage, D&O, preliminary verification inquiries, etc.)</p>

Source: By the authors

A brief description of each of these covers follows, subject to two provisos:

- First, designations often differ from one policy to another, though the essential nature of the covers remains the same.
- Second, in existing standard commercial policies the different covers have been drawn up so as to cover risks of more than one IPR and different types of IPRs (patents, copyright, trademarks, etc.)⁹⁷.

A. Legal expenses

This category, legal expenses insurance, includes several types of insurable risk.

⁹⁷ Underwriters are reluctant to provide their terms for study. However, we have had partial access through earlier research and experience and from the websites of underwriters and brokers cited herein. By way of example, La Playa Intellectual Property Insurance, available at http://www.laplaya.co.uk/knowledgebank/Patent_EnforcerTM_Intellectual_Property_Insurance.pdf (last accessed on 1 October 2012); Samian Sentinel Patent Enforcer at <http://www.patentenfencer.eu/> (last accessed on 20 October 2012); Composite: The Coverholder, available at <http://www.composite-legal.com/uploads/files/Intellectual%20Property%20Policy%20Wording.pdf> (last accessed on 20 May 2012); IPISC, available at <http://www.patentinsurance.com/> (last accessed on 20 September 2012); RJ Ahmann Company, available at <http://www.rja.com/patent-insurance-intellectual-property-protection-minneapolis-mn/> (last accessed on 20 September 2012); Charles Milnes & Co., available at <http://www.reactinsurance.com/index.htm> and at certain Patent Offices, e.g., the Australian Patent Office at <http://www.ipaustralia.gov.au/ip-infringement/enforcing-your-ip/ip-insurance/> (last accessed on 20 September 2012); and the others mentioned herein, among others. The covers discussed below are representative of the main and/or widely available features in the broad collection of material reviewed.

A.1. Expenses for enforcement against infringement of the insured's patent

This is usually known as first party pursuit or enforcement coverage or patent assertion, the term that will be used here. Its purpose is to protect the insured IPRs against third-party infringement and thus provides basic support for innovation⁹⁸. The wording of patent assertion coverage usually entails that after accepting the claim, the insurer will take charge of defraying the legal expenses. However, there is another type, known as *patent compliance insurance*, in which expenses are refunded⁹⁹.

Patent assertion coverage is constructed around the definition of a claim as infringement or threats against an insured IPR, making it relatively easy to identify the claims covered. This coverage is the core of all the standard policies and wording of terms in IPR insurance. It is based on the consideration that litigation expenses can be substantial and even prohibitive for IPR holders, particularly if they have to defend themselves against giant industrial concerns. Having to defend against attacks on their patents is an extremely serious risk, especially if they operate in a niche market and their production is based on one or a few patent-protected products¹⁰⁰.

A.2. Countersuits and counterclaims

For our purposes here, this refers to legal expenses coverage against third-party claims. Unlike first party defense covers, which are purely defensive (see below), *Countersuits and counterclaims* arise only where the legal proceedings or actions taken out of court that require the insured to defend himself ensue from previous legal proceedings or actions outside court undertaken by the insured to assert or enforce his IPRs against third-party infringement or threatened infringement. This eventuality covers the risk of legal expenses caused by countersuits. This coverage is accessory to A1 and may hold out interest in an insurance product designed to support R&D.

⁹⁸ The standard terms we have seen have a first party pursuit section basically including coverage for claims by the insured against third-party infringement of his patent in relation to:

- Infringement of the declared patent.
- Legally unwarranted threats of infringement or the equivalent (e.g., a third-party communication to the insured indicating that an infringement has occurred or will occur).
- Passing off, including, but not limited to, unfair competition, as it relates to the declared patent.
- Violation of trade secrets.
- Counterclaims and lawsuits.

⁹⁹ Aventín Arroyo JA: *La esencia de la actividad aseguradora y su potencialidad para ofrecer remedios a los innovadores. Experiencias y posibilidades [Essentials of insurance and its potential for providing innovators with remedies. Experience and prospects]*, in Couto Gálvez RM, Sánchez-Ramos Roda C (coords.), *Seguros y Patentes [Insurance and Patents]*, Colección Propiedad Intelectual e Industrial de la obra científica, Madrid, Complutense University, Elzaburu, 2012, pp. 114 ff.

¹⁰⁰ Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, p. 11, available at http://www.hmtreasury.gov.uk/d/contra_vision_ltd_336_p7_131kb.pdf.

A.3. Guarantee

A claim under this cover relates to the need for the IPR holder to post a bond or monetary security with a court as a consequence of legal proceedings.

This eventuality of having to post security typically arises where interlocutory measures or verification/discovery proceedings are petitioned in litigation proceedings relating to A1, rendering it secondary to the latter.

A.4. Defense against alleged infringement of third-party patents

This legal expense cover defends the insured against claims that he is infringing third-party IPRs¹⁰¹.

The risk borne by the insurer is affected by the fact that it is practically impossible to know, *a priori*, what kind of claim might be brought against the insured, hence policies are subject to the need for *ad hoc* analysis (business sector, products, scope of research carried on by the insured, etc.).

A.5. Litigation with licensees (and other agreements)

This cover is for legal expenses ensuing from breach of contract relating to agreements declared in the policy, chief among them license agreements¹⁰².

B. Damages

This is the group of perils relating to damages, that is, the risk that the payment of indemnities to third parties may be incurred against the insured's assets in respect of an IPR (his own or another's) or that losses (indemnities for

¹⁰¹ The standard terms we have made reference to include this cover in their first party defense section. Coverage is provided against claims of having committed infringement by reason of handling/processing a product declared in the policy or against actions that threaten peaceful use of the insured's IPRs (and named in the counterclaim). It includes defending against both:

- Claims of non-contractual infringement and claims of breach of a license agreement entered into by the insured, always in relation to a specific, declared product, as well as claims of false accusations (by the insured vis-à-vis third parties) and claims of violating trade secrets.
- Actions threatening the insured's patent rights (declared IPRs), including coverage against, for instance, nullity actions, rectification, cancellation, revocation, or petitions to amend a registration; requests for a compulsory license or declaratory actions brought by third parties to counter a claim of infringement, and litigation over the ownership of a patent by the insured's employees. This broad coverage also extends to countersuits.

¹⁰² In the terms reviewed, defensive covers (contract litigation, including litigation with licensees) are defined as:

- Litigation brought by the insured against third parties on grounds of breach of the contractual obligation to pay royalties and license fees (in this policy, in excess of three monthly payments).
- Litigation brought by the insured against third parties on grounds of breach of the contractual obligation to hold the insurer safe and harmless.

Also covered is the defense of the insured in claims requiring them to pay license fees under a declared agreement. Finally, instituting and responding to countersuits in litigation relating to the previous features of this cover is also included.

licensees, lost revenue subsequent to nullity of a patent, etc.) may be sustained.

Underwriting this type of insurance requires complex calculations and detailed statistical data not available in Spain at the present time. While the general terms reviewed do refer to this type of eventuality, the fact is that no insurer provides general cover for damages except on the basis of specific research and calculations¹⁰³. The premiums for this type of product are prohibitive for SMEs, and large companies that have this coverage obtain it either by paying extremely high premiums or, more often, by instruments combining insurance with other financial or financial engineering instruments.

Several subgroups can be distinguished within these indemnity covers. Because of the high risk they represent and their aleatory nature, it is not advisable to include any of these in a new insurance sub-branch for innovative SMEs in Spain.

B.1. Own losses

These are covers for losses sustained by stoppage of the business, non-receipt of license payments, having to restructure the production line pursuant to other IPR litigation, and the like. They cover high costs that are hard to quantify *a priori*, such as:

- Lost revenues in the event a patent is cancelled after nullity proceedings. In this case the indemnity is calculated based on earnings generated by the patent while in force for a specified period of time.
- Stoppage of business: the insurer is liable where interlocutory measures (for instance, a cease and desist order) are executed against the insured pursuant to a complaint brought against him on grounds of patent infringement or pursuant to a final judgment or arbitration decision. That is, what is covered are lost business earnings as a consequence of stoppage of business activities, sales, or the like during a specified length of time. Indemnities are usually calculated for an agreed-upon period of time.
- Lost license payments: covers lost profits sustained over a specified period of time. Included are losses ensuing from interlocutory measures ordered against the insured or against licensees for which the insured is liable; from a declaration of nullity of IPRs in civil proceedings; from indemnities payable to third parties by the insured as a consequence of infringement of their IPRs; from indemnities arising from termination of a license agreement by the insured where said termination is declared null and void. Other causes

¹⁰³ There are indications that groups like Pearl and IMF, mentioned above, offer other types of financial agreement to cover this eventuality. Michael Edwards and Associates: *Scoping Study: Report of the Patent Enforcement Project Working Group*, June 16th 2004. Available at <http://www.patent.gov.uk/about/enforcement/finalreport> (last accessed on 31 August 2012).

of lost earnings have also been covered, e.g., other types of breach of license agreement by the insured or the licensee.

- R&D losses: provides for reimbursement of an amount specified in the policy to the insured to cover expenditures on and investments in R&D in circumstances specified in the policy, for instance, pursuant to a declaration of nullity against a patent, or where the insured is declared to have infringed a patent or the insured's patent is declared not to have been infringed, or where profits are lost due to research funds spent on generic products¹⁰⁴.
- Losses to the value of intellectual property portfolios: the policy provides for payment of a specified amount in the event the insured's IPRs are cancelled or where the insured has to settle an infringement of his IPRs or is accused of unfair competition or unfair use of patents.
- Cost of refurbishments, reconditioning, and repair: reimbursement of the actual cost of redesign, reorganization, or elimination of products and processes subsequent to IPR litigation.

B.2. Third-party damages

This coverage extends to both contractual and non-contractual damages¹⁰⁵. It may take the form of:

- Coverage of damages ensuing from breach of contract:
 - This is coverage for damages to protect the insured against losses to his assets from having to pay indemnities by way of compensation for damages. The source of the obligation to pay compensation is contractual: a contract declared in the policy whereby the insured undertakes to hold a third party harmless against claims, penalties, or indemnities regarding a declared product or to take charge of the legal defense of that third party against claims of industrial property infringement.

¹⁰⁴ In the USA this relates to investments under an exemption laid down in the Drug Price Competition and Patent Term Restoration Act (Hatch-Waxman Act) of 1984.

¹⁰⁵ By way of example, in the terms reviewed this coverage is provided for cases of:

1. Payment of indemnities to a third party or provisions to hold a third party harmless by the insured for infringement by a specified product in the context of a specified agreement, within the limits of this coverage; and also
2. Payment of indemnities to a third party or provisions to hold a third party harmless by the insured in the context of an agreement declared in the policy whereby the insured has undertaken to institute infringement proceedings for specified industrial property rights within the limit or sum insured under this item.

Sometimes the terms include more precise definitions of third parties or specifically cover licensed transactions. By way of example, see in this respect, Composite: The Coverholder: Composite Legal Expenses, Suffolk House, Trade Street, Cardiff, CF10 5DT, underwritten by Groupama Insurance Company Limited, Groupama House, 24-26 Minories, London EC3N 1DE. Standard terms are available at <http://www.composite-legal.com/uploads/files/Intellectual%20Property%20Policy%20Wording.pdf> (last accessed on 20 May 2012).

- Coverage of non-contractual damages:
 - This is coverage of liability to indemnify third parties for damage ensuing from IPR perils.

B.3. Licensee damages

This is protection against indemnities the insured IPR holder may be liable to pay a licensee pursuant to a variety of situations ranging from a declaration of nullity of the patent being worked by the licensee to various breaches of the license agreement, etc.

Under this cover the license agreement is the main item insured. For policy writing purposes insurers need to consider not only the characteristics of the IPRs but also the various licenses agreements extant.

C. Multiple risk policies and other covers

Policies currently available, directed at large companies, and studies reviewed here are based on the option of having a single policy cover a wide range of risks. Formally, the policies include all the previously mentioned covers in the general terms and conditions, and possibly some additional covers¹⁰⁶. A single policy thus contains guarantees for several IPRs of the same or different types (patent or patents, trademark or trademarks, a combination of the two, etc.). This makes each multiple risk policy highly complicated and hence wholly unsuited for launching an insurance product for SMEs.

- These policies are commercially available in the USA¹⁰⁷.
- They are sold as value added products intended to increase the chances of commercial success or survival following an adverse judgment or to boost the appeal of companies' technical portfolios.
- They give the insured access to funds for legal expenses or entitle him to reimbursement after a final judgment, provided that the proceedings began while the policy was in force¹⁰⁸.

¹⁰⁶ We have seen that each of the covers provided is often set out in the same terms and conditions in the marketplace, though subject to different constraints. Furthermore, objectively speaking, coverage may encompass a number of intellectual and industrial property rights: trademarks, patents, models/designs, and even trade secrets.

¹⁰⁷ By way of an example of a policy having broad multiple risk covers and numerous exclusions as discussed above see: Composite: The Coverholder: Composite Legal Expenses, Suffolk House, Trade Street, Cardiff, CF10 5DT, underwritten by Groupama Insurance Company Limited, Groupama House, 24-26 Minorities, London EC3N 1DE. Standard terms are available at <http://www.composite-legal.com/uploads/files/Intellectual%20Property%20Policy%20Wording.pdf> (last accessed on 20 May 2012).

¹⁰⁸ More information at <http://www.patentinsurance.com>.

- The insured may select those covers he deems most appropriate for the risks he faces and his ability to pay premiums or self-insurance.
- In the context of multiple risk policies, there also exist insurance products combining other risks with certain of the covers mentioned above (A1 to A5, B1 to B3) and advertising mater for insurance products combining other risk with coverage for:
 - Preliminary verifications and investigations to enable the insured to defend himself against claims of infringement instead of immediately acquiescing so as not to incur high costs, as is usually the case for SMEs, and also to be able to investigate possible infringement of the insured's own patent.
 - D&O liability, that is, civil liability of the directors and officers of companies involved in an infringement, either as victims or as infringers. It covers claims in the form of damages and liabilities against the directors of the insured companies ensuing from claims of IPR infringement¹⁰⁹. This cover is offered in the USA market, most prone to claims of this type¹¹⁰.

The complexity of multiple risk coverage available mainly in the USA market makes them unsuitable for launching a simple and relatively inexpensive insurance product intended to promote research and registration of IPRs by SMEs and researchers.

3.3.2. Exclusions

The policies considered are worded in terms of broad coverage restricted by contractual exclusions that limit the risk actually assumed by insurers according to the premiums payable and the features of each individual policy. This means that no general listing of exclusions common to all policies exists, or at least we have not found any such listing.

Nevertheless, certain contingencies or risks can be identified as being expressly excluded under the terms of different policies.

Here is a list of exclusions included in the policies that have been reviewed.

- Risks in specific jurisdictions (mainly the USA) in policies with broad geographical coverage.

¹⁰⁹ D&O risks are not treated equally in company IPR policies in the international market. D&O coverage has not been examined in the academic studies carried out in Europe reviewed here and appears as an exclusion in the terms of some multiple risk policies, though others include a specific cover with a separate insured sum for defending company directors against claims of infringing third-party patents.

¹¹⁰ For USA case law concerning liability of directors for patent infringement see Pérez Carrillo, EF: Responsabilidad de los administradores y altos ejecutivos en caso de violación de patentes por parte de la sociedad mercantil [Liability of directors and officers in patent infringement by companies], *Actas de Derecho Industrial y Derecho de Autor*, XXIII, 2002, pp. 223-239.

- Personal injury and property damage, breach of professional duties, and liabilities of directors and officers (unless D&O coverage for IPR perils has been purchased, as shown in Table 7(C)).
- Risks relating to specific sectors (nuclear, aviation, etc.).
- Fines and tax penalties.
- Legal expenses for criminal proceedings.
- Government claims or penalties under defense of competition rules.
- Patent maintenance costs and expenses (fees and the like).
- Unreasonable costs incurred in legal proceedings.
- Costs relating to data storage and failures occurring before or after the year 2000.
- Damage arising from radiation risks.

These can be seen to be a quite general set of exclusions typical for policies having broad covers in which specific content is set down by means of individual, *ad hoc* terms and conditions.

3.3.3. Personal aspects of comparative experience: insured, brokers, insurers

While it is becoming more commonplace, IPR insurance continues to be a little-known insurance product. There are very few IPR (patent) insurers:

- Large, multinational insurers or reinsurers such as Swiss Re, the Australian IMF, and the Canadian Pearl underwrite *ad hoc* insurance policies on the basis of due diligence, i.e., researching individual cases, and complex policies with large patent-holding companies.
- Few insurers offer protection against the patent-related risks faced by innovative SMEs. They offer legal expenses coverage, as we have seen: Samian, brokers for a Lloyds syndicate, underwrite policies of this kind, chiefly in Denmark. Willis operate in Denmark. Allianz and the Nuremberg, MAT, Mannheimer Holding consortium in Germany.
- There are or have been consortiums offering patent litigation insurance schemes to SMEs and lone inventors, e.g., mutual insurance by the Swedish Inventors' Association (SIA) or BTG in the United Kingdom.

Together with insurers, brokers and agents play an important role in selling IPR insurance.

- For instance, in the United States selling insurance to SMEs falls mainly to insurance brokers, who may be or cooperate with IP attorneys. Insurers offering litigation insurance to SMEs form a rather small group.

- The role of certain national Patent Offices, like the Danish and British Patent Offices and formerly the Swedish Patent Offices as mediators, facilitators, or simply purveyors of information is to be noted.

Based on the terms and conditions studied, IPR insurance policy buyers fall in several different groups:

- Businesses, research organizations, and individual IPR holders (original filers, assignees, licensees, holders of a security interest or pledges).
- Licensees.
- Natural or legal persons who in the performance of their activities think they might have to face IPR infringement proceedings and directors and officers thereof.

3.3.4. Contracts of adhesion and information aspects of current policies (and discussion)

The complexity of the risk(s) being covered, particularly in multiple risk policies but also in others drawn up with a narrower definition of the risk, explains the need for detailed policy application forms to identify the insurable risk. As a rule, these forms are designed for data disclosure and identification, on condition that all undeclared, incorrect, or seriously incomplete items are excluded from coverage¹¹¹.

General particulars of the policyholder and/or the insured

- Identifying particulars.
- Business structure.
- Date started doing business.
- Billing (breakdown by IPR-related billing, billing during the preceding 12 months, and R&D+i-related billing, breakdown by geographic billing region {Europe, America, etc.}).
- Details of outside funding for R&D.
- Number of employees including percentage or number wholly or partially working in R&D.
- Details of confidentiality agreements with employees, employees with access to restricted or confidential information.

¹¹¹ Composite: The Coverholder: Composite Legal Expenses, Suffolk House, Trade Street, Cardiff, CF10 5DT, underwritten by Groupama Insurance Company Limited, Groupama House, 24-26 Minorities, London EC3N 1DE. Standard terms are available at <http://www.composite-legal.com/uploads/files/Intellectual%20Property%20Policy%20Wording.pdf> (last accessed on 20 May 2012).

Compilation, classification and management, of all these data, with attribution of repercussions, means that insurers must have a team of professionals capable of selecting suitable risks.

Declared intellectual property rights

Based on the background materials considered here, insurers can be seen to raise all sorts of questions concerning IPRs of all kinds, including IPRs that are not going to be insured, both during the policy application process and throughout the lifetime of the policies.

- Type of IPR (patents, trademarks, registered designs, etc.) for which coverage is applied.
- Identifying particulars.
- Sector.
- Significance of the IPRs to policyholder's billing.
- IP attorney in charge of filing and the like.
- Agreements (licenses, assignments, usufruct, etc.) concerning the IPRs to be insured.
- Existence of other IPRs owned or managed by the policyholder.
- Conflicts or hazards involving the IPRs to be insured.
- Knowledge of third-party research that could affect the subject matter to be insured.

Requesting and evaluating this information requires a team of management professionals, and the insurers' teams responsible for managing these risks need to include IPR experts.

Products contingent upon own IPRs (or potentially third-party IPRs) depending on the coverage to be purchased

On the application forms reviewed, insurers ask the policyholder/insured for a range of details (from citations and documentation on the grant of the patents to catalogues, brochures, and flyers) identifying the rights and/or products to be covered by the insurance policy that might be contingent upon own or third-party IPRs. Policyholders are required to expressly declare where they are doing business, especially if they do business in the United States, and whether they have plans to expand sales into new territories within the coming 24 months.

The requirement to submit copious documentation is consistent with the broad coverage offered, but it is excessive for an innovative single risk product offering coverage for IPR legal expenses. At the same time, managing so much diverse information erects barriers to entry by new insurance companies.

Agreements

The proposals considered here require disclosure of agreements bearing on the insurance coverage.

- Identification (exclusive licenses, other licenses, leases, etc.).
- Content.
- Value or estimated value.
- Provisions for indemnities or civil penalties in the event of non-compliance, regardless of whether the insured or a third party is liable for indemnifying.

As in other sections, the detailed documentation required represents a significant administrative burden and is not relevant for legal expenses insurance for a single, declared IPR whose owner seeks to protect its contribution to innovation by ensuring funding for legal defense.

Policyholder's/Insured's risk management systems

This section on the application form is for describing whether there is any market monitoring mechanism for identifying the risk of infringement of the IPRs or threats against those IPRs.

Previous litigation or threats

This section requires details concerning the existence of litigation or disputes regarding the rights, agreements, or products mentioned in the application.

3.3.5. Territorial considerations

Defining the territorial scope of coverage is essential to IPR insurance policies in view of the territorial nature of IPRs.

- The multiple risk policies reviewed are drawn up as worldwide insurance with possible territorial exclusions for the USA, Canada, and Australia.
- Nevertheless, Danish, Swedish, and French practice has revealed the most suitable basis for patent litigation insurance for SMEs to be national coverage with possible extensions to other European countries.
- The 2006 study by CJA, which never actually materialized in practice, concluded that the target scope of coverage should be both national patents and European patents.
 - Coverage should extend to the geographic scope of each Member State of the European Union in which a patent has effect and in the Member State having jurisdiction for the first instance and appeal courts.
 - Coverage that extends to more than one jurisdiction means that insurers will require professionals or partners in the various territories, thereby

increasing the cost of managing the insurance from the side of the insurers, who will pass it on to the insured. It is not suitable for a start-up product being launched in a new market.

3.3.6. Time considerations

- In all the theoretical and practical examples considered coverage is annual and renewable.
- All the examples considered describe insurance products on a “claims made” basis.
- A straight “claims made” basis is the most suitable scheme for a product being launched in a new market.

3.4. Premium and indemnity

The premium and its relationship to the indemnity are essential factors for insurance policies, both in that the premium is the main expenditure required of the policyholder and in that the relationship between the premium and the indemnity is a basic technical factor for viability.

- Calculations for setting premiums for insurance products that cover indemnities are performed on an *ad hoc* basis involving complex research and due diligence and have no equivalent in standard policies. They are complemented by terms on deferred premiums calculated on the outcome of litigation or terms whereby insurers acquire an interest in the owners of the insured IPR or by a combination of insurance and financial engineering instruments¹¹².
- On the basis of the studies reviewed here, for standard insurance the basic premium is between around 300 and 600 euros (for territorial coverage in several European countries)¹¹³. Certain factors may allow premiums to be lowered, e.g.:
 - The policyholder is an enterprise that purchases insurance policies for several related patents¹¹⁴.

¹¹² Patent Enforcement Project UK, 2007. Also seen in the background material for Samian's Sentinel-Patent Enforcer.

¹¹³ CJA Consultants Ltd.: *A study for the European Commission on the feasibility of possible insurance schemes against patent litigation risks*. Final Report 2006 at http://ec.europa.eu/internal_market/indprop/docs/patent/studies/pli_report_en.pdf (last accessed on 21 September 2012).

¹¹⁴ Samian: Sentinel PatentEnforcer. <http://www.patent-enforcer.eu/> See (last accessed on 20 October 2012).

- The insured sum is combined with co-insurance and other risk spreading instruments.
- The territorial scope is limited to a single country.
- There is public sector support, either by means of compulsory insurance or by means of the other forms of support referred to in the final section in Part II of this study.

3.4.1. Obstacles to calculation and solutions

3.4.1.1. Risk selection

Experience by insurers that have offered IPR policies indicates that this insurance sector is more subject to selection than others. This means that the IPR holders who are most inclined to purchase this type of insurance are those who regard themselves as being exposed to a high level of risk.

On this basis, those interested in coverage would be:

- Rightholders who have reason to expect their IPRs to be contested, compelling them to incur the cost of defending them.
- Rightholders whose IPRs are often infringed, pirated, etc¹¹⁵.

Solutions to offset the problem of risk selection could include:

- A mandatory insurance scheme.
- Limiting insurance policy purchases to patents that can be identified as quality patents (for example, patents that have undergone preliminary examination as to their contribution to innovation and to the existing industrially applicable art, as discussed in Annex 1).

3.4.1.2. Reliable statistics

For an insurance scheme to work properly, there must be reliable statistics. In whatever insurance sector considered (compared with the formula proposed in the studies drawn up by CJA), insurers would prefer precise assessment of the risks before a policy is drawn up. However, for certain kinds of insurance, like the one under consideration here, this is not really a viable option either technically or economically in the medium term.

At the present time sufficiently accurate actuarial risk statistics for precisely calculating suitable premiums do not exist. Consequently, for purposes of patent insurance, at least in the initial stage of product launch in a specific

¹¹⁵ Rutsaert J-M: *Legal protection insurance, the problems to be solved*; available at ftp://ftp.cordis.europa.eu/pub/patinnova99/docs/3_7_rutsaert.pdf (accessed on 30 September 2012).

market, detailed, accurate statistics will have to be supplemented or replaced by other data, variables, and assessments that are available, having in mind that:

- Implementing a patent insurance scheme requires costs to be sufficiently low so that price will not be a barrier to purchase. By the same token, it has to be high enough to offset the risk taken on by insurers.
- On the other hand, compilation of statistics of this kind is advancing in the framework of the European Observatory on Infringements of Intellectual Property Rights¹¹⁶, currently operating under the auspices of the Office for Harmonization in the Internal Market (OHIM) [Community Trade Mark Office] though having competence for all types of IPR, as discussed in the final section in Part II of this study.

3.4.1.3. Solutions

There are many kinds of insurance for which the insurance company does not take on all of the insurable risk. Often the insured party takes upon itself some of the liability of a claim. This avoids disproportionate increases to premiums and conflicts of interest.

A. Deferring calculations

This methodology was considered in the studies by CJA released in 2004 and 2006¹¹⁷.

It addresses the difficulties involved in determining *a priori* what type of infringement or infringer will be encountered by any given patent as well as the fact that even where an *a priori* assessment can be carried out, it will have to be updated or even redone with every potential infringement disclosed. Under the type of European patent insurance scheme proposed by CJA, there would be no genuine risk assessment practically until the complaint is actually lodged.

¹¹⁶ The Observatory's website is http://ec.europa.eu/internal_market/iprenforcement/observatory/index_en.htm. Regulation (EU) No. 386/2012 of the European Parliament and of the Council of 19 April 2012 entrusts the Office for Harmonization in the Internal Market (Trade Marks and Designs) with tasks related to the enforcement of intellectual property rights.

¹¹⁷ CJA Consultants Ltd: *The possible introduction of an insurance against costs for litigation in patent cases*, Final Report 2003, http://ec.europa.eu/internal_market/indprop/docs/patent/studies/litigation_en.pdf (last accessed on 22 September 2012). *A study for the European Commission on the feasibility of possible insurance schemes against patent litigation risks*, Final Report 2006, http://ec.europa.eu/internal_market/indprop/docs/patent/studies/pli_report_en.pdf (last accessed on 21 September 2012). *A study for the European Commission on the feasibility of possible insurance schemes against patent litigation risks. Appendices to the Final Report*, June 2006 http://ec.europa.eu/internal_market/indprop/docs/patent/studies/pli_appendices_en.pdf (last accessed on 21 September 2012).

Calculation of the premium would be a two-step process:

- A standard risk calculation at the time the policy is purchased, based on costs according to the preliminary study concerning the patent whose risk of infringement is being assessed.
- An *ad hoc* calculation of the cost of litigation subsequent to the preliminary study.

Initially the insurance policy would operate on the basis of a minimum premium payable on purchase of the policy. Litigation costs *per se* would be assessed when the complaint is about to be or has been filed. Pursuant to this assessment, the insurer's experts would consider the nature of the alleged infringement, its effects on the patent in question, in brief, the level of risk. At that point the insurer would express its opinion as to the chances of success in the court action, would recommend whether the insured should continue or withdraw from the proceedings, and would take a decision as to its own position in this regard, that is, whether it is prepared to take on the risk posed by the litigation and at what price (the premium).

The advantages of this system are:

- Companies are able to control the levels of risk assumed after having first carried out a preliminary study.
- The insured benefits from the coverage provided by preliminary studies at a relatively modest price. Furthermore, if the independent experts carrying out the assessment recommend not continuing because of the insured's poor chances of prevailing in the litigation, the most sensible way forward could be to discontinue the proceedings and try to come to a settlement, even where this is not the insurer's recommendation.

The disadvantages are:

- It was not deemed acceptable by the insurance sector¹¹⁸.
- It appears to disregard the effect of the transposition of Directive 2008/489/EC into national law, enhancing initial information and evidence gathering in the context of court proceedings, though on petition by one of the parties security may have to be posted to offset possible indemnities.
- The effectiveness of policies becomes highly aleatory, such that insurers have no clear idea of their level of exposure, while the insured, on purchasing a policy, do not know whether or not they are protected should they have to defend their patent in court.

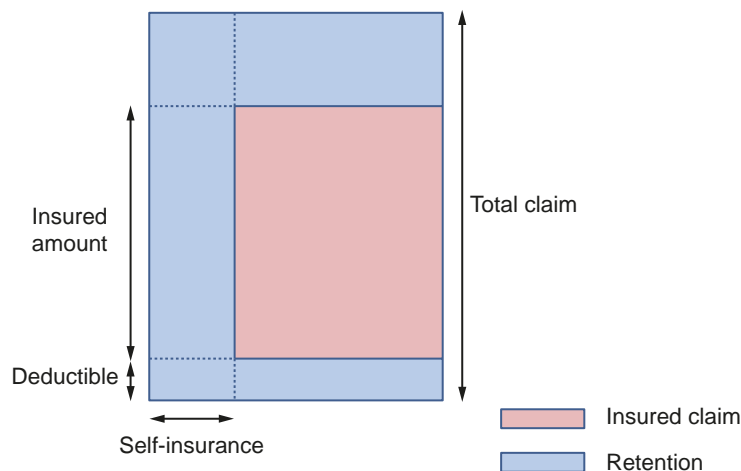
¹¹⁸ International Association of Legal Protection Insurance: *Joint Position Paper of CEA and RIAD on the Final Study on the Feasibility of Possible Insurance Schemes against Patent Litigation Risks*, Brussels, December 2006, at <http://www.riad-online.net/61.0.html> (last accessed on 25 January 2012).

B. Risk spreading: co-insurance, deductibles, front or back-loading and limits on insurance

The most commonly used mechanisms for spreading risk from the insurer to the insured in general insurance practice include merit rating, self-insurance, deductibles, limits on insured sums, and front or back-loading.

Under merit rating systems, premiums increase according to claims filed and decrease when no claims are filed under a policy. This mechanism is widely used, for instance, in the car insurance sector. It enables the insured to benefit from lower premiums if he keeps the number of claims down, thereby lowering the risk of conflicts of interest for the insurance company. However, merit rating works better in the context of compulsory insurance, because otherwise the insured would cancel his insurance on filing the first claim. Furthermore, since under covers A1-A3 (see Table 7, Types of IPR insurance) a single patent is unlikely to face litigation more than once during the duration of coverage, merit rating is not highly advantageous in a voluntary insurance scheme. Even in a compulsory insurance scheme, since a policy is linked to a patent rather than to the patent holder, merit rating would not necessarily foster more cautious behaviour on the part of the insured: it could even have just the opposite effect, for instance, where one patent holder sells his patent to a more contentious owner, who would benefit from the previous holder's accumulated merit and could enjoy a certain scope for litigating under the insurance policy. For these reasons, spreading risk under a merit rating system would not appear to be suitable for type A1-A3 patent litigation insurance.

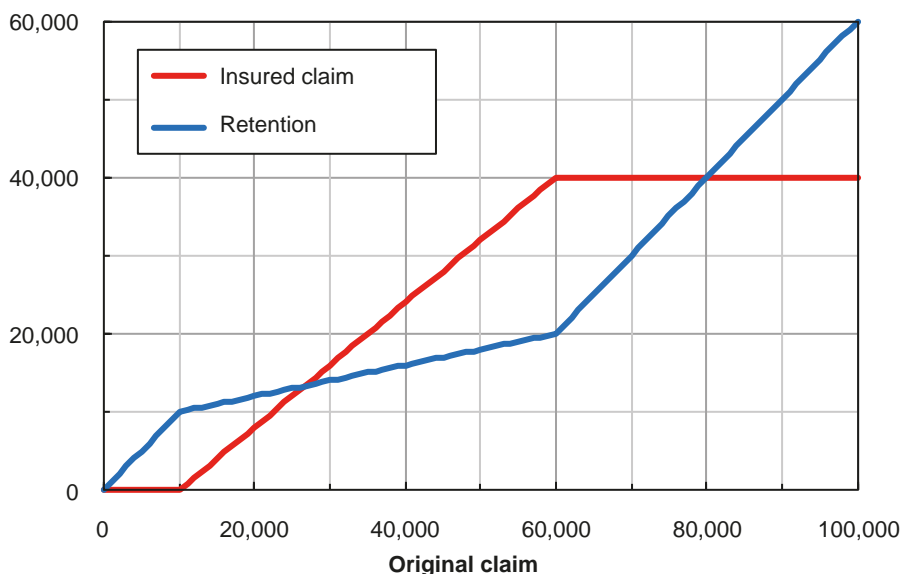
Table 8
Risk sharing



Source: By the authors

- By means of self-insurance the insured assumes a proportional part of the risk coverage under a claim. This mechanism has been used in some IPR policies reviewed, though the insured's exposure has ranged from small percentages to up to 20%. In some countries this mechanism is commonly used in home insurance. It helps to keep gross claims within real terms, inasmuch as the insured shares liability for risk with the insurer over the entire period covered.
- A deductible is a certain amount that the insured is required to pay before he can call on the insurer to pay indemnities under the insurance policy. The amount of the deductible depends to a large extent on each branch of insurance and can range from a few hundred euros in branches of private insurance to up to millions of euros in branches of industrial insurance. It is commonplace in car insurance, home insurance, health insurance, civil and liability insurance, and it helps keep down the number of claims filed with insurers.
- Limits of indemnity enable limits to be set for each cover, for each claim, or for an amount in aggregate over a period of time, for instance, annually. This tends to be conducive to reaching settlements, because the insured is cognizant of the fact that once the limitation of indemnity has been reached, he alone bears liability for the risk. The maximum amount, besides limiting the insurer's obligations, is a basis for calculating the premium payable by the policyholder, hence the premium is set not only in response to the insurer's interest in limiting payouts but also in response to the interests of the policyholder, who is able to set the premium at an amount he considers reasonable to pay.

Table 9
Claims and retention



- Front-loading is another interesting option for setting premiums for patent insurance, i.e., the amount of the premium on a policy purchased and renewed annually over the lifetime of a patent decreases yearly to reflect the fact that the likelihood of litigation is highest early in a patent's lifetime.

Depicted graphically by way of example, the table below sets forth a risk sharing chart for premium setting depicting the portions of retention and the insured amount, respectively, in a balanced distribution of risk according to the severity of the claim.

To aid in understanding this chart, here is a graph for an example with a deductible of 10,000 euros, an insured amount of 50,000 euros, and 20-% self-insurance.

CHAPTER 2 PROPOSAL

1. PRELIMINARY ASPECTS

1.1. Presentation

This second part sets out a design for a type of IPR insurance suitable for launch in Spain as an instrument for promoting innovation in our country.

The product proposed here has been formulated as a mechanism that is consistent with Spain's public innovation policies and more specifically as a means of achieving the strategic objectives for promoting innovation set out in the most recent National R&D Plan (such as the current **Government Plan for Scientific and Technical Research and Innovation 2013-2016**)¹, Instrumental Action Initiatives (IAA), National Programmes (NPs), Strategic Actions (SAs), and other documents addressing the promotion of R&D and patenting in our country.

Introducing a patent insurance scheme like the one discussed here is an approach that is likewise consistent with the **European Europe 2020 Strategy**, which also opens up new pathways for the private sector to cooperate with the R&D objectives set out in the relevant documents (see Annex 3).

The proposal outlines an optimal product for fostering research, having in mind, in particular that:

- The studies considered indicate that the economic difficulties faced by SMEs and “small inventors” in enforcing their IPRs are a major reason why they often do not have recourse to patenting their innovative and industrial quality inventions.
- IPR insurance enables resources of private sector insurers to be directed at funding and providing guarantees for innovation.

¹ Plan Estatal de Investigación Científica y Técnica y de Innovación 2013-2016 [Government Plan for Scientific and Technical Research and Innovation 2013-2016]]. Available at the website of the Ministry of the Economy and Competitiveness at http://www.idi.mineco.gob.es/portal/site/MICINN/menuitem.7eea_c5cd345b4f34f09dfd1001432ea0/?vgnextoid=83b192b9036c2210VgnVCM1000001d04140aRCRD (last accessed on 21 February 2013).

The proposal is based on the importance attaching to safeguarding quality patents that either have been granted after undergoing the SPTO's preliminary examination procedure or have effect in our country under the provisions of the EPC and PCT (see Annex 1).

- It involves the *ex novo* launch of a specialized insurance product in the Spanish market, one that can be referred to, in general terms, as IPR insurance, and being more specific, a Legal Expenses Insurance for Patents.
- It takes the form of a novel insurance product in Spain whose coverage is limited to legal defense (legal expenses) for a single type of IPR, namely, patents. The structure of the risks and eventualities covered and excluded is discussed in the section dealing with covers here in Chapter 2.
- Notwithstanding this major initial constraint, the conjunction of the different sectors of activity in which R&D resulting in patents takes place, the territorial nature of patent rights, today's tendency towards globalization, risk spreading, and the lack of accurate actuarial data confer special features on the proposed product.
- The target sector for this approach consists of innovative SMEs together with lone inventors and university teams. For that reason, special emphasis has been placed on simplification, so that the design will be easy for potential buyers of insurance to understand while at the same time ensuring that the insurance will be sufficiently methodical.

In designing the product consideration was given to the fact that when the initial stage of launching a simple product has been completed, additional covers may be developed.

1.2. Mission

To strengthen basic applied research in the production sector in Spain by fostering involvement by the private sector in funding, organization, design, and development, thereby helping to improve the quality and use of patents in Spain's scientific and technology system.

1.3. Objectives

- To foster quality patents and their use in the production sector in Spain to overcome Spain's technology gap.
- To link the private sector to the common goal of innovation.
- To help consolidate the position of SMEs as agents of innovation.
- To develop a niche in the insurance market.

1.4. Scope

In contrast to the variety, complexity, and high cost of the differing proposals and different products reviewed in Part I of this study, a relatively simple product, particularly with regard to product management, is proposed for the purpose of launching IPR insurance in Spain.

The coverage described is considered to be the most conducive to strengthening innovation: the need for SMEs to be able to defend themselves against actual “attacks” or threatened infringement of their patent rights. The scope could be extended, to a limited extent, to licensees. This basic coverage is accompanied by recommended riders.

Both indemnities for damages and risks ensuing from other types of IPR and agreements not involving patents having effect in Spain are excluded. In any case, with time and experience with this first pilot product, other covers may be added subject to special terms and conditions.

The initial target object for this product would be:

- SMEs.
- Research centres in Spain’s research system.
- Lone inventors.

All without preventing others from buying the product or negotiating their own individual modified policies.

1.5. Potential allies and detractors

The following groups are included among those who have an interest in a patent insurance scheme in Spain:

- **Society in general and government**, inasmuch as this product²:
 - Fosters scientific productivity.
 - Broadens the dissemination of the results of scientific activity.
 - Involves the private sector in funding R&D and innovation.

² Regarding the interest of this type of product to society see, as representative, Aventín Arroyo JA: *La esencia de la actividad aseguradora y su potencialidad para ofrecer remedios a los innovadores. Experiencias y posibilidades* [Essentials of insurance and its potential for providing innovators with remedies. Experience and prospects], in Couto Gálvez RM, Sánchez-Ramos Roda C (coords.), *Seguros y Patentes* [Insurance and Patents], Colección Propiedad Intelectual e Industrial de la obra científica, Madrid, Complutense University, Elzaburu, 2012, pp. 107 ff.

- **SMEs and lone inventors**, who in many cases are forced to rely on trade secrets to avoid being copied or infringed following publication of the patent³. The following advantages could result:
 - They can obtain a guarantee for defending their patents.
 - They can free their own resources for future investment.
 - They can increase the quality and security of their patents by enhancing their ability to attract investments by venture capital and other sources of funding.
- **Insurers**, who can exploit a niche market with great potential in a strategic economic sector linked to technological innovation.

Those possibly opposed to this product could include:

- Certain operators in the international insurance market, who could prefer to keep their insurance products semisecret.
- Large technical companies and patent trolls⁴, who have resources of their own and can form captive companies for their own defense in order to protect themselves or to “attack” other inventors (albeit spuriously)⁵.

1.6. Buying insurance: Mandatory or voluntary?

Product design and premium setting depend in large measure on key factors, such as deciding whether coverage should be compulsory or optional.

- A mandatory insurance scheme would make it possible to offer reduced premiums because of economies of scale and because it would eliminate the possibility of risk selection by potential buyers against the interests of insurers.

³ See, for example, Centre for Strategy Services and Evaluation Services, *Making IPR work for SMEs*, Annex B: Best Practice Cases, Directorate-General for Enterprise and Industry, European Commission, 2009.

⁴ Recent studies have indicated that 90% of lawsuits brought by patent trolls are directed at small enterprises. Chien, CV: *Startups and Patent Trolls*, Legal Studies Research Papers Series, Santa Clara University School of Law, Accepted Paper No. 09-12, September 2012. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2146251.

⁵ Cuypers F: *Seguros de patentes y patentes de seguros: reflexiones y estrategias [Patent insurance and insurance patents: thoughts and strategies]*, in Couto Gálvez RM, Sánchez-Ramos Roda C (coords.), *Seguros y Patentes [Insurance and Patents]*, Colección Propiedad Intelectual e Industrial de la obra científica, Madrid, Complutense University, Elzaburu, 2012, pp. 129-126. The author explains that to cover these risks, particularly those relating to third-party or own damages ensuing from third-party patent infringement, losses sustained from infringement of their own patents, or even from a declaration of nullity against their own patent (lost profits, lost licensing income, etc.), large companies usually have recourse to other financial instruments.

- An insurance scheme compulsory from the outset would mean the sale of a considerable number of policies, so insurers' overhead (product development, computing infrastructures, management mechanisms, etc.) would be lower than otherwise (prorated per policy purchased), and as a result this insurance product could offer relatively low prices.
- On the other hand, a mandatory insurance scheme could be expected to increase the number or frequency of patent lawsuits, for psychological reasons if nothing else. Still, this adverse factor could be mitigated by means of the risk sharing mechanisms described in Part I and discussed in more detail in the section on premium setting here in Part II and in Annex 2.
- The principle of negative risk selection would operate in a voluntary patent insurance scheme. This means that, looking at potential policy buyers, those most likely to purchase insurance would be the most contentious buyers or those who expect their patents to be infringed.

As has repeatedly been mentioned here, a patent insurance product aimed at promoting research by SMEs would be in the general interest, and governmental support for its launch would be a decisive position statement by the government on behalf of R&D. Even if support does not take the form of a compulsory insurance scheme, insurance aimed at publication of quality patents by Spanish SMEs and national researchers would **merit support by the public sector and would need support, at least in the early stages of product launch**⁶ (see strategy below).

2. PRODUCT DEVELOPMENT (POLICY AND ACTUARIAL CONSIDERATIONS)

2.1. Substantive issues

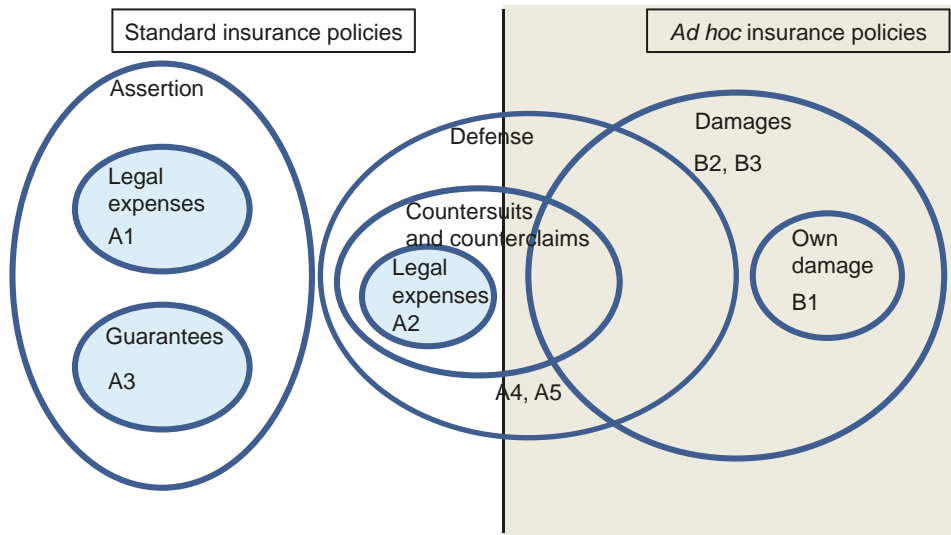
2.1.1. *General object of the insurance (insurable risks)*

The general objective of launching patent insurance in Spain of the kind designed here is to supply Spanish patent holders with legal and technical assistance to enable them to assert their right to peacefully exploit their rights.

⁶ Concerning the advisability of public sector support for patent insurance, at least during the launch stage, see Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, p. 11, at http://www.hm-treasury.gov.uk/d/contravision_ltd_336_p7_131kb.pdf (last accessed on 20 September 2012). Also Kingston W: *Enforcing Small Firms' Patent Rights*, School of Business Studies, Trinity College, European Commission Study Contract No. EIMS 98/173: Patent Defence in Europe: ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies_enforcing_firms_patent_rights.pdf (last accessed on 25 September 2012). The Danish scheme, paradigmatic for the effective support furnished by the Patent Office, though support is non-financial (there are no subsidies, only non-financial promotional measures) is mentioned here.

This general approach to what would be IPR insurance, more properly, patent insurance, has scope for several modalities of insurance as shown in Table 1.

Table 1
Coverage diagrams for suitability for launching patent insurance to promote R&D in Spain



Source: By the authors

The general purpose of the insurance, that is, potentially insurable risks, should share the features inherent to perils in all insurance policies: uncertainty or aleatory aspects, the possibility of occurrence, specificity, lawfulness, fortuitousness, and a financial component⁷.

The insurance coverage could be split into two main groupings, namely:

- Standard or commodity insurance. The left-hand portion of Table 1. These include coverage of risks A1, A2, and A3 defined here. These policies can be established with a minimum of initial or pre-purchase research. They require relatively simple administration and management which are in certain respects similar to mass insurance (for example, in respect of the form and pre-purchase documents). They involve the assumption by insurers of risks that are relatively simple to define in contractual terms even in the absence of a detailed statistical basis.
- A1, A2, A3 are risks relating to legal defense and expenses for enforcing one's own IPRs (and posting guarantees). Despite their complexity,

⁷ Castelo Matrán J. et al.: *Diccionario MAPFRE de Seguros*, [MAPFRE Insurance Dictionary], Madrid, 2008 edition.

premiums can be set *a priori* such that management costs are known, making for a viable insurance product to be brought out in Spain.

- A1 are legal expenses-assertion risks, called first party pursuit in the USA, sometimes also referred to in Spanish translation as “patent compliance insurance”⁸. These risks (covers) are for **legal expenses against direct or indirect infringement or threatened infringement of the insured’s patent**.
- A2 is the risk (and corresponding coverage) of legal expenses against third-party countersuits or counterclaims in previous “pursuit” actions involving the insured patent. In the diagram these appear formally as straight defense covers, that is, legal expenses for defense against third-party claims, but in fact they are a product supplementary to first party pursuit insurance, because the need for defense comes about in the context of a reaction in extant proceedings brought to assert the insured patent, that is, a third party’s defensive strategy based on attacking the owner of the insured patent.
- A3 is the risk (and coverage) of guarantees that may have to be posted as a result of first party pursuit proceedings (A1) involving the insured patent. It appears in the diagram in the framework of assertion insurance, because it only covers bonds the insured may have to put up in the course of first party pursuit proceedings to defend the insured patent against attack or infringement (for example, in petitioning for preliminary verification proceedings, interlocutory measures, and the like).
- *Ad hoc* or bespoke insurance. It appears on the right-hand side in Table 1. This type of policy requires thorough and complicated directed research (due diligence), entailing high administrative costs and compelling the insurer to cover risks for sums that are virtually unlimited and aleatory and hard to determine at the time the policy is taken out.
- A4 and A5 are risks (and coverage) of legal expenses for straight defense (that is, defense not directly related to assertion of the patent insured by the policy). They cover defense against claims of direct or indirect infringement or threatened infringement of third-party IPRs (for instance, by a researcher’s research, even before patenting). Prediction of these risks before they occur is highly aleatory and requires complex study before the policy is purchased.

⁸ Aventín Arroyo JA: *La esencia de la actividad aseguradora y su potencialidad para ofrecer remedios a los innovadores. Experiencias y posibilidades [Essentials of insurance and its potential for providing innovators with remedies. Experience and prospects]*, in Couto Gálvez RM, Sánchez-Ramos Roda C (coords.), *Seguros y Patentes [Insurance and Patents]*, Colección Propiedad Intelectual e Industrial de la obra científica, Madrid, Complutense University, Elzaburu, 2012, pp. 107-139. See pp. 115-116 for a description of patent compliance insurance, though from a reimbursement perspectiva.

- B1, B2, and B3 are risks relating to injuries (own and third-party damages) coverage of which requires detailed, *ad hoc* research specific to each case. These appear on the right-hand side of Table 1. Besides being aleatory, risk (damages) in these cases is always high and closely dependent on the sector of activity, type of patent, current status of the marketplace, and other factors. As discussed in Part I, coverage of these risks is offered by a few large international insurance companies, by means of *ad hoc* policies involving special formulations and detailed negotiations. Management costs for this type of coverage, and the indemnities ensuing from materialization of the risk, are high and hard to calculate *a priori*. They are completely excluded from coverage by the proposed patent insurance product to be launched in Spain.

The only one of the preceding insurable risks, or possible coverage, that would be viable in a product intended for the Spanish market to support research by SMEs would be one basic cover and two possible additional secondary covers against the specific, well-defined risk of infringement of one insured patent per policy.

The risk covered should be expressly described in the policy in accordance with the provisions of Article 8.3 of the Insurance Policy Act (IPA)⁹.

2.1.2. Basic peril insured under the proposal. Basic coverage

The basic risk covered under the patent insurance proposed here to foster innovation appear in the left-hand portion of Table 1 (coverage A1), namely, the legal expenses of defending the insured patent declared in the policy against infringement (or threatened infringement) up to the monetary sum and time limits agreed upon.

Calculating this risk would be easier if detailed statistics were available, but they are non-existent at present. Still, in the absence of statistics, it is a type of risk that can be taken out in standard insurance without requiring particularly costly studies. Annex 2 sets out the formulas for calculating this coverage. Limitations would also include insuring risks only for Spanish patents granted after preliminary examination (PE), which confers a certain guarantee of quality, thereby reducing the potential frequency and severity (intensity) of claims¹⁰.

⁹ Fuentes Camacho V, Tapia Hermida AJ, Fernández Rozas JC and Tirado Suárez FJ: *Ley de Contrato de Seguro [Insurance Policy Act]*, Aranzadi, 2005.

¹⁰ Applicants for Spanish patents may request preliminary examination (PE) of their applications. The examination addresses sufficiency of the subject matter of the patent application in terms of research, novelty, and inventive step. Where examination is requested, the application is published and any interested party is entitled to bring opposition against the application within two months of publication. In addition, the SPTO conducts a study on the above-mentioned

Peril A1 is a legal expenses insurance¹¹. In legal terms it comes under the definition of legal expenses insurance set forth in Article 76(a) IPA, *under legal expenses insurance the insurer undertakes to defray – within the limits laid down by law and in the policy – the expenses incurred by the insured as a consequence of his involvement in administrative, court, or arbitration proceedings and to supply the insured with the legal assistance for court and out-of-court matters specified by the insurance coverage*. Pursuant to Article 76(d) IPA and other provisions the insured is entitled to select those who will represent and defend him in the terms set out in the policy without tutelage¹².

With a view to overcoming the difficulty inherent to engaging expert legal counsel in an area as specialized as patent protection while respecting freedom of choice, solutions are put forward in the section on claims management in the patent insurance we have designed to protect innovation by SMEs.

Under the terms of the policy, administrative, court, and out-of-court proceedings may all constitute cause for a claim.

As provided by law, insurers may choose to obligate themselves to pay either reimbursement or outlays. In the product designed here, insurers would agree to pay a direct outlay to avoid the burden placed on financially weak SMEs and insured parties by reimbursement-based insurance policies (which require the insured to advance funds for defense).

By way of example, the following policy wording is proposed: *protection-assertion coverage to cover expenses (legal advice, expert opinions, fees of counsel) against infringement, threatened infringement, suspected direct or indirect infringement of the insured patent within the qualitative and quantitative limits set out in this policy*.

aspects (sufficiency of the research, novelty, inventive step). Applicants may respond both to any oppositions and to any objections raised by the SPTO. Examined patents thus imply greater assurances of the quality of the underlying research (innovative character and practical applicability) than unexamined applications and hence are more meaningful from an innovation standpoint. For both these reasons an insurance scheme intended to promote innovation should focus on examined patents. See also Annex 1.

¹¹ Legal expenses insurance is usually classified under primary insurance to forestall incurring debt and is a type of property insurance as well as a type of casualty insurance. Legal protection insurance is included under casualty insurance in Title II IPA. See Olmos Pildain A: *El Seguro de Defensa Jurídica [Legal Protection Insurance]*, Aranzadi, Elcano, 1997, p. 196.

¹² Several general provisions enshrine the right to freely select counsel and court procurator: e.g., Articles 545.1 and 440 Organic Act regulating the Judiciary, Article 7.1 Statute regulating the Legal Profession, and Article 4 Statute regulating Court Procurators in Spain all refer to this right. In Europe, Article 6.3.c) European Convention for the Protection of Human Rights and Fundamental Freedoms, Article 4.1 Council Directive No. 87/344/EEC of 22 June 1987 on the coordination of laws, regulations and administrative provisions relating to legal expenses insurance.

Cover A1 extends to legal advice, expert opinion, fees of counsel for trial and out-of-court proceedings (within the maximum amount allowed) in respect of commencing a series of legal actions (briefly described in Annex 1):

- Civil proceedings, including:
 1. Cessation of the acts infringing the patent.
 2. Indemnification for damage sustained.
 3. Seizure of goods whose production or importation infringes a patent right and of the means used to achieve that production or carry out the patented process.
 4. Taking possession of the seized goods or means, where possible.
 5. Taking the requisite measures to prevent continued infringement of the patent and in particular transformation of the seized goods or means, or their or destruction where necessary to prevent infringement of the patent.
 6. Publication of judgments adverse to infringers by means of announcements and notification of interested parties.
 7. Actions claiming unjust enrichment.
- Criminal proceedings in defense of patents.
- Additionally requesting preliminary verification proceedings and interlocutory measures under the Law on Civil Procedure and the Patent Act (PA).

A circumstance to be noted is that A1 legal expenses and technical protection coverage confers on insured patent holders **BROADER protection than results from the strict legal concept of direct or indirect patent infringement** (see Annex 1), inasmuch as this coverage protects not only against infringement *per se* but also against **threatened and suspected direct and indirect infringement**.

2.1.3. Recommended riders

To increase the product's effectiveness, purchasing two additional covers is recommended. Notwithstanding the dearth of information and statistics on IPR litigation (as has been emphasized), these extended covers are compatible with standard coverage and accordingly fall within the scope of technical calculations for premium setting under this proposal.

2.1.3.1. Legal protection against countersuits and counterclaims

This is graphically represented as A2 in the left-hand portion of Table 1.

This coverage gives insured patent holders economic resources for legal expenses to defend against "third-party attacks" in the form of countersuits,

that is, within the same proceedings instituted by the insured, and/or in those arising as a consequence of the insured patent holder's asserting his patent right protected under cover A1. These are in all cases contentious issues relating solely to the insured patent. That is to say, this coverage does not protect against other claims (like those described in A4/A5) relating to patents or goods other than those covered under A1.

As an example, the following wording can be put forward by way of a guideline: *Within the limit of the insured amount stipulated in the Special Terms, the following shall also be guaranteed, provided that the subject matter of the claim is included under the covers of this policy: legal expenses for defense in countersuits or counterclaims of indemnity or nullity brought by a third party named in civil, administrative, or criminal proceedings in which the insured patent holder had previously brought suit or threatened action because of direct or indirect infringement of the insured's patent (the insured patent) by said party.*

It should be stressed that this coverage is **BROADER** than just legal expenses coverage in countersuits (within the technical meaning defined in Annex 4) against the insured. This coverage includes legal expenses and legal defense in proceedings concerning the insured patent ensuing from previous action taken by the insured to protect his patent.

2.1.3.2. Security

Graphically represented as A3 in Table 1 (left-hand side), this covers bonds and deposits that courts may require to grant discovery measures in declaratory proceedings and/or for securing evidence and/or interlocutory measures.

By way of example, the following wording is suggested: *Within the limit of the insured amount stipulated in the Special Terms, the following shall also be guaranteed, provided that the subject matter of the claim is included under the covers of this policy: security posted with the courts to guarantee the outcome of proceedings, including (but not restricted to) deposits ordered as a consequence of a petition for discovery proceedings, ordered for measures to safeguard evidence, and ordered by reason of a petition for action to bring about cessation.*

Like covers A1 and A3, cover A2 has a broad scope of operation.

2.1.4. Exclusions

Over and above the clauses stipulating the risk, the exclusion section should clearly specify the scope of the insurer's indemnity obligation beyond all doubt. The exclusions should be expressly stated in the policy.

2.1.4.1. General

1. Risks relating to the defense of IPRs other than for the **patent declared in the policy** are expressly excluded.
 - Attacks on related patents or patents in the same family will not be included in the coverage.
 - Where a third party infringes or threatens to infringe an insured patent and an uninsured patent, the insurer's exposure is limited to the former, even where first party pursuit proceedings are instituted jointly for both. This situation could make it necessary to include *severability* provisions, that is, **provisions that singularize the risk covered by the insured in a given proceedings**, along with express exclusions.
2. All coverage of indemnities for third-party damages and all coverage of own damages should be excluded from the risks covered by the proposed product. This exclusion is based on the fact that these risks require virtually individual due diligence and *ad hoc* analysis that substantially raise insurance management costs to nearly unlimited levels. The high indemnities for third-party damages in patent infringement litigation disadvise proposing this coverage in an initial product for launch in the marketplace in Spain. To better understand the scope of these exclusions, they involve the following risks (see Table 1).
 - A4 and A5: covers for legal defense in offensive litigation or complaints lodged to defend one's own research or production line. We refer to these as straight defense in that they arise when the insured needs to defend himself against third-party claims in proceedings separate from first party pursuit proceedings to assert the insured's own patent (A1). They differ from insurable defense covers (A3) against *countersuits* and *counterclaims*, which may be purchased as additional coverage under this proposal.
 - B2 and B3: risks of indemnities for third-party damages (including damages ensuing from being held to bear liability). These arise pursuant to legal actions or proceedings taking place out-of-court whereby the insured has to compensate third parties for damages ensuing from having encroached on or infringed their IPRs.
 - B1: own damages arising, for example, from a potential declaration of nullity of the patent, which include lost licensing income, lost earnings, or expenses for retooling a production line.
3. Defensive acts, proceedings, designation of experts and counsel, and the like by the insured without the insurer's approval are generally excluded. The insured himself shall defray all expenses and disbursements in such cases. In order to make this exclusion effective while averting misunderstanding and dispelling all uncertainty on the part of the insured,

we recommend incorporating the claims management tables included in this study in the documents making up the policy.

4. Claims among different owners of the insured patent are excluded, even where they are all listed as policyholders in the policy, the so-called *insured vs. insured exclusion*. This provision is intended to safeguard the insurer from potential conflicts of interest among the insured parties.
5. Claims ensuing from the compulsory licensing system for the reasons laid down in Article 86 PA and claims based on acts which, under the Patent Act, constitute neither direct or indirect infringement of the patent nor threatened direct or indirect infringement are likewise excluded¹³.
6. Another explicit general exclusion is pre-existing litigation or proceedings in progress and any other known circumstances predating purchase of the policy falling within the scope of the broad definition of a claim as used here, namely, direct or indirect infringement or threatened direct or indirect infringement¹⁴.
7. Claims customarily excluded from legal expenses insurance policies (fraudulent claims, etc.) are also excluded from coverage.

2.1.4.2. *Defense against third-party claims*

The policy should be suitably worded to dispel all uncertainties as to the scope or extent of defense coverage. The design proposed here of a first party pursuit or **legal expenses for patent assertion** cover only provides insurance coverage for defending against claims brought against the owner of the

¹³ According to Article 86 PA these are: private acts not performed for business purposes; acts performed on the invention, not “using the invention”, for experimental technical and scientific purposes to enhance or consolidate the inventive principle *per se*. In the case of generic medicines this exclusion includes studies and trials carried out to obtain marketing authorization in Spain or other countries (Bolar provision), Final Provision 2 in the Safeguarding and Rational Use of Medicines and Sanitary Products Act, Act No. 29/2006 of 26 July 2006, amending Article 52.1.b) PA by limiting the patent right against experimenting for scientific purposes (those for commercial purposes being completely excluded). This is embodied in Article 52.1.b) PA. Compounding of medicines by pharmacists for individual use. Using the invention on board ships of Paris Convention countries (body of the vessel, in the machinery, tackle, gear, and other accessories) when the vessels temporarily or accidentally enter Spanish waters; exhaustion of the patent; farmer’s/rancher’s privilege; third-party rights to prior use; lawful exploitation of dependent patents as laid down in Article 56 PA; lawful exploitation of a legal monopoly backed by a law conferring the right to exploit a patented invention on the holder of the monopoly.

¹⁴ Cuypers F: *Seguros de patentes y patentes de seguros: reflexiones y estrategias [Patent insurance and insurance patents: thoughts and strategies]*, in Couto Gálvez RM, Sánchez-Ramos Roda C (coords.), *Seguros y Patentes [Insurance and Patents]*, Colección Propiedad Intelectual e Industrial de la obra científica, Madrid, Complutense University, Elzaburu, 2012, pp. 126-129. P. 122 draws attention to the difficulty insurers face in trying to assess policyholders’ specific knowledge of disputes in progress.

insured patent (first party defense), posting bonds, and where the owner of the insured patent is compelled to defend himself against countersuits and counterclaims (covers A1, A2, and A3) bearing on the insured patent. Accordingly, defensive coverage excludes:

- Third-party claims of patent (or other IPR) infringement for work, research, licenses, etc. on the part of the insured which are not directly related to the insured patent.
- Third-party claims of patent (or other IPR) infringement for work, research, licenses, etc. on the part of the insured which, though related to the insured patent, are not a response by the third party to an initial first party pursuit claim enforcing the insured patent **covered by and declared to the insurer**.

2.1.4.3. Security

In connection with cover A3, coverage is excluded not only for the cases set out in the general exclusions but also for guarantees ordered by the courts pursuant to facts or grounds other than petitions for measures under covers A1 and A3.

By way of example, deposits ordered in nullity or third-party indemnity proceedings against the insured in matters that do not fall within the scope of either first party pursuit or countersuits and counterclaims.

2.1.5. Clauses limiting the insured risk

2.1.5.1. Sharing and reimbursement

The general terms should be drawn up using limitation clauses and provisions enabling the insurer to recover the indemnity in the event of successful litigation.

General policy clauses should include some for the purpose of:

1. **Specifying insured and uninsured risks.** The policy should include clauses that clearly break down the amount of expenses in cases in which actions comprising both risks that are covered and risks that are uncovered are joined together. When drafting the policy, special care should be taken that this limitation is consistent with the specification of the insurable risk and substantive exclusions, to avoid unnecessary exposure by the insurer pursuant to possible interpretations by the courts.
2. **Specifying insured and uninsured parties.** The policy should precisely set out the method for distributing any shared legal defense expenses between insured and uninsured parties.
3. **Reimbursing the insurer.** Where an action covered by the policy is successful and the insured is awarded costs payable by the adversary or compensation for damages sustained in an amount sufficient to cover, in

whole or in part, the legal expenses approved and settled by the insurer, the policy should make provision for the insurer's entitlement to recover his outlays, either by subrogation of the insured's right to collect payment directly from the other party or by payment by the insured.

2.1.5.2. Time periods. Annual time frame. Claims made.

The period of insurance commences upon application¹⁵ and continues on the basis of yearly renewals. The policy shall be on a claims made basis. Accordingly, as provided by Article 73.2 IPA since 1995, coverage is limited to those cases in which a claim is made by the injured party during the period the insurance policy is in effect (in this case, yearly).

This circumstance bears on the concept of a claim to the extent that only direct or indirect infringement or threatened infringement occurring and reported while the policy is in force shall have consideration as a claim.

Article 73.2 IPA provides for two types of claims made limitation clauses under civil liability insurance (on the basis of the systematic categorization of this insurance).

- Post contract coverage, which provides for coverage where a claim is made within a period specified in the agreement subsequent to the period in which the policy is in effect. Since the product being designed here is purchased annually, this type of coverage is not suitable.
- Retroactive coverage, which accepts as a loss claims made during the period of insurance in relation to events that may have taken place earlier. Many policies contain exclusions to this clause establishing that the insured must not have been aware of the causal events. Since we are here suggesting an annual insurance policy with broad risk covers (including threatened infringement as a claim), where the events giving rise to the insured risk and hence the claim may be complex and verified only at a later date, coverage of causal events (infringement or threatened infringement of the insured patent) that predate the policy would overlap with or be null and void under the provisions of Article 4 IPA.

2.1.5.3. Territorial limitations

The calculations set out here are based on the protection of patents having effect in Spain, by being filed at the SPTO (undergoing preliminary examination), at the EPO and validated in Spain, or by means of the PCT procedure (routes briefly summarized in Annex 1).

¹⁵ An actionable right arises from that time as stated in Annex 1, "initial provisional protection". For priority see Annex 1.

Where patents are co-owned, or where patents ensue from research work in cooperation with researchers/inventors located outside the territory of Spain who hold rights in the patent, this circumstance needs to be taken into account in the policy for purposes of clearly limiting the territorial coverage, which in this product is limited to legal expenses for Spanish patents.

2.1.5.4. Limitations regarding law and jurisdiction

The scope of coverage is limited to patents having effect in Spain and infringements:

- Considered as such under Spanish law.
- Settled out of court as provided under Spanish law.
- Actionable before Spanish courts and tribunals.

2.1.6. Coverage unsuitable during the initial product launch stage

No preliminary premiums have been calculated here for another series of alternate covers, because they have not been deemed to be essential to launch of the product in Spain. Nevertheless, perhaps they could be offered in specific situations on the basis of *ad hoc* calculations, because they could be implemented once the product has gained a solid foothold and there are accurate actuarial data. As seen in Part I, at the present time these risks are covered by large innovative companies through captive affiliated companies or policies purchased specially from large insurance companies (often supplemented with financial engineering instruments that lie outside the scope of traditional insurance products) which are not suitable for a product launch phase in Spain or as instruments intended to support R&D by SMEs. These are listed below.

- Risk of defending against oppositions to examined patent applications at the SPTO.
- Risk of defending against claims of infringing a third-party patent.
- Risk of damages (and liability) stemming from claims of infringing a third-party patent.
- Coverage of damages (and liability) stemming from license agreements.
- Legal expenses coverage in respect of license agreements.
- Coverage of civil liability of directors and officers (an insurance product known as D&O) ensuing from claims of infringing a third-party patent and/or license agreements.

These risks have been made exclusions in some of the terms cited in Part I and have been explicitly mentioned as exclusions in the product designed for Spain presented here in Part II. In any case, this brief section is intended to underline that they are not suitable for the introductory product designed to support innovation by SMEs.

2.2. Individual aspects

- If the scheme is compulsory, the patent holder will purchase the insurance policy and settle the first premium either on paying the application fee to the SPTO/EPO/PCT Receiving Office or on paying the maintenance fee for the patent to the Office that granted the patent.
- If the scheme is voluntary (as proposed here), payment of the premium cannot be linked to payments to the SPTO, though the Office could be an interesting intermediary, as will be seen later.

The parties connected with the policy are:

2.2.1. Policyholders

Policyholders, that is, purchasers of the policy in their own name, may include:

- SMEs¹⁶.
- Individual researchers.
- Public and private entities and institutions (universities, government research centres).

Though not the purpose of this proposal, collective policies purchased by university consortiums or business groups, or even by public agencies for promoting R&D, are a possibility. In any case, our recommendation is to use the form set out in Table 2, one patent per application, to reduce the insurer's administrative overhead.

2.2.2. Insured

In the specific type considered here, the insured would be the owners of Spanish patents (Article 1.2 PA), exceptionally exclusive licensees. They would be the parties, referred to in the policy as the insured, whose assets would have to bear the cost of defending the patent.

¹⁶ Companies of all types may purchase the litigation expenses insurance for Spanish patents proposed here, though the core target for the proposal are SMEs, which commonly take the legal form of a limited liability company, so this may be expected to be the most common type of policyholder.

2.2.3. Intermediaries

The proposed product could be sold through the same channels commonly used by other industrial sectors (insurance brokers and agents). However, given the special characteristics of the sector and the newness of the product, our recommendation would be to cooperate with public and/or private bodies operating in the IPR sector: the SPTO itself as well as the different industrial property attorneys and specialized law firms could take part in promoting, offering, and selling the policy, in the role of opinion shapers.

Promotion by specialized agents would have benefits both for the insured, who would be able to get appropriate advice on this type of product, and for the insurer, who would be more likely to achieve a critical mass of policies.

2.2.4. Reinsurers

Patent legal expenses insurance as considered here is designed around a relatively low maximum insured amount. The risk is not exposed to disasters and is instead a typical frequency risk rather than a severity risk. Therefore, the traditional solution of proportional quota share reinsurance coverage would seem to be most appropriate.

This quota share solution is also the best for small insurers interested in entering this type of market niche quickly but lacking the capital to fulfil solvency requirements.

2.3. Actuarial aspects

2.3.1. Reserves and provisions

As in any other branch of insurance, the insurer should keep reserves on hand to be able to pay out claims that occur. In this respect the proposed first party pursuit or legal expenses insurance is no different from other branches and consists of the following components:

- Reserves for outstanding premiums are calculated by automatic accounting methods, as in any other branch.
- Case reserves, or loss reserves, will be generated in accordance with the expert opinion of claim adjusters.
- There is no need to set aside IBNYR (incurred but not yet reported) actuarial reserves for claims that have occurred but have not yet been reported to the insurer, because the coverage type is claims made.
- IBNER (incurred but not enough reported) actuarial reserves are obtained from traditional statistical analysis of aggregate claims triangulation by accident year and development year, for instance, using the chain ladder

technique. It is possible that if there are returns of premiums, the reserves could be negative. However, in the early years of implementation of marketing this product, since there is no solid statistical footing, actuaries would be wise to set aside reserves for the maximum, that is, up to the amount insured. This measure is unlikely to significantly affect a large insurer's balance sheet, since it would merely be adding a branch to an already diversified portfolio.

2.3.2. Prudential and solvency issues

Prudential aspects are regulated by solvency rules, currently represented by Solvency I, and the Solvency II rules are to be implemented later. Accordingly, patent legal expenses insurance introduced in Spain would at first be subject to Solvency I. In any event, both schemes are considered here.

- In the framework of Solvency I, this product will be subject to the solvency requirements on the basis of premiums received. In a voluntary purchasing scheme this volume of premiums should not be significant, nor should it affect the solvency of the business in the case of established insurers. Even if the scheme implemented were to be mandatory limited to Spain and patents granted by the SPTO, there should not be a particularly high volume of premiums, at least in the early years, in view of the relatively low level of patenting in Spain discussed in Part I of this study, particularly if the insurable risk is limited to patents that have undergone preliminary examination. However, if the product fulfils its mission and targets by promoting research with an increase in patenting in Spain, it could have an impact on the number of policies, as a result of which the volume of premiums could foreseeably increase proportionally after a few years, when Solvency II has entered into force.
- Under Solvency II the solvency of companies applying the standard formula could be affected. By contrast, companies applying an internal model will model the volatility added to their portfolio by the risks attaching to patent legal expenses insurance coverage. Furthermore, under the proposed design of this patent insurance the risk is limited by risk spreading mechanisms and is not exposed to catastrophic events, hence its contribution to solvency capital requirements will probably be low.

Summing up, this insurance product can be said to have a low impact on capital requirements.

2.3.3. Insured amounts

Under this proposal, two options for the maximum insured amount (100,000 euros and 200,000 euros) are provided for each of the covers, the basic cover

and the two recommended covers (see Table 2). The option chosen is linked to the deductible (5,000 euros or 10,000 euros) in the terms shown in the premium setting exercises (see below) and the formulas (Annex 2), indicative of low product sensitivity to the insured amount (Table 7) and high sensitivity to the deductible (Table 8).

2.4. Formal aspects, information, undertakings

2.4.1. Pre-contract stage

The pre-contract documents to be incorporated into the insurance policy should be thorough, clearly defining the rights, products, and agreements included in the coverage. Still, for purposes of launching a new product onto the market in Spain, the forms employed should be kept simple. This will minimize effort on the part of the buyers of the policy as well as insurers' administrative overhead costs.

2.4.1.1. Application form

The proposal described is based on a simple standard application form to minimize processing costs to the extent possible.

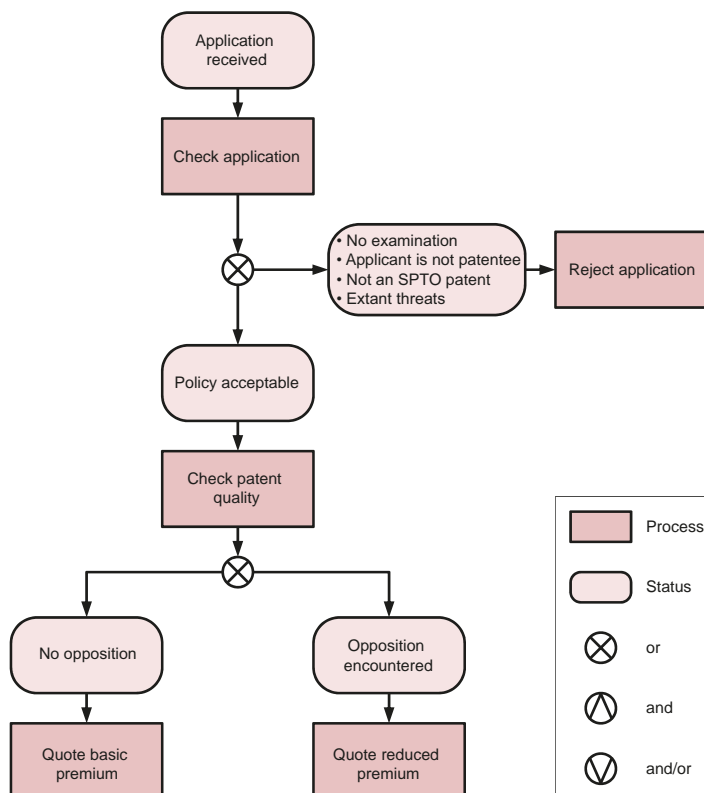
As opposed to the complex forms referred to in Part I, since the proposed product is designed to be a standard insurance, only three kinds of data need to be filled in (apart from the usual insurance sector provisions: statement that the policy is the entire contract, declaration that the information provided is true, acceptance of the jurisdiction of the courts and tribunals of Spain, etc.):

- Applicant's particulars, i.e., whether the applicant is a natural or a legal person, and in the latter case the representative for purposes of the application.
- Details concerning the patent, namely, the number and a copy, along with a declaration that the patent has been granted under the SPTO's preliminary examination procedure. To these effects there is no difference if the patent is an application prosecuted at the EPO or by the international (PCT) route.
- Details concerning the requested coverage, filling in the starting date of the period of insurance, the quantitative terms of the policy (deductible and insured amount) on the basis of the two basic amounts listed on the form, as previously explained in the section on actuarial aspects here in Part II.

2.4.1.2. Processing of the application

Policy processing procedure for the proposed scheme is simple and depicted graphically in Table 3.

Table 3
Application processing flow diagram



Source: By the authors

By way of explanation, the flow chart distinguishes between:

- Process (checking, assessment, and either rejecting the application or quoting a premium for the policy).
- Processing status or stage (submission of application, patent vetting completed, whether or not an opposition was encountered).

Once the application has been filed, the insurer must then examine the application to determine:

Whether the patent to be insured actually took the preliminary examination (PE) route or the equivalent is documented at the SPTO or the PCT route. Another prerequisite for acceptance of the risk by the insurer, whether the applicant is the patent holder, is also checked.

Whether oppositions were encountered during prosecution of the patent (this condition will affect the premium rate).

2.4.2. Period of insurance

2.4.2.1. Claims

A claim is the materialization of the risk. In the context of the insurance product designed here, it consists of the occurrence of an event that gives rise to the need to take some initial legal defense measure (court proceedings, pre-court procedure, out-of-court procedure) to enforce the insured patent.

- In the product considered here (**basic cover, A1**) we have already seen that the insured risk includes direct and indirect infringement of the insured patent, threatened infringement, and well-founded suspicion of infringement. Accordingly, “claim” is defined in the following terms: *Materialization of any current infringement (direct or indirect) or threatened infringement of the insured patent. Materialization of any well-founded suspicion that direct or indirect infringement of the insured patent is taking place or is about to take place*¹⁷.
- For **additional cover A2**, a claim consists of an effective order by a competent court or other body to put up security as a requirement for or consequence of taking measures to enforce the insured patent under cover A1, including information verification proceedings and proceedings for safeguarding evidence pursuant to the provisions of the Patent Act and the Law on Civil Procedure. It is defined in the following terms: *Materialization of an order by a competent court or other body to put up financial securities or guarantees as a requirement for or consequence of complaints against an alleged infringer in the framework of proceedings covered by basic cover A1 or supplementary cover A3 provided by this policy.*
- For additional cover A3, a claim consists of the filing of complaints or claims, in or out of court, or of materialization of documented threats to file such complaints or claims (countersuits or counterclaims) against the insured patent as a consequence of action taken under cover A1 provided by this policy.

¹⁷ For our purposes here, in addition to the content of the definitions section of the policy, the wording of the limitation of the insured risk and loss should state that: **Direct infringement** shall be deemed to be any act of manufacturing, supplying, marketing, or using the product covered by the patent or importing same for any of these purposes. Using the method covered by the patent or offering such use where the other party knows or circumstances make it clear that using the method without the patent holder's consent is prohibited. Supplying, marketing, or using the product obtained directly by the method covered by the patent and importing or possessing the said product for any of these purposes. **Indirect infringement** shall be deemed to be supplying or offering to supply means or instruments for putting the subject matter of the patent or an essential element thereof into practice, provided that the party supplying or offering to supply knows or circumstances make it clear that the said means are suitable for implementing and meant to implement the patented invention and that the said means are supplied or an offer to supply them is made to persons who are not authorized to put the invention into practice.

2.4.2.2. *Handling/management of claims*

In keeping with the principle of simplifying processing of this product without prejudicing the efficacy of the procedure for verifying claims, the claims handling procedure can be summarized as set out in the following claims management chart (Table 4). The procedure encompasses all foreseeable situations that could arise when the policyholder/insured becomes aware that a loss has taken place. Since the product considered here is new, **our recommendation would be to include this claims handling chart as part of the policy documents for explicit knowledge and comprehension by the insured, in accordance with the formalities laid down in Article 3 IPA.**

Regarding Table 4 here in Part II:

- As an aid to comprehension, a distinction has been made between “processing stages” and actual “processes” requiring action (notifying, choosing a law firm, depositing security, instituting litigation, etc.).
- The flow chart reflects the three possible procedures that could ensue from the risks covered by the policy:
 - Handling a loss under cover A1, i.e., reacting to infringement of the insured patent (or the threat or well-founded suspicion that infringement is about to commence).
 - Handling a loss in which a security has to be posted (cover A2).
 - Handling a loss in which there are countersuits and counterclaims (cover A3).

A brief discussion of Table 4 follows.

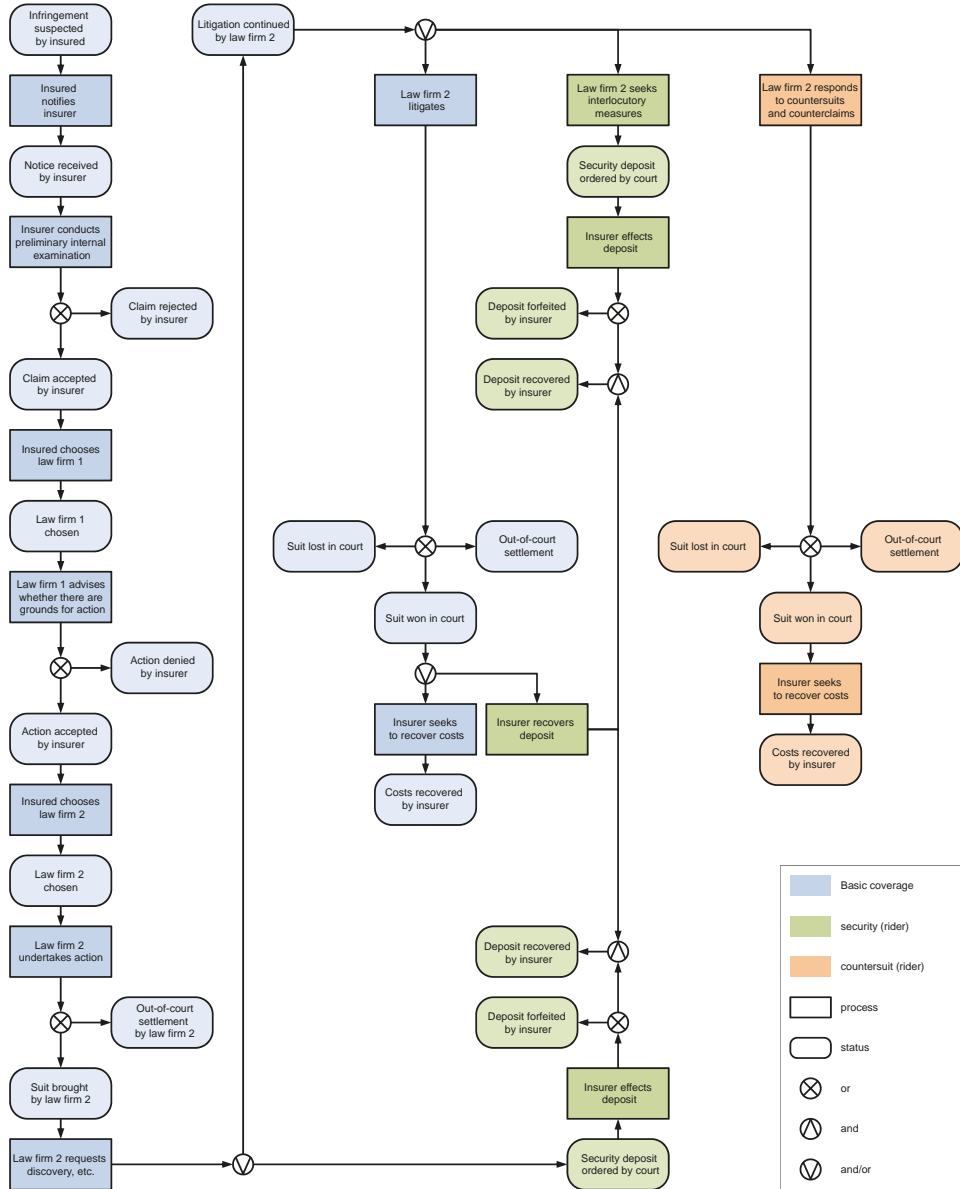
A. Notification of claim to insurer and initial stages

As soon as the insured or policyholder becomes, or based on circumstances and due care, he should have become, cognizant of the infringement, threat of infringement, or suspicion of infringement, he should notify the insurer by the means laid down in the policy, giving notice of the circumstances and the known evidence and offering the insurer his full cooperation to furnish additional data and documents.

After an initial formal examination of the notification (verifying that the policy is in force, the insured patent is the one declared in the claim, etc.), the insurer will either refuse the claim or accept the claim and give the insured the option of choosing a law firm (**law firm 1**) from a list of suggested firms. The task of law firm 1 will be to assess whether, on the basis of the evidence furnished by the insured at this stage, there is a well-founded basis for:

- Deciding whether or not a claim covered (A1) has occurred.
- Deciding whether there are technical grounds for taking legal action.

Table 4
Handling of claims



Source: By the authors

If there are no grounds for instituting a legal defense (for instance, there is no evidence of direct or indirect infringement, nor threat thereof), the insurer will deem that no claim has materialized and will notify the insured accordingly. Otherwise, the insurer will propose the appointment of a new defense team

(**law firm 2**) from the insurer's list of experts. This second law firm shall take charge of defending the insured patent holder, who, as already discussed, pursuant to the provisions of Article 76.d) IPA is free to choose the team that will defend him without taking instruction from the insurer. To observe the insured's right in this respect, we recommend a sufficiently broad list of law firms, including the leading experts in IPRs and patents in Spain (since this is a specialized field, such a list would be feasible). The differing assignments of law firms 1 and 2 will avert possible professional conflicts of interest and ensure the impartiality of law firm 1 when assessing the prospects for litigation.

Law firm 2, chosen freely by the insured from among the experts proposed by the insurer, will be in charge of taking the initial steps to assert the insured patent, either seeking to settle with the infringer or instituting the corresponding legal action on instructions from the policyholder/insured. The insurer's liability is fixed within the quantitative and qualitative limits set out in the policy for cover A1.

B. Litigation, discovery, security

At the stage of filing the complaint, it will frequently happen that:

- Law firm 2 will recommend petitioning for **interlocutory measures and/or discovery or verification proceedings** to safeguard evidence or prevent infringement of the patent from further injuring the policyholder/insured. Commonly, the court will order the petitioner to post a security deposit (see Annex 1). If this occurs, a claim will be brought into being under **cover A2, which shall likewise be reported to the insurer**.
- Law firm 2 will recommend taking certain measures, e.g., steps seeking cessation, which could entail having to post a bond.

If cover A2 has been purchased, the insurer shall pay the amount of the security within the limit of the total maximum amount stipulated and any other limitations provided for in the policy.

C. Countersuits and counterclaims

It may happen that, as a consequence of defensive action taken in or out of court by the holder of the insured patent with the insurer's support, the infringing party may in turn lodge complaints or take steps against the patent holder (nullity proceedings, petition for damages) or may threaten to do so (in evidentiary form, e.g., letters or other documented manner). This would materialize a claim under risk cover **A3**. This circumstance is to be reported to the insurer, and it will be law firm 2's task to respond to the countersuit or counterclaim and continue litigation. The insured may have to furnish security in these proceedings as well (in which case, refer back to the preceding item).

D. Outcome of litigation

If a favourable decision is achieved, the defendant, i.e., the infringer of the insured patent, will have to cease infringing and pay damages. Under the insurer's reimbursement clause referred to above, the insurer will recover any outlays advanced to cover security. The insurer may also recover legal expenses where the defendant is ordered to pay costs, or the legal expenses may be charged to the damages awarded to the owner of the insured patent.

2.5. Calculations for setting the insured amount, indemnity, and premium

2.5.1. Simplified method

This study has designed a simple patent insurance product limited to legal expenses, with covers for first party pursuit, countersuits and counterclaims, and security, on payment of a single premium.

By way of example only, the calculations for a hypothetical mandatory product follow, as an initial point of reference, since they are particularly helpful in the absence of reliable statistics applicable for patent insurance in Spain. The method has the advantage of including few model parameters and thus can be fit to the scant empirical data available.

This first approximation defines the premium as the product of multiplying mean claim frequency by mean claim severity. In a later approximation administrative costs (fixed and variable) of the insurance and capital costs will have to be added.

In a mandatory scheme (compulsory insurance), mean claim frequency is calculated by dividing the yearly number of patent lawsuits in Spain by the number of patents having effect in Spain in that year. This approximation has disregarded factors differentiating between patents (for instance, the incidence of patent age on the litigation risk) and may be completed at a later stage, based on data available in future, for example, in the context of a generalized linear model.

In the absence of detailed statistics on patent litigation in Spain at the present time, empirical data will have to be finessed by means of approximations or expert opinion-based estimates by specialists in the field of patent litigation. These opinions (on the number of lawsuits and their severity) should be incremented to include a margin of safety taking into account a possible increase in the number of lawsuits after insurance becomes available. The expert opinions will be based on studies like those cited in Part I and on the cumulative experience of law firms 1 and 2 (see Table 4) appointed by the insured from the lists of law firms to handle claims proposed by insurers, which law firms will furnish details of litigation they have on record (for instance, because they were involved).

For purposes of this study, we have based the figures employed on the studies cited in Part I. Our assumptions for the calculations were as follows:

- Number of lawsuits: we have taken a very conservative premise of an incremented mean frequency of 0.3%, that is, three lawsuits for every thousand patents having effect in Spain.
- Mean severity: Assuming that the amount will not be affected by conduct of the insured and hence that no correction factor needs to be applied for a margin of safety, mean intensity has been estimated at 30,000 euros.

Based on these assumptions, absent any system for spreading risk, the price for coverage (making no account for costs) would be $0.003 \times 30,000 = 90$ euros per policy insuring one patent. Compared with the cost of a patent and maintenance costs, the amount of the premium is minor.

2.5.2. Model including risk spreading

Applying mechanisms for spreading risk to the preceding case lowers the premium still more. However, to be able to estimate the size of this reduction requires a knowledge of the complete spread of the claim severity probability distribution, not just the mean severity.

It will probably take some years of collecting data to compile sufficient information to be able to fit this distribution accurately. In the meantime, in the absence of data on claims, we have used two extreme models for modelling claim severity. They were fit to yield the same mean severity. These “extreme” claim models were:

Fat tail claims distribution: Modelling used a Pareto distribution (threshold value = 2,500 euros, index = 1.1). This model is prone to a certain probability for extreme occurrences.

Thin tail claims distribution: Modelling used an exponential distribution (threshold value = 0 euros, mean = 27,500 euros). Extreme events are highly unlikely in this model.

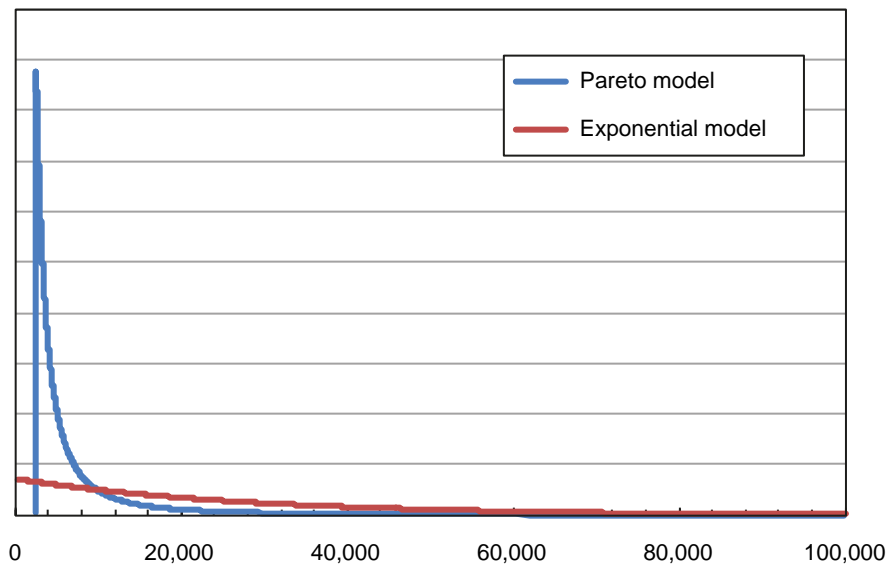
The formulas used to calculate the premium in each model are set out in Annex 2.

On this basis the corresponding mean probabilities have been projected:

They are represented graphically in the following tables:

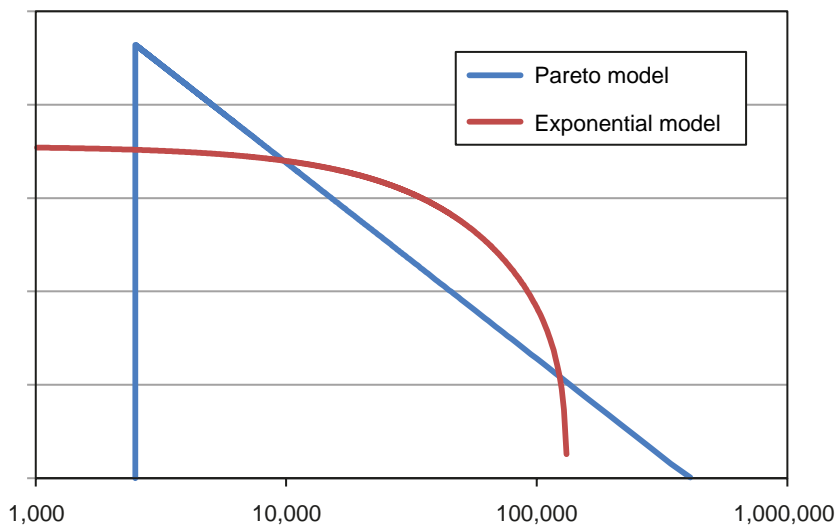
- **Linear and log-log plots of Pareto and exponential probability distributions.** The Pareto distribution has a threshold of 5,000 euros and an index of 1.2, yielding a mean claim of 30,000 euros. The exponential distribution is also based on a mean claim of 30,000 euros.

Table 5
Linear plot of probability densities for the Pareto
and exponential models



Source: By the authors

Table 6
Log-log plot of probability densities for the Pareto
and exponential models



Source: By the authors

While both models yield the same mean severity, 27,500 euros, on applying mechanisms for spreading risk the mean severities are quite unlike. For 5-% self-insurance, a 5,000 euro deductible, and an insured amount of 200,000 euros, the approximate mean insured loss comes to:

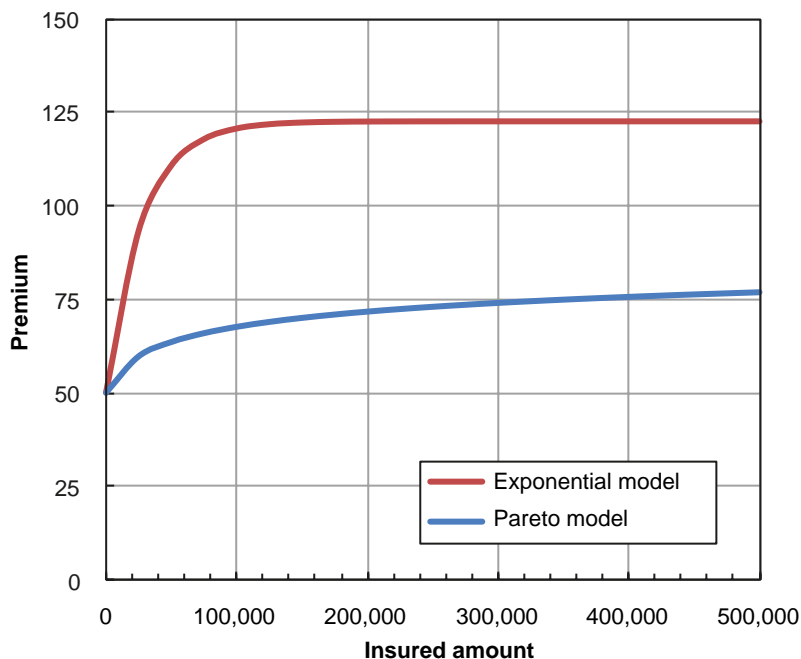
- 7,000 euros according to the Pareto model.
- 22,000 euros according to the exponential model.

Multiplying exponential model severity by our assumed frequency value of 0.3% yields a pure risk premium of approximately 60 euros. Multiplying this value by a factor of 2 to take administrative and capital costs into account yields an annual premium of 120 euros per policy insuring one patent.

The relationships between the insured amount and the premium by mean claim value are plotted below in the following tables.

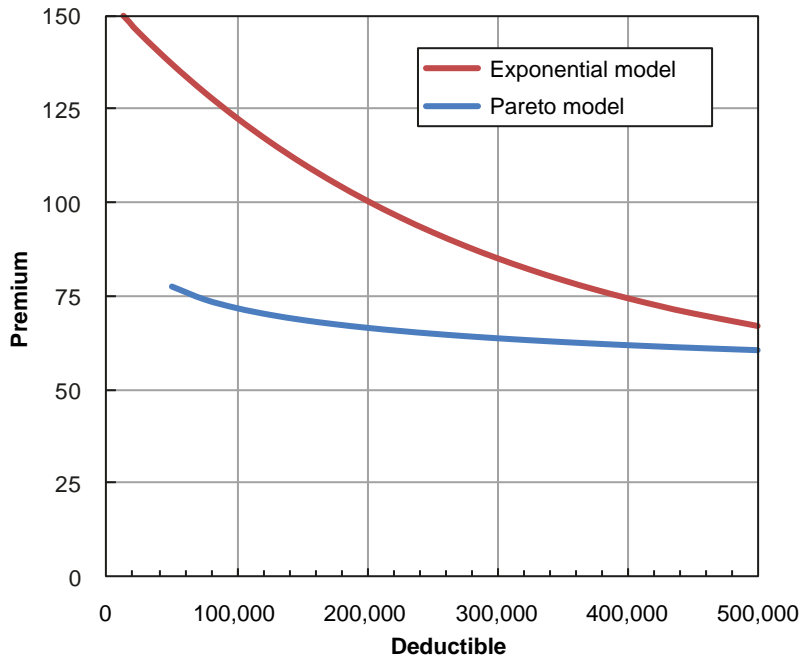
- **Premium vs. amount insured for each model.** The figure is based on a deductible of 5,000 euros and the parameter values set out in Annex 2, Table 1.
- **Premium vs. deductible for each model.** The figure is based on an insured amount of 200,000 euros and the parameter values set out in Annex 2, Table 1.

Table 7
Premium vs. insured amount for the Pareto and exponential models



Source: By the authors

Table 8
Premium vs. deductible for the Pareto and exponential models



Source: By the authors

The premium can be seen to be distinctly more sensitive to changes in the deductible than to changes in the insured amount, a finding common to all branches of insurance.

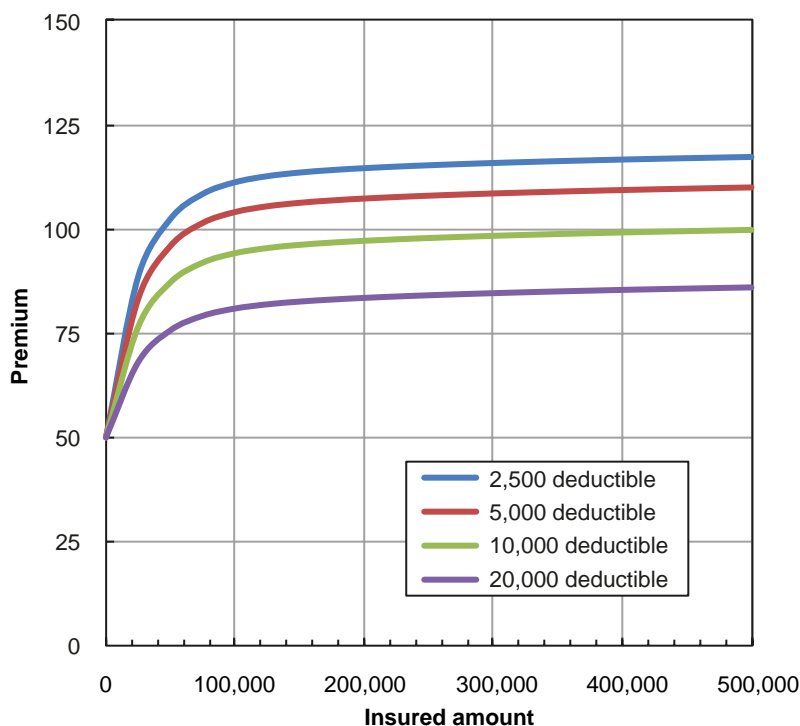
Table 9
Typical premiums in euros by deductible and insured amount

		Insured amount			
		50,000	100,000	200,000	400,000
Deductible	2,500	102	111	115	117
	5,000	96	104	107	109
	10,000	87	94	97	99
	20,000	76	81	83	85

Source: By the authors

To make purchasing easier, a 50:50 weighted average of the two models could be used at first, basing the premiums on a table like Table 9 or on the plots set out below in Tables 10 and 11. The standard premiums were calculated using the parameter values set out in Annex 2, Table 1.

Table 10
Standard premium vs. insured amount for different deductibles



Source: By the authors

3. FEASIBLE IMPLEMENTATION STRATEGIES

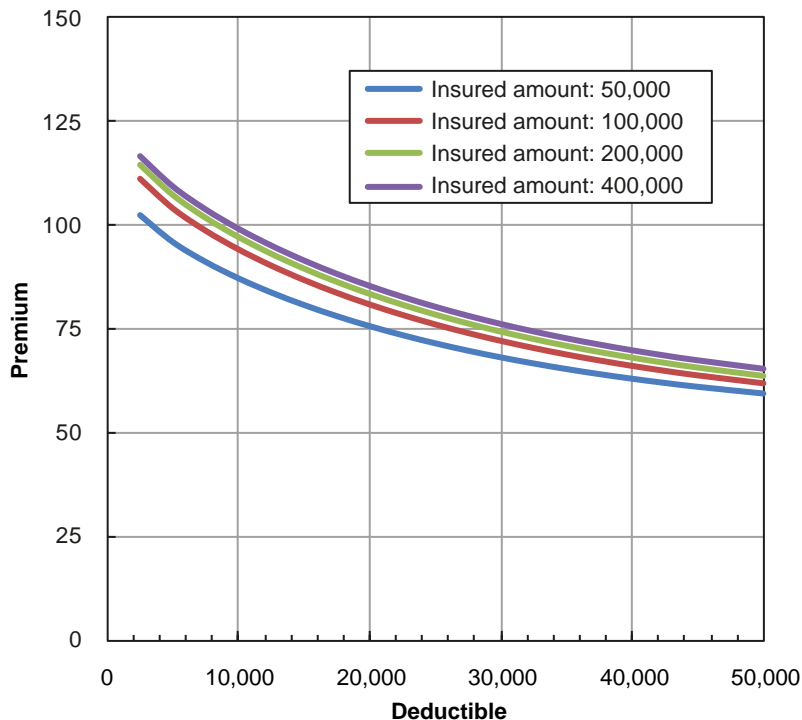
The strategy for introducing an insurance scheme like the one described here in Spain is based on heightening its ability to help grow our country's scientific and technical base by bringing on stream such agents of innovation as SMEs and lone inventors, so that they can obtain quality patents (examined patents).

It is also based on the understanding that insurers are undertaking initial implementation of a pilot product and that they will have to do so at their own expense, as an exercise in *social responsibility*, that is, for the benefit of society.

The business risk to insurers would be less where the product is implemented as a mandatory insurance scheme, but this eventuality is highly unlikely. In any case, whether as voluntary or compulsory insurance:

- Insurers who take the lead in launching this product will be taking a stand on the side of a measure for socio-economic advancement in the face of the crisis.
- Product launch should elicit a positive reaction (and some support) from the public sector.

Table 11
Standard premium vs. deductible for different insured amounts



Source: By the authors

3.1. Preliminary aspects: need for data and statistics

In Part I we made reference to some statistical data on patents having effect in Spain.

- Even so, it should be noted that accurate, detailed, empirical data on aspects relating to the design of an insurance product covering certain risks relating to patents having effect in Spain are largely lacking. Specifically, there is a dearth of:
 - Data on the procedure leading to the grant of Spanish patents (with or without preliminary examination).
 - Data on lawsuits concerning examined Spanish patents at the first and second instances.
 - Data on infringements of examined Spanish patents.
 - Data on countersuits.
 - Data on the amount of damages.

- Data on the average cost of a lawsuit.
- Data on the average amount of security posted.
- The absence of data hampers design and means that a conservative position should be taken when defining the insured risks¹⁸.

The strategy for launching patent insurance aimed at fostering R&D in Spain should garner support from the public sector, at least to the extent of compiling better statistics on patents and patent litigation.

3.2. Promoters of patent insurance in Spain

Hypothetically, different players could or should lead in launching a private insurance product aimed making research in Spain more competitive.

- The promoter behind the scheme could be an entity in the public sector, having in mind the benefits that would accrue to the common interest. It should be noted that pursuant to Article 44.2 of the Spanish Constitution the public authorities are obligated to promote science and scientific and technical research for the common good.
- The promoter could be a private entity, in this case a potential underwriter of the risk, who should:
 - Be an established insurer to reduce its relative exposure to a new special area, in internal terms.
 - Have a technical basis for study taking into account other earlier, comparable experiences.
 - Round up interest in implementing the product: even while maintaining the necessary detachment during the feasibility analysis phase, holding contacts and seeking out potential “allies” in related sectors is important.

¹⁸ In the CJA study referred to in Part I, premiums were estimated on the basis of data compiled by surveying law firms specialized in patent litigation throughout Europe (CJA Consultants Ltd.: *A study for the European Commission on the feasibility of possible insurance schemes against patent litigation risks*. Appendices to the Final Report. June 2006. http://ec.europa.eu/internal_market/indprop/docs/patent/studies/pli_appendices_en.pdf, last accessed on 21 September 2012). However, we question the reliability of those data, because the selection of law firms surveyed was biased. Simply by way of example, we are aware that the leading firm of experts in IPRs in Spain was not surveyed, and it is a known fact that the insurance sector did not take part in the study. Regarding the 2003 CJA study, see Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, pp. 35-36, at http://www.hm-treasury.gov.uk/d/contra_vision_ltd_336_p7_131kb.pdf. Regarding the final study, see International Association of Legal Protection Insurance: *Joint Position Paper of CEA and RIAD on the Final Study on the Feasibility of Possible Insurance Schemes against Patent Litigation Risks*, Brussels, December 2006, at <http://www.riad-online.net/61.0.html> (last accessed on 25 January 2013).

3.3. Shepherding interest and product mission

The circumstances and interests that come together in launching a niche insurance product as discussed in Part I are re-addressed here as they apply specifically to Spain.

- Innovation is a basic cornerstone of competitiveness.
- Innovation enhances the quality of life.
- New ways of promoting active participation by the private sector in R&D¹⁹ need to be explored, particularly funding and guarantees.
- Insurance coverage in the form of bespoke products or through captive companies does not meet the needs of SMEs and lone inventors, who make up the core of our country's business sector²⁰, hence there is a need to design a specific product.
- Product design should go hand in hand with a formative strategy intended to confer consistency and enhance implantation, to be accompanied by:
 - Public policy fostering innovative companies.
 - Networks and associations of innovative companies.
 - Universities promoting applied research.
 - Support for inventors producing industrially applicable innovations.
 - Observance of the welfare of other parties with an interest in innovation (consumers, investors, and the like).

3.4. Litigation expenses insurance for SMEs. Purchasing. Growth forecast

Certain of the analyses set out in Part I, in particular the studies produced by CJA for the European Commission in 2003 and 2006, were based on the notion of implementing a compulsory patent insurance scheme. Other studies²¹ have discussed the benefit of mandatory insurance in the initial

¹⁹ Government of Spain-SPTO: *Plan de Promoción de la Propiedad Industrial en España, 2010-2012 [Plan for Promoting Industrial Property in Spain 2010-2012]*, 2010, p. 2.

²⁰ Government of Spain-SPTO: *Plan de Promoción de la Propiedad Industrial en España, 2010-2012 [Plan for Promoting Industrial Property in Spain 2010-2012]*, 2010, p. 4.

²¹ Haberman M, Hill R: *Patent enforcement for SMEs and lone inventors, a system failure*, 2003, p. 11, available at http://www.hmtesury.gov.uk/d/contra_vision_ltd_336_p7_131kb.pdf (last accessed on 20 September 2012). Kingston W: *Enforcing Small Firms' Patent Rights*, School of Business Studies, Trinity College, European Commission Study Contract No. EIMS 98/173: Patent Defence in Europe: ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies_enforcing_firms_patent_rights.pdf (last accessed on 25 September 2012).

stages of product marketing. Still and all, there is some reluctance to introduce compulsory insurance for all IPRs.

- **If a mandatory insurance scheme is implemented, its scope would be the basic legal expenses cover: first party pursuit/assertion for examined patents, and as we have already seen:**
 - It is not clear whether a compulsory scheme could be implemented in Spain in the near term.
 - A “selectively” mandatory scheme would be a positive step towards strengthening the quest for quality patents making the greatest contribution to R&D (as opposed to “trivial” patents).

3.4.1. Compulsory insurance (for examined patents). Forecast of premium trends

Table 12 depicts the increase in the volume of premiums if a mandatory insurance scheme is implemented, with insurance being taken out for all patent applications taking the preliminary examination route to grant in Spain.

- A mean yearly premium of 200 euros has been assumed.
- The annual growth rate in the number of patents has been taken to be 10%.

3.4.2. Voluntary insurance. Promotion by the public sector

If a compulsory insurance scheme cannot be implemented in Spain, forecasting trends for premiums would be highly aleatory and hence has not been included here as such.

In this case, however, taking **promotional measures** can be proposed with a view to strengthening examined patents and boosting insurance sales. To this end, potential measures by the public sector with little or no monetary cost are suggested, measures that could have a strong impact on boosting quality patents and protecting them by means of private insurance.

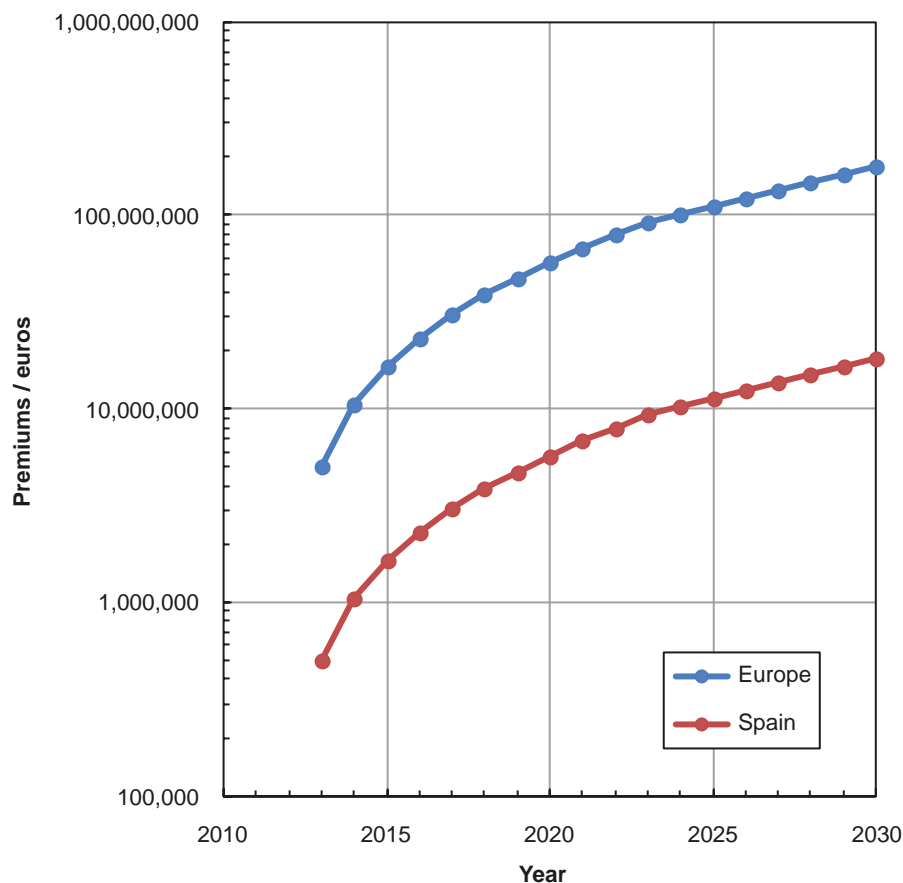
A. Measures to sensitize public opinion regarding the repercussions of IPR infringements and to publicize the product

The public sector should take measures to release information intended to publicize the insurance product, for instance, via the SPTO and/or the Ministry of Science and Innovation and/or the European Observatory on Infringements of Intellectual Property Rights²². Pursuant to the *Industrial Property Strategy*

²² The Observatory’s website is http://ec.europa.eu/internal_market/iprenforcement/observatory/index_en.htm. Regulation (EU) No. 386/2012 of the European Parliament and of the Council of 19 April 2012 entrusts the Office for Harmonization in the Internal Market (Trade Marks and

for Business and Entrepreneurs 2012-2014 (Ministry of Industry, Energy, and Tourism), these measures would comprise:

Table 12
Trends for premiums in Spain and in Europe under a compulsory patent insurance scheme



Source: By the authors

Designs) with tasks related to the enforcement of intellectual property rights, including assembling representatives of the public and private sectors and the European Observatory on Infringements of Intellectual Property Rights. The Regulation transferring competence was published in the OJEU of 16 May 2012 and took effect on 5 June 2012. See Pérez Carrillo EF: Lucha contra piratería. Obtención de pruebas y medidas cautelares: Reflexiones a propósito de las reformas de la Directiva 2004/48/CE, del Observatorio Europeo de las vulneraciones de los derechos de propiedad intelectual y del Tratado ACTA [Anti-piracy. Compiling evidence and interlocutory measures: considerations on revisions to Directive 2004/48/EC by the European Observatory on Infringements of Intellectual Property Rights and ACTA], *Actas de Derecho Industrial y Derechos de Autor*, XXXII, 2012, pp. 433-450 concerning the latest revisions relating to implementation.

- **Information campaigns** publicizing the availability of legal expenses insurance for examined patents.
- Items on the **websites** of public agencies like the SPTO or the Ministry of Science and Innovation (at least like the ones already in existence on the websites of the Danish²³ and UK²⁴ Offices).
- Support for **arranging meetings, awarding prizes, etc.** in relation to studies, companies, and insurers working on, investing in, or implementing this product.

B. Economic and tax measures

Economic measures expressly affording potential subsidies and grants to examined patents that have taken out insurance would also be in order, with a view to:

- Covering the cost of premiums.
- Providing tax incentives for patent insurance protection (via R&D grants).

C. Legislative measures

These could take various tacks:

- Implementing a compulsory legal expenses insurance scheme for examined patents.
- Amending civil, criminal, and procedural legislation so that the results of official investigations carried out by the police and by Customs can be reported to the victims of possible IPR infringement, including patents, and documents made available to them for use as evidence in instituting civil and criminal actions asserting their IPRs²⁵.

3.5. Institutions and agencies providing support and promotion

3.5.1. Government entities

Involvement by certain institutions and agencies could be beneficial or even necessary for successful implementation of a patent insurance scheme for

²³ The Danish Patent and Trademark Office: <http://www.dkpto.org/>

²⁴ The UK Intellectual Property Office: <http://www.ipo.gov.uk/>

²⁵ Elaborating on this idea, Pérez Carrillo EF: Lucha contra piratería. Obtención de pruebas y medidas cautelares: Reflexiones a propósito de las reformas de la Directiva 2004/48/CE, del Observatorio Europeo de las vulneraciones de los derechos de propiedad intelectual y del Tratado ACTA [Anti-piracy. Compiling evidence and interlocutory measures: considerations on revisions to Directive 2004/48/EC by the European Observatory on Infringements of Intellectual Property Rights and ACTA], *Actas de Derecho Industrial y Derechos de Autor*, XXXII, 2012, pp. 433-450.

Spain. These are listed below together with some of the measures that they might take.

- **Ministry of the Economy and Competitiveness (MINECO)²⁶**
 - Expressly including patent insurance in the National R&D Plan.
 - Including insurance in the Research Promotion Plans and Programmes, e.g.:
 - National Scientific Research, Development, and Technical Innovation Plan (National R&D+i Plan)²⁷.
 - Programmes like INGENIO (aimed at boosting investments in R&D and obtaining private sector commitment to this end²⁸).
- **Cross-Sector Anti-Counterfeiting Commission**, which has been assigned specific measures for taking action²⁹ in the framework of the current IP Strategy³⁰ that would benefit start-up of a patent insurance scheme like the one considered here and could be supplemented by others, such as drawing up blacklists of customary IPR infringing practices and companies (patents included).
- **Patent and Trademark Office**, both by the institution itself and by its professional staff members³¹.

²⁶ Ministry of the Economy and Competitiveness: See <http://www.idi.mineco.gob.es/>

²⁷ This plan is currently being reworked by the Ministry of Innovation; it is the Spanish science, technology, and business system's programming instrument for achieving the technology research, development, and innovation policy objectives and priorities laid down in the Science Act and the National Science and Technology Strategy. On 7 October 2011 the Council of Ministers resolved to extend the 6th National Scientific Research, Development, and Technical Innovation Plan 2008-2011 pending the Government's approval of the Government Science and Technical Research Plan provided for under the Science, Technology, and Innovation Act, Act No. 14/2011 of 1 June 2011.

²⁸ The INGENIO programme's website at the Ministry of Economy and Competitiveness is http://www.idi.mineco.gob.es/portal/site/MICINN/menuitem.7eeac5cd345b4f34f09dfde1001432ea0/?vgnnextoid=7ac0714a6eb70210VgnVCM1000001034e20aRCRD&lang_chosen=es [in Spanish].

²⁹ *Estrategia 2012-2014 en materia de Propiedad Industrial para empresas y emprendedores [Industrial Property Strategy for Business and Entrepreneurs 2012-2014]* (Ministry of Industry, Energy, and Tourism), p. 36 provisionally tasks it with the following mandate, for assessment purposes:

- Improving the institutional framework for the advancement of IP protection.
- Improving the regulatory framework for IP protection.
- Bringing statistics on IP infringements into line with Community strategies.

³⁰ *Estrategia 2012-2014 en materia de Propiedad Industrial para empresas y emprendedores [Industrial Property Strategy for Business and Entrepreneurs 2012-2014]* (Ministry of Industry, Energy, and Tourism).

³¹ By way of comparison, this aspect has received particular attention in Sweden, Denmark, and the UK.

- **Finance Ministry.** Through tax legislation as permitted by the EU³², such as rights to tax write-offs (Article 11, Consolidated Corporate Tax Act), deductions for R&D and innovation activities (Article 35 of the Act)³³, other tax instruments such as the Patent Box³⁴, or specific incentives specially designed to promote the insurance product.
- **Public bodies of Spain's Autonomous Regions**, e.g., the Galician Regional Government's Industrial Property Promotion Service³⁵, which offers subsidies to SMEs to help cover the cost of IPR-related activities, such as patent (and other IPR) filing costs, or the **Regional Consortium and MadRI&D Knowledge Foundation**³⁶ in Madrid.
- **The European Observatory on Infringements of Intellectual Property Rights**³⁷. The European Observatory on Infringements of Intellectual Property Rights was set up in 2009 in the framework of the Commission's General Directorate for Internal Market and Services under the name of the European Observatory on Counterfeiting and Piracy. It was entrusted to the OHIM on 5 June 2012. The Regulation transferring competence calls for the Observatory's

³² Article 173, Treaty on the Functioning of the EU.

³³ An important definition of R&D+i used here in this study.

³⁴ A tax incentive currently applicable in Spain authorized by the European Commission to benefit technology transfers. It is based on Article 23, Consolidated Corporation Tax Act. This is a deduction of 50% of the revenues earned from patent and other IPR transfers (assignments, licenses, and other agreements) and is available for assignments to start-up companies created to exploit IPRs (Department of Revenue, 23 March 2009; CV0578/09 and CV0579/09).

³⁵ The Service's website, describing its IP support programmes, can be accessed at <http://economiaeindustria.xunta.es/ServizoGalegodePropiedaddeIndustrialSEGAPI>. Some of the Service's experiences with subsidies for patenting have been examined as good practices in Radauer A, Streicher J, Ohler F: *Benchmarking National and Regional Support Services for SMEs in the field of Intellectual and Industrial Property*, Pro INNO Europe Paper, no. 4, 2007.

³⁶ Madri&d is a subsidiary agency of the Madrid Regional Government tasked with offering technology innovation, research, and development services. See <http://www.madrimasd.org/Empresas/default.asp>.

³⁷ The Observatory's website is http://ec.europa.eu/internal_market/iprenforcement/observatory/index_en.htm. Regulation (EU) No. 386/2012 of the European Parliament and of the Council of 19 April 2012 entrusts the Office for Harmonization in the Internal Market (Trade Marks and Designs) with tasks related to the enforcement of intellectual property rights, including assembling representatives of the public and private sectors and the European Observatory on Infringements of Intellectual Property Rights. The Regulation transferring competence was published in the OJEU of 16 May 2012 and took effect on 5 June 2012. See Pérez Carrillo EF: Lucha contra piratería. Obtención de pruebas y medidas cautelares: Reflexiones a propósito de las reformas de la Directiva 2004/48/CE, del Observatorio Europeo de las vulneraciones de los derechos de propiedad intelectual y del Tratado ACTA [Anti-piracy. Compiling evidence and interlocutory measures: considerations on revisions to Directive 2004/48/EC by the European Observatory on Infringements of Intellectual Property Rights and ACTA], *Actas de Derecho Industrial y Derechos de Autor*, XXXII, 2012, pp. 433-450 concerning the latest revisions relating to implementation.

activities on infringements of intellectual property rights to be funded by the OHIM's own budgetary means. It carries out work in the fields of:

- Statistics.
- Fostering best practices.
- Raising awareness of the value of IPRs.
- **The OHIM Cooperation Fund.** Pursuant to being entrusted with the Observatory on Infringements, the plenary session of 28 September 2012 approved a Packet 2 Project entailing setting up a repository of industrial property infringements³⁸. The repository holds out the possibility that both IPR holders and the authorities (including the national patent and trademark offices) will be able to obtain information and send it to rightholders whose rights are being infringed. The Fund will be financing various projects, including the enforcement database³⁹, which subsequent to the transfer of the European Observatory on Infringements of Intellectual Property Rights is being expanded to encompass other IPRs, patents among them.

3.5.2. Private entities and practitioners

In the context of the launch strategy, it would be advantageous to seek consensus and assign roles in the process to certain parties whose activities engage with industrial property in one way or another, who could give out information or perhaps even advise on product selection.

- IPR agents and attorneys, who are familiar with and partially responsible for the sector.
- Companies and associations of innovative companies⁴⁰.
- Universities and research centres and their IPR management services⁴¹.
- Venture capital groups investing in innovative SMEs.

³⁸ http://oami.europa.eu/ows/rw/resource/documents/observatory/meetings/meeting_27092012/04_project%202.pdf

³⁹ While initially intended for monitoring Community trademarks and registered Community designs, following transfer of the European Observatory on Infringements of Intellectual Property Rights the basis for monitoring is being expanded to cover other IPRs as well, including patents.

⁴⁰ Reports like the one by Kingston (2000) and experiences like that of Sweden have been based on this factor, with the associations themselves being regarded as the source of funding for the product. Kingston W: *Enforcing Small Firms' Patent Rights*, School of Business Studies, Trinity College, European Commission Study Contract No. EIMS 98/173: Patent Defence in Europe: ftp://ftp.cordis.europa.eu/pub/innovation-policy/studies/studies_enforcing_firms_patent_rights.pdf (last accessed on 25 January 2013).

⁴¹ These centres account for a significant proportion of patents. The growing importance of patents as compared to other IPRs in the university system raises the profile of universities as potential takers for a possible patent insurance product.

- The mass media and social networks: these could be used as means for disseminating information regarding IPRs and infringements in the sense already considered in the Industrial Property Strategy for Business and Entrepreneurs 2012-2014 (Ministry of Industry, Energy, and Tourism).

3.6. “Traditional” distribution channels

The distribution channels for a new patent litigation insurance in Spain will basically depend on the type of purchasing scheme implemented, mandatory or voluntary. A distinction can also be made between conventional channels for insurance products, such as agents and brokers, and other specific outlets for insurance for the specific risks relating to IPRs.

3.6.1. Product distribution

The insurance intermediaries who are the traditional distribution channel should play a role in marketing within the confines of legal requirements⁴². Still, experience with patent litigation insurance in other countries suggests that conventional channels for distributing insurance (brokers, agents) are not the most appropriate for selling policies of this kind, because they have no experience in how patents operate. Therefore,

- They do not readily attract the attention of patent holders.
- Their role as regulated intermediaries should be supplemented by recommendations from other specialists.

3.6.2. Other channels for product presentation: Specialized patent attorneys and patent agents

Without prejudice to the legal requirements for practising the profession of insurance intermediary, IPR specialists have a very important role to play in publicizing these products and raising the awareness of SMEs and inventors. As a distribution channel supplementing conventional channels, their involvement in offering recommendations could be extremely important in disseminating patent insurance.

- They have expertise in patent matters and work with patent holders.
- They are in a perfect position to understand and explain patent insurance and to be able to assess the competitive advantages of different products.

⁴² The Private Insurance and Reinsurance Mediation Act, Act No. 26/2006, of 17 July 2006 regulates the conditions under which private insurance and reinsurance intermediaries are to operate in the marketplace and lays down the requirements for admission to the practice of these activities.

- Comparative experience, particularly in the USA, counsels enlisting their services in the marketing of patent insurance.

These specialists can and should play a relevant role in providing information on this type of product and in carrying out simulation studies for policy operation, presenting proposals, undertaking preparatory work preliminary to the sale of an insurance policy or reinsurance, closing policy sales, and even performing certain management and policy functions for this insurance, especially in the event of a claim⁴³, in the terms allowed by insurance sales regulations.

3.6.3. Spanish Patent and Trademark Office

- The Office would be the perfect channel for sales under a compulsory insurance scheme.
- In a voluntary insurance scheme, it could act by:
 - Simply furnishing information about the product or making recommendations.
 - Hosting offices (or websites) of brokers specializing in patent insurance.
 - Serving as intermediary (after regulations have been amended as appropriate to allow it to act as an intermediary for an insurance product), collecting premiums for insurance purchases when a patent is granted and on payment of maintenance fees.

4. CONCLUSIONS

4.1. Conclusions to Part I: Making IPR insurance into insurance for protecting R&D+i patented by SMEs and inventors

1. Relationship between patents, economic development, and SMEs

- a) A country's volume of patents is an indicator of its level of development and a critical factor in its competitiveness. This is all the more so in the case of quality patents, which make a genuine contribution to innovation by virtue of their novelty, inventive step, and industrial applicability.
- b) An economy based on knowledge (R&D) and know-how applied to industry (R&D+i) are viewed as essential factors for overcoming the present economic crisis and achieving sustainable growth.
- c) The efficacy of IPRs depends on the holders' inducement to enforce their rights, not only in terms of exploiting their content but also in terms

⁴³ These activities fall outside the scope of the definition of "mediation" pursuant to the provisions of Article 3.1.b) of the Private Insurance and Reinsurance Mediation Act.

of asserting them against infringements interfering with or preventing their exclusive use.

- d) The high cost of defending patents redounds in the low number of patents filed by SMEs.
- e) SMEs are responsible for a high proportion of job creation in the EU.

2. Patent infringement

- a) Is an underlying risk for innovative SMEs.
- b) Undermines R&D by forcing expenditures on defense.
- c) Penalizes R&D investment and is adverse to SMEs' ability to attract investment funding, including venture capital.
- d) Increases the likelihood of resorting to trade secrets, to the detriment of publishing patents and scientific and technical development.
- e) Is more commonly deliberate and predatory where potential infringers perceive that patent holders will not litigate to defend their patents.

3. Patent litigation

- a) Is costly, especially in the USA.
- b) Is less costly in Europe, where there is, however, still a diversity of cost levels and legal systems.
- c) Diminishes SMEs' interest (and investments) in patents.
- d) Often turns into "a fight to the finish" (particularly in the USA).
- e) Tends to be settled out of court in the early stages of a dispute, at least when both parties have commensurate means to expend on legal expenses.

4. Patent insurance

- a) Is an incentive for R&D, especially its patent assertion facet offering insured parties coverage for legal expenses to defend against infringement.
- b) Is a special niche product in the marketplace.
- c) Takes the form of multiple risk policies with differing coverage for different IPRs in the USA and the international markets and is the subject of a business method patent at the USPTO.
- d) Has been evaluated for the EU as a whole, and some practical experience has accrued in certain member countries (Sweden, UK, Denmark, France, Germany).

- e) Is promoted (but not subsidized) by the Patent Offices of Denmark and the UK and was previously promoted in Sweden and France.

5. European studies on patent insurance for SMEs in the European Union as a whole

- a) Have been based on economic models without a solid statistical underpinning.
- b) Have been drawn up for the most part without taking industry and insurers into account.
- c) Have not sufficiently considered the practical difficulties facing a European-wide insurance scheme subject to national differences in insurance law, language, etc.
- d) Have not considered the effects of Directive No. 2004/48/EC on gaining access to evidence, provisional and precautionary measures, and security.
- e) Have not benefited from legal/actuarial analyses of Spain's insurance and patent systems.

6. IPR-related risk insurance practice

- a) This business sector consists of two main types of agents and products:
 - (i) First, large insurers and international financial entities, along with captive companies and affiliates, offer complex products that often combine techniques more proper to the insurance field as such with other risk management or financial engineering mechanisms. They are based on individualized, in-depth analyses (due diligence) entailing high overhead expenses and extremely costly risk management factors.
 - (ii) Second, national insurers (or national affiliates of multinationals) offer very few commercial consumer products. Additionally, other public-private and private associations have been involved in this sector and in certain countries, e.g., Sweden, have offered mutual policies.
- b) It entails barriers to entry into the marketplace by new operators desiring to break into the existing field.
- c) Available policies cover highly varied risks that require expensive preliminary study for each policy to be purchased and close follow-up during the period of insurance.
- d) The complex transparency rules and broad territorial coverage make purchasing any insurance product on the basis of the forms considered practically unfeasible for a medium-sized insurer seeking to enter the marketplace on its own.

- e) Most products, chiefly the ones referred to in item a-i here in this Conclusions section, are expensive, and their costs are beyond the reach of SMEs and lone or university inventors.

7. Current interest in widespread patent insurance

- a) Various Patent Offices have expressed interest in this study.
- b) New initiatives are being undertaken in different countries (Denmark, Germany), and in October 2012 the European Commission expressed its satisfaction at the continued development of these products.
- c) Various Patent Offices asked us to contact national patent attorneys or have referred us to them directly as sources of information on insurance products.
- d) A leading reinsurer has requested information about this study.
- e) The principal underwriters have not furnished access to their information.

8. Launching patent insurance in a European country

- a) It should be based on previous experience.
- b) It should at first be limited to a single IPR, for instance, quality patents, and to the coverage most apt to promote R&D, i.e., first party pursuit or patent assertion, making adjustments for the special legal characteristics in each jurisdiction.
- c) The paucity of statistics will be a problem, though it might be reduced by enlisting the cooperation of national Patent Offices if they are involved in product creation.
- d) Clear economic and legal means of specifying the risks covered and shared risks and avoiding adverse selection will have to be designed.
- e) The initiative should garner effective support from the public sector, patent specialists, R&D, and industry.

4.2. Conclusions to Part II: Designing patent insurance to foster research by SMEs in Spain

1. Launching patent insurance in Spain

- a) Its primary mission should be to promote R&D.
- b) A conservative approach should be taken at least until there are reliable statistical data on the number of patent lawsuits and their mean severity in our country.
- c) It should be grounded in consensus and cooperation between the public sector and the private sector for the purpose of promoting R&D.

2. Initial product design

- a) The coverage offered in the pilot stage (launch) should be limited to those covers that will do the most to promote innovation.
- b) The main initial coverage will be **first party pursuit/assertion of the insured patent**.
- c) Further, offering coverage for **security deposits and countersuits and counterclaims** would also be advisable.

3. Cost of patent insurance during launch in Spain

- a) The product should be introduced so as to keep costs to insurers and the insured to a minimum.
- b) The formulas for limiting the risks covered, acceptance, claims management, and premium setting designed in this study should enable suitable cost control.

4. Claims management

- a) Insurers should have a list of expert law firms for policy holders to choose from with a view to admission of claims by insurers and for purposes of handling defense proceedings.
- b) Two different law firms should take part in each claim to avert conflicts of interests.

5. Risk assessment

- a) Risk assessment for this product should at first be based on conservative calculations derived from expert studies.
- b) The creation of a statistical infringement database, encompassing patent infringement, has already gotten under way in the framework of the European Observatory on Infringements of Intellectual Property Rights, funded by the OHIM's Cooperation Fund.

6. Publicity and sale

- a) This should be included in the programmes of work drawn up by the National Strategic R&D and IPR Plans, such as the current Government Plan for Scientific and Technical Research and Innovation 2013-2016 (Ministry of the Economy and Competitiveness).
- b) The sales strategy for a patent insurance product should be supported by institutions, agents, programmes, and channels in both the public sector and the private sector supplementing conventional insurance sales and brokerage channels.

ANNEX 1

COMMENTARY CONCERNING THE GRANTING PROCEDURE, CONTENT, AND DEFENSE OF SPANISH PATENTS

There follows a review of the main aspects of the procedures and routes for obtaining patents having effect in Spain, the content of the patent right, and the main resources for defending patents in court. Ending the Annex is a short **Glossary** of terms used in this study overall.

1. PROCEDURES

1.1. Filing application with the SPTO

Obtaining a patent at the Spanish Patent and Trademark Office (SPTO) entails filing an application by a party that enjoys entitlement under Article 1.2 Patent Act (PA), namely, a) a natural or legal person who is a Spanish national, b) a natural or legal person habitually residing or having a real and effective industrial or commercial establishment in the territory of Spain, c) a natural or legal person entitled under the Paris Convention¹, d) a national of a Member State of the WTO², and e) a refugee habitually residing in the territory of Spain³. In addition to these parties, certain foreigners may enjoy entitlement based on the principle of reciprocity of treatment of nationals⁴.

1.1.1. Content

To be admissible applications must include a series of documents and information laid down by law.

¹ In accordance with Articles 2 and 3 Paris Convention, entitlement is conferred on the nationals of Paris Convention countries or those from countries not Contracting Parties to the Convention who have a real and effective industrial or commercial establishment in a Contracting State.

² Articles 2, 3, and 4.a) TRIPS Agreement.

³ Article 14 July 1951 Convention relating to the Status of Refugees and Protocol of 31 January 1967 (Accession by Spain on 22 July 1978).

⁴ According to Article 2 PA natural or legal persons not included in the preceding articles may also be entitled to obtain a Spanish patent under the principle of reciprocity, that is, if the countries of which they are nationals allow natural or legal persons of Spanish nationality to obtain patents of invention in their territory.

- An application form setting out the invention concisely, clearly, and in full, such that it could be put in practice by a person skilled in the art. It should be consistent with the claims⁵. Biological materials pose certain special cases⁶ and constraints on accessing the materials⁷.
- A description of the invention for which the patent is sought.
- The drawings referred to in the description or the claims.
- An abstract of the invention (Article 2.1 PA).
- A priority claim under the Paris Convention, where appropriate.

In respect of the requirement for one or more claims, Article 26 PA provides that claims are to be clear and concise and supported by the description. They define the subject matter for which protection is sought⁸. They are numbered consecutively in each patent. Each claim starts off with a preamble setting forth the object of the claim and a characterizing portion defining the features claimed.

Each claim in a patent is a legal text in its own right. The first claim is usually the main independent claim and the most general, the remaining claims being either independent as well, or dependent [Rule 7.2 Implementing Regulations

⁵ Rule 5.2 IRPA stipulates the order of items to be followed in the description, namely: i) the title of the invention; ii) the technical field to which the invention relates; iii) a discussion of the prior art before the priority date known to the applicant; iv) a disclosure of the invention as characterized by the claims for an understanding of the technical problem and the solution afforded by the invention; v) a description of the drawings, if any; vi) a discussion of how the invention is applicable to industry where said applicability is not obvious from the description.

⁶ Where the invention for which a patent has been applied concerns biological material not available to the public or a method of using same, and where the biological material cannot be described so that it can be carried out by someone skilled in the art, the provisions of Article 25.2 PA are to be fulfilled. Accordingly, the applicant shall deposit a sample with an institution legally authorized for this purpose (pursuant to the 1977 Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure), and the application shall contain such relevant information as is available to the applicant on the characteristics of the biological material so deposited. The institution where the deposit has been made is to be named in the application.

⁷ With regard to inspection of files, Article 45.1 PA makes provision for three separate cases: i) before an application has been published, the application shall only be open to those parties specified in Article 44 PA; ii) between filing and grant, files shall be open to interested parties or, at the request of the applicant, an independent expert; and iii) after the grant of the patent, files shall be open to inspection by any party on request.

⁸ Article 60.1 PA stipulates that “The extent of the protection conferred by the patent or by the patent application shall be determined by the content of the claims”, hence protection can be said to be closely related to the description of the invention made on applying the patent, or, as stated in the judgment issued by the Spanish Supreme Court on 26 November 1983, “... *protection is subordinate to the certainty that by means of the claims the inventor has modified the essential qualities of the subject matter and to the fact that its use achieves a new industrial result*”.

to the PA (IRPA)]. In any case, the set of claims as a whole must observe the principle of unity of invention (Rule 8 IRPA).

1.1.2. Filing and priority

Applications perfected in Spain are filed with the Spanish Patent and Trademark Office (SPTO), with applicants using the forms and submitting the number of copies laid down in Rules 11 and 12 IRPA and following SPTO instructions. From the moment a patent application is validly filed it gives rise to a right recognized by law⁹ and exerts certain effects. In particular, the filing date is an important factor connected with the legal protection of the subsequent patent and relating to what is known as the **priority right** (Article 22.1 PA).

A patent application assures **initial provisional protection**¹⁰ against use carried out between the date of publication of the application and the date of publication of the notice of grant of the patent (effects are null where an application is withdrawn or finally rejected). It enables the applicant to obtain reasonable compensation in the event of infringement of his provisional rights and may be enforced against use by third parties that would be prohibited if the patent had been granted, provided that the third party is cognizant, or should be aware, that a patent application has been filed for the invention. This interim protection also has effect where use of the invention by a third party or parties takes place before publication, though only where notification of its filing and content has been provided to the party using it (in the case of microorganisms, from when the microorganism has been made available to the public)¹¹. For provisional protection to become fully effective, the patent application in question must eventually mature to grant.

The priority right means that whoever has filed a regular application for a patent of invention in certain countries or with certain bodies is entitled to the right of priority laid down in the Paris Convention in Spain¹². Where the valid filing of the earlier patent claimed has taken place within the preceding

⁹ It may be owned jointly by several persons, in which case the co-owners are governed by Article 72 PA. It may be expropriated for public use or by virtue of its being in the interest of society (Article 73 PA). It may be assigned, used as security, licensed, and used as collateral Articles 74 to 78 PA, Rules 56 to 58 IRPA).

¹⁰ In accordance with the provisions of Article 67 EPC and Article 59 PA.

¹¹ Articles 59.2 and 59.3 PA.

¹² Filings in the Member Countries of the Paris Union for the Protection of Industrial Property and also in certain Member Countries of the WTO may claim priority pursuant to Articles 3 and 4 TRIPS Agreement and Article 4 in SPTO Instruction No. 2/1995 of 2 December 1995 on application of the TRIPS Agreement. Pursuant to the provisions of Article 28 PA, the priority right may also be claimed by nationals of other countries that accord applications filed in Spain a priority right with effects equivalent to those laid down in the Paris Convention.

12 months, the earlier filing date is deemed to be the filing date of the Spanish patent application¹³. Priority is claimed by submitting a declaration with the application. Additionally, patentable inventions that have been shown at an official or officially recognized exhibition are accorded temporary protection for **six months** (Article 7 PA, Rule 20 IRPA).

1.1.3. Procedures for grant: with preliminary examination and without (general procedure)

In national proceedings at the SPTO, patents may be obtained in Spain either under the general procedure or optionally under the procedure including preliminary examination. The two procedures have certain steps in common and certain others specific to each. Some of these are mentioned below in that they are particularly germane to patents as objects of insurance.

The following steps are common to both procedures for grant, whichever is chosen:

- **An application is admitted to prosecution** on verification that it contains or is accompanied by the documents set out in Article 21 PA. If formal requirements are satisfied, a filing or priority date will be accorded within 10 days of receipt of the application.
- If the application is admitted to prosecution, a **formal and technical examination** is carried out *ex officio* when two months have elapsed (Article 119.1 PA). This examination reviews the particulars set forth in the application (formal examination) and checks that the details in the specification (description, claims, abstract, and drawings) conform to the requirements for patents laid down in the Patent Act. An examination of the invention's industrial applicability also takes place at this stage.
- Next, **the application is published** in the Official Industrial Property Gazette (OIPG)¹⁴. At the same time a **specification of the application** will also be issued, containing the description, claims, drawings, and other details (Article 32.2 PA, Rule 26.3 IRPA).

¹³ In accordance with Articles 4C.2 and 4C.3 Paris Convention and Rule 4.2 IRPA multiple priorities originating in different countries may be claimed, but time limits are always counted from the earliest priority date. In accordance with Articles 29.3 and 29.4 PA, during prosecution the particulars shall be examined to ensure that the applicants and subject matter of the applications are the same, and priority shall extend only to those elements for which priority has been claimed.

¹⁴ Publication encompasses the elements set forth in Article 26.2 PA (filing number, title of the invention, etc.) It takes place 18 months after the filing or priority date provided the *ex officio* examination and, where applicable, the report on the state of the art (search report) have been completed, or earlier at the applicant's request.

- Following this, **official actions** may be issued in cases in which the formal and technical examination discloses remediable deficiencies in the documents submitted, and **prosecution is subsequently resumed (notices of both published in the OIPG)**. Prosecution continues when the deficiencies have been remedied.
- The core of the next step is the **report on the state of the art** (search report)¹⁵.
 - The search report sets out everything described in writing, orally, or by any other means available to the public in Spain or abroad before the filing date of the patent application (Article 2.6 PA).
 - In the report the SPTO carries out cursory verification of the novelty and inventive step of the invention covered by the application (Rule 29.4 IRPA)¹⁶.
- This is followed by the filing of third-party observations to the search report, reply, observations, and grant of the patent¹⁷.

Following publication of the search report the applicant has three months in which to request a preliminary examination (PE) or choose to continue the general procedure for granting the patent applied for. Where the applicant does not request PE within that time period, prosecution is continued under the general procedure by default.

Conversely, where it is requested, in all cases at the applicant's **choice**, preliminary examination (PE) proceedings commence¹⁸.

- Following publication of the search report, applicants who so choose have to request the PE within three months¹⁹, thereby giving rise to examination

¹⁵ The time limit for requesting the report is five months from the filing date or priority date of the application or the month following resumption. Where the SPTO has already conducted an international search report (ISR) under the PCT, it takes the place of the other search report.

¹⁶ In the course of the search a distinction is to be made between documents published before the priority date, documents published between the priority date and the filing date of the application, and documents published subsequently. The search report contains a preliminary written opinion as to whether the invention in question appears to fulfil the requirements stipulated by law, in particular (with respect to the search report) whether the invention is novel, entails inventive step, and is industrially applicable. The SPTO notifies the applicant of the search report and publishes it in the OIPG; at the same time the application is published if it was not published previously.

¹⁷ When the patent is granted the patent documents and the documents, observations and comments relating to the search report, and any other documents (any amendments to the claims submitted, etc.) are made available to the public.

¹⁸ It was introduced in Spain in the food sector by Royal Decree No. 812/2000 and subsequently made applicable generally by Royal Decree No. 996/2001.

¹⁹ For the PE request to have effect, an examination fee is payable; it is non-refundable and published in the OIPG.

of the sufficiency of the search and the novelty and inventive step of the subject matter of the patent application.

- Any interested third parties may bring opposition against the patent within two months of publication of the request.
- In addition to and aside from any oppositions that may be filed, the SPTO carries out its own examination into the points referred to above (sufficiency of the search, novelty, and inventive step) and notifies the applicant, who may then respond both to any oppositions and to any objections raised by the SPTO.

Whichever procedure an application follows, patents are granted **without prejudice to third parties and without any assurance by the Government** as to their validity or the usefulness of the subject matter covered (Article 40.1 PA).

The notice of grant is published in the OIPG. Before publication a patent specification is issued containing the details of the notice, the full text of the description, claims and drawings, and the search report, along with citation of any opposition briefs submitted and the OIPG in which the patent is published.

1.2. European application (European patent)

Two schemes for obtaining patent protection coexist in Europe: the national patent systems just referred to above and the European patent system operated by the European Patent Office (EPO)²⁰ in Munich, which is not a legal instrument of the Community *per se*.

The Munich Convention on the European Patent (EPC)²¹ set up a centralized mechanism for prosecuting patents operated by the European Patent Office (EPO), located in Munich. However, after grant a European patent is converted into national patents and is governed by the national laws of the Contracting Parties to the Convention designated in the application. Accordingly, a European patent is not a unitary right but rather a package of national patents, and to date there is no single court of law to handle litigation regarding European patents raising trans-border issues. Acts of infringement,

²⁰ National patents were harmonized by means of various international conventions, including the Convention on the Grant of European Patents (Munich Convention) in 1973, to which all the Member States of the EU have acceded. The Munich Convention lays down a unitary procedure for the grant of European patents. The Convention established the European Patent Office (EPO), which grants patents that are directly convertible into national patents subject to national law.

²¹ The EPC was signed in Munich in 1973, and there are currently 36 contracting states, including all the Member States of the European Union. It is not part of the Community's legal system but rather belongs to the realm of conventional law between countries. The Convention set up a European Patent Organization having, as organs, the European Patent Office (hereinafter "the Office") and the Administrative Council.

counterclaim petitioning for nullity, or nullity proceedings relating to European patents may be subject to different national laws and procedures.

Efforts to create a Community patent are rooted in the attempt by European countries to create a Community patent culminating in the signing, in 1975, of the Luxembourg Convention²², which never came into force²³. Translation is one of the difficulties that has plagued attempts to set up a Community patent system²⁴. A step forward in establishing unitary patent protection in 25 Member States has now been taken, in the framework of enhanced cooperation authorized by the European Council²⁵, with neither Spain nor Italy taking part, whereby the Commission proposed implementing measures²⁶. Regulation No. 1257/2012²⁷ has been approved and provides that European patents will have unitary effect in the participating countries (which do not include Spain). This system will take effect in January 2014 and will depart from the previous situation, in which, following a common administrative prosecution, European patents were divided into what has commonly been referred to as a “bundle of patents”, having separate effects in each member country subject to the

²² The Luxembourg Convention on the Community Patent (CPC) was amended by the Agreement relating to Community Patents, which was concluded in Luxembourg on 15 December 1989 and contains a series of documents including a Protocol on the Settlement of Litigation concerning the Infringement and Validity of Community Patents. The Luxembourg Convention would have converted the national phases of grant into a single, common phase for the Member States.

²³ The European patent system is complicated, fragmented, and costly: obtaining a European patent valid in just 13 member States can cost up to 10 times more than a USA patent. At the present time, an SME desirous of obtaining and maintaining patent protection in all 27 Member States for 20 years would have to pay out an amount estimated at 200,000 euros over that period, in large part comprising translation costs and costs attaching to the requisite prosecution at each of the national offices. See the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, “A single market for intellectual property rights boosting creativity and innovation to provide economic growth, high quality jobs and first class products and services in Europe”, COM (2011) 287 final.

²⁴ The development of machine translation systems is an essential element that would aid in lowering the high cost of translation and bringing patent protection within the reach of undertakings of all sizes. Machine translation would not only make patent protection more affordable, it would also furnish access to information on patents in the different languages from the application stage. The EPO started an automatic translation system in 2010.

²⁵ Council decision of 10 March 2011 authorising enhanced cooperation in the area of the creation of unitary patent protection, OJ L 76, 2011. The participating countries are Belgium, Bulgaria, the Czech Republic, Denmark, Germany Estonia, Ireland, Greece, France, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, the Slovak Republic, Finland, Sweden, and the United Kingdom.

²⁶ COM (2011) 215 final and COM (2011) 216 final.

²⁷ Regulation No. 1257/2012 of the European Parliament and of the Council of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection (OJ L 361 2012).

particularities of each country. In order to confer uniformity on the practical application of this new right, the Regulation provides for the establishment of a Unified Patent Court. Despite the advantages of unitary protection, this new system – which does not include Spain – has not escaped criticism²⁸. The system is to be implemented based on the Agreement on the Unified Patent Court, an international treaty with the 25 Member States involved in the project participating, plus Italy (with Spain staying outside for the time being)²⁹.

Pursuant to Opinion 1/09 of the Court of Justice of the European Union, the Unified Patent Court, though an international court, will be a part of the jurisdictions of the Member States and will be called upon to enforce EU law and will be entitled to refer requests for preliminary rulings to the Court of Justice. In terms of composition, the Court will consist of a Court of First instance having a Central Division (headquartered in Paris with subdivisions in London and Munich and national or regional divisions) and a Court of Appeal having its seat in Luxembourg.

The enhanced cooperation is based on Part IX EPC, whereby any group of Contracting States may provide that a European patent may only be granted jointly in respect of all those States. Regulation No. 1257/2012 is a special agreement within the meaning of Article 142 EPC as well as a regional patent treaty in accordance with Article 45.1 Patent Cooperation Treaty (PCT) and a special agreement within the meaning of Article 19 Convention for the Protection of Industrial Property signed at Paris on 20 March 1883 and last amended on 28 September 1979.

1.3. PCT – International patents

The Patent Cooperation Treaty (PCT) of 19 June 1970, last modified on 3 February 2001, implemented a single international procedure for filing patent applications in the various Contracting States³⁰.

It does not lay down any procedure for granting patents, nor does it replace national grants, **it is merely a means of unifying prosecution** to lower costs and extend certain time limits. This procedure may be undertaken in one of two ways:

²⁸ The Max Planck Institute in Hamburg released a critical overview of the “unitary patent package”. See The unitary patent package: twelve reasons for concern, in Max Planck Institute for Intellectual Property and Competition Law, 17 October 2012, available http://www.ip.mpg.de/en/pub/publications/opinions/unitary_patent_package.cfm (last accessed on 23 February 2013).

²⁹ The court will have competence in respect of both European patents with unitary effect and European patents without unitary effect and will be subject to European Union law. The Agreement was signed in Brussels on 19 February 2013.

³⁰ <http://www.epo.org/patents/law/legal-texts/html/epc/2000/e/contents.html>.

- **Directly as an international patent application under the PCT** in one of the contracting countries.
- **Based on a national or regional patent application** within the international priority period of 12 months from the filing date.

Here is a concise summary of prosecution of an international patent under the PCT:

- **Receipt and examination** of the sufficiency and suitability of the documents submitted and whether Convention priority is claimed.
- Nine months after the filing date, release of the **search report** citing documents relating to the subject matter to be patented, together with the **opinion on the search report** (a preliminary written, non-binding opinion as to whether the invention is novel, involves inventive step, and is industrially applicable). Where the application claims Convention priority, the report shall be issued three months after filing of the PCT application.
- **Between 12 and 16 months after filing**, amendment of the claims, if appropriate, may be required on the basis of the search report, amendment not to introduce new matter.
- **The PCT application is published 18 months after filing**, though early publication of the international application may be requested at any time.
- Twenty-two months after the filing or the priority date, or three months after the written opinion to the search report, the applicant may request a **preliminary examination**, more in depth and broader in scope than the previous opinion, for information purposes. It provides a formal opinion as to the novelty, inventive step, and industrial applicability of the claimed invention.
- **Entry to the national and/or regional phase** takes place within 30 months (with some exceptions, e.g., 33 months in Israel). This entails formalizing the patent application in each country or group of PCT member countries of interest.

This **concludes the stage of direct involvement of the PCT system** in the case³¹.

³¹ The following countries are currently contracting parties: Albania, Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Croatia, Hungary, Ireland, Iceland, Italy, Liechtenstein, Lithuania, Luxembourg, Latvia, Monaco, Former Yugoslav Republic of Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Sweden, Slovenia, Slovakia, San Marino, and Turkey. Other countries, e.g., Bosnia and Herzegovina and Montenegro, recognize European patents on request.

2. CONTENT

2.1. Ownership

Inventions are the result of activity by “inventors”, who thereby secure a position in which dominance is two-fold: personal or moral rights and property rights.

- On the one hand, the inventor holds inalienable and non-transferable moral rights to be recognized as the author of the invention (Article 14 PA).
- Further, he holds the right to use the invention directly or to assign it.
- Additionally, he holds the right to claim ownership of the patent for himself or his successors (Article 10.1 PA) or of a patent he has acquired by means of conveyance.

2.2. Patent rights

A patent confers on the owner a series of rights that make up the core of the legal protection of inventions generally. The specific content or scope of each patent is determined by the content of the **claims**. Thus, in defining the subject matter for which the patent is sought, they should be clear and concise (Article 26 PA), though drawings and the description may be used to help interpret the claims (Article 60.1 PA)³².

The rights making up the content of a patent are both positive and negative.

- The positive rights attaching to patent protection encompass manufacturing, offering for sale, marketing, and using the patented subject matter; and in the case of processes, marketing and using the goods produced directly by means of the patented process and import or possession of the said goods for this purpose³³.
- The negative rights entitle the patent holder to prohibit third parties from any act of direct or indirect appropriation or use.

³² The claims define the subject matter of the invention and the scope of protection, and the drawings and the description are to be taken into account for purposes of interpretation (judgment issued by the Provincial Appellate Court of Barcelona, Section 15, Civil Division, 2 and 3 May 2005).

³³ For process patents Article 61 PA provides that where there is a process patent in Spain covering the manufacture of goods manufactured or prepared outside Spain and brought into Spain, the patent holder shall hold the same rights against the goods brought into Spain (offering for sale, marketing, and using the goods manufactured elsewhere and brought into Spain) as he holds against goods manufactured under the patented process within Spain. Article 61.2 PA provides for a rebuttable presumption, i.e., where the subject matter of a patent is a process for the manufacture of new goods or substances, unless there is proof to the contrary any goods or substances with the same characteristics shall be deemed to have been obtained using the patented process.

- Acts of direct exploitation (Article 50.1 PA) are:
 - Manufacturing, offering for sale, marketing, or using a product that is the subject matter of a patent, or importing said product for any of these purposes.
 - Using, or offering the use of, a patented process by a third party who is aware, or circumstances make it obvious, that use of the process without the rightholder's consent is prohibited.
 - Offering for sale, marketing, or using goods produced directly by a patented process, or importing or possessing the said goods for any of these purposes.
 - **Acts of indirect exploitation** consist³⁴ of supplying or offering to supply the means or equipment for putting the patented subject matter or an essential element thereof into practice. For the rightholder to be able to prevent these acts from being carried out, the third party committing these acts must either be aware, *or circumstances must make it obvious*, that the said means are suitable for and intended for putting the patented invention into practice, and that the means are supplied, or an offer to supply is made, to persons who are not authorized to put the invention into practice.

The duration of patent protection is **20 years from the filing date, unextendible**, though protection has effect from publication of the notice of grant in the Official Industrial Property Gazette.

2.3. Limitations

These are regulated in Articles 52 to 58 PA.

- By way of an underlying premise, in accordance with Article 57 PA, exploitation of the patented subject matter or process may not violate the law, morality, public order, or public health, and shall in any case be subject to the temporary prohibitions or limitations established by law.
- In addition, compulsory licensing may be in force for the reasons laid down in Article 86 PA.
- Furthermore, the patent holder is not entitled to prevent certain acts of exploitation from being carried out:

³⁴ Articles 51 PA and 64.2 PA, inspired in the unratified Luxembourg Convention on the Community Patent ("*... all those who engage in any other exploitation of the subject matter protected by the patent – other than manufacture, import, or utilization of the process – shall be liable for damages only where they have been notified by the patent holder of the existence of the patent (duly identified) and of its infringement and they have been required to cease the infringement, or where their conduct has been culpable or negligent ...*").

- **Private acts** carried out for non-commercial purposes.
- **Acts carried out on the invention for technical and scientific experimental purposes, not “using the invention”.** These are experiments aimed at improving or confirming the underlying technical inventive principle as such. For generic medicines this includes studies and trials conducted to secure marketing authorization in Spain or other countries (known as the Bolar provision)³⁵.
- Preparation of medicines by **compounding in a pharmacy for individual use**.
- **Use of the invention on board vessels of other countries of the Paris Union for the Protection of Industrial Property** (body of the vessel, machinery, tackle, gear and other accessories when such vessels temporarily or accidentally enter the waters of Spain).
- Subsequent to **exhaustion**³⁶, which means, pursuant to Article 52.2 PA, that goods (the patented goods or goods produced by a patented process) placed on the market in the European Economic Area by the patent holder or a third party authorized by the patent holder are excluded from protection under the patent.
- **By reason of farmer’s/rancher’s privilege**, regulated under Article 53 PA as per the wording laid down in Act No. 10/2002. Under the privilege a farmer who acquires protected plant propagating material for use on his own farmstead is entitled to use the product of the harvest for

³⁵ Final Provision 2 in the Safeguarding and Rational Use of Medicines and Sanitary Products Act, Act No. 29/2006 of 26 July 2006, amending Article 52.1.b) PA. The issue arose in the famous case of Roche Products Inc. vs. Bolar Pharmaceutical Co. Inc. in the USA in 1984, in which the Court of Appeals of the Federal Circuit and subsequently the Supreme Court limited the “experimental use exception” (a constraint on the *jus prohibendi*, or the exclusive right conferred by the patent right) to experimentation for scientific purposes, wholly excluding use for commercial purposes. To circumvent this judgment a law (known as the Hatch-Waxman Act) was passed in 1985 containing a provision (the so-called “Bolar provision”) providing that the manufacture, use, offering for sale, or sale of a patented invention solely for uses reasonably related to obtaining administrative marketing authorization for medicines shall not constitute infringement of a patent. This law is the source of the so-called “Bolar clause”. The Patent Acts of EU countries generally incorporated the experimental use exception as drafted in the CPC in 1975 (which text did not enter into force), to the effect that the patent right did not extend to experimental use of the patented product or process, the meaning as worded in Article 52.1.b) of Spain’s PA. As already mentioned, a form of the Bolar provision was included in Community (EU) law by the Directive of 31 March 2004 (transposed into Spanish law in 2006). For commission of infringement to be precluded, the third-party acts must be shown not to have exceeded this scope.

³⁶ In the final analysis, exhaustion of the patent right within the EU/EEA has been laid down in Community case law in the judgments issued by the Court of Justice of the European Communities on 31 October 1974 in Case C-15/74, Sterling Drug; on 14 July 1981 in Case C-187/80 Merck; and on 9 July 1985 in Case C-19/84 Pharmon).

subsequent reproduction or multiplication on the farmer's own holding. Where a farmer or rancher acquires breeding animals or reproductive material from the patent holder or with his consent, the said farmer or rancher is authorized to use the livestock for continued agricultural or livestock purposes but shall not be authorized to sell the livestock or reproductive material within the framework of commercial activity or for that purpose.

- **By reason of earlier use.** This right is set forth in Spain in Article 54 PA, to protect the rights of parties who have been using the patented subject matter in good faith, subject to strict constraints.
- **By reason of dependent patents.** Article 56 PA provides that where the subject matter of a later patent cannot be exploited without using the invention protected by an earlier patent, this situation will not preclude the validity of the junior patent. The dependent relationship means that in order to be able to exploit the subject matter of the other patent, the holder of each of the patents will need the consent of the holder of the other or a compulsory license regulated under Article 89 PA.
- **By reason of exploitation pursuant to a statutory monopoly,** backed by a law conferring on the holder of the monopoly the right to exploit a patented invention with the consent of the patent holder (or, it is to be understood, a court; Article 58.2 PA).

2.4. Enforcement and rights *in rem*

The rights ensuing from the grant of a patent may be enforced directly by the patent holder or by other parties subsequent to acts of conveyance (Article 10.1 PA).

As a property right a patent can be assigned a monetary value and can be used for transactions under the law: co-ownership, expropriation, usufruct, security interest, assignment or conveyance, licensing. Articles 74.2 PA and 79.2 PA lay down the acts and transactions for which a patent may be used, which need to be in writing to be valid and will only have effect vis-à-vis third parties acting in good faith upon recordal on the SPTO's Register of Patents.

3. INFRINGEMENT

Acts infringing patent rights comprise acts that obstruct or interfere with the unhindered enjoyment of direct or indirect exploitation of a patent within the scope of protection (see above). In this respect distinctions should be drawn between product patents and process patents and between acts of direct infringement and acts of indirect infringement.

- Direct infringement includes:
 - Manufacture, offering for sale, marketing, or use of goods protected by a patent or importing or possessing the said goods for any of these purposes (Article 50.1.a) PA). Carrying out these activities is in itself an act of infringement, irrespective of whether or not the infringer is cognizant that he is infringing a patent.
 - Use of, or offering for use, a process protected by a patent by a third party who is aware, or circumstances make it obvious, that use of the process without the rightholder's consent is prohibited (Article 50.1.b) PA). Despite the wording of this Article, legal opinion takes the view that where a process is used, infringement occurs even when the other party is not aware that an infringement is taking place³⁷.
 - Offering for sale, marketing, or using goods produced directly by a patented process, or importing or possessing the said goods for any of these purposes (infringing the patent rights pursuant to Article 50.1.c) PA).
- Indirect infringement consists of acts where a patented invention is used or exploited indirectly, for instance, by supplying or offering to supply unauthorized parties the means necessary to put the patented subject matter into practice.
 - Infringement arises merely by making the offer, even if there is no follow-through.
 - For infringement to occur, the party making the offer or delivery must be aware that the means are suitable for and intended for putting the patented invention into practice, or this is made obvious by the circumstances surrounding the case.

Biotechnology patents have certain special properties with a bearing on the scope of infringement (Articles 50.2, 50.3, and 50.4 PA as per the amended wording in Act No. 10/2002):

- Where the subject matter of a patent is a biological material, infringement may arise from acts of a third party concerning any biological material obtained by reproduction or multiplication starting from the patented biological material, provided that the material in question possesses the properties derived from the invention described in the patent and the material obtained by reproduction or multiplication of the patented material possesses those same properties.

³⁷ Botana Agra MJ: "Efectos de la patente" ["Effects of patents"], in Fernández-Novoa C, Otero Lastres JM and Botana Agra MJ: *Manual de la Propiedad Industrial [Industrial Property Handbook]*, Marcial Pons, Madrid, 2009, pp. 159-176, see in particular p. 162.

- Where a patent concerns a process suitable for producing biological material, infringement extends to acts concerning the biological material that possesses the same properties obtained by the patented process by reproduction or multiplication in identical or differentiated form.

4. APPEALS AND LITIGATION CONCERNING PATENTS

4.1. Administrative appeal proceedings

Filing a patent application gives rise to administrative proceedings that may or may not end in grant. Administrative decisions affecting the applicant's rights will be issued over the course of prosecution. **Ordinary administrative appeals** may lie from the decisions issued by SPTO officials pursuant to the Act Regulating the Legal System of the Public Administrations and Common Administrative Procedure, Act No. 30/1992.

4.2. Contentious-administrative appeal proceedings

According to Article 47.1 PA, any interested party, as well as the applicant, is entitled to lodge a contentious-administrative appeal against the grant or rejection of a patent without having had to first bring opposition during the proceedings for the grant of a patent undergoing preliminary examination. **According to Article 47.2 PA, such an appeal may relate only to the omission of essential steps in the proceedings or to issues on which the Administration may rule during the granting procedure.**

In accordance with Article 47.3 PA no appeal claiming lack of novelty or inventive step of the subject matter of the application may be lodged against a patent granted subsequent to the ordinary granting procedure, **though contentious-administrative appeals may be lodged with respect to substantive issues relating to patents undergoing prosecution that includes preliminary examination³⁸.**

4.3. Assertive civil proceedings

This section deals with actions by the patent holder to enforce the positive or negative rights conferred by the patent.

4.3.1. General questions

Article 62 PA provides that the patent holder may bring, before the tribunals of ordinary jurisdiction, the relevant actions of any kind or nature against those

³⁸ Judgment issued by Chamber 3, Section 3, of the Contentious-Administrative Appeal Division on 4 July 2007.

who infringe his right and may petition for the necessary measures to safeguard that right.

The different civil actions available for enforcement are enumerated in Article 63 PA, though legal opinion holds that it is an unrestricted enumeration of proceedings.

- Cessation of the acts that infringe the patent.
- Compensation for any harm sustained.
- Seizure of any items produced or imported in breach of the patent, as well as of any means used for the production thereof or for implementing a patented process.
- Claiming ownership of any items or means seized, where feasible.
- Adoption of the measures necessary to prevent continued infringement of the patent, in particular, transformation of the items or means seized, or their destruction where essential to prevent infringement of the patent.
- Publication of the judgment against the infringer by means of announcements and notices to interested parties.

Under Article 62 PA, **patent holders are the parties entitled** to take action in civil proceedings; furthermore, Article 124.1 PA provides that **registered licensees** on record on the SPTO's Register of Patents also have some standing to sue.

- **Exclusive licensees** may bring, in their own names, any and all actions which the patent holder is entitled to take against third parties who infringe his right.
- Barring an agreement to the contrary, **non-exclusive licensees** are entitled to sue (Article 124.2 PA) where, after being required to take action by means of a notification sent via notary, the patent holder refuses or fails to do so within three months of receipt of the notification³⁹.
- **A party who acquires a patent** may only claim compensation for damages sustained from the time the patent was acquired, that is, from the time he becomes the patent holder.

There is a time bar on civil actions of five years from the time an action could first have been brought (from when the patent holder becomes aware of the infringement) (Article 71.1 PA)⁴⁰.

³⁹ Judgments (civil proceedings) of 18 October 1995 and 19 January 2000: For a licensee to be able to institute legal proceedings, the license must be on record on the SPTO's Register of Patents.

⁴⁰ Counted from the day on which the rightholder became aware of infringement of his right and of the identity of the infringer (judgment of the Provincial Appellate Court of Saragossa, Section 2, 16 January 2001).

- The **burden of proving** sales of the infringing goods falls on the party making the complaint in accordance with the general principles laid down in Article 217 of the Law on Civil Procedure (LCP).
- Nevertheless, the **ex re ipsa** doctrine holds that injury results as a logical consequence of the unlawful act itself.

4.3.2. Competence

Article 123 PA provides that the courts of the ordinary jurisdiction shall be competent to hear all litigation arising as a consequence of the exercise of actions of any type or nature pursuant to the Patent Act, namely, civil proceedings (Articles 11 and 63 PA) and contentious-administrative appeal proceedings (Article 47 PA).

Competence in civil proceedings relating to industrial property matters belongs to the **Mercantile Courts** (Article 86ter.2, Organic Act Regulating the Judiciary Branch, Organic Act No. 6/1985 of 1 July 1985), with jurisdiction belonging to the Mercantile Court at the venue where the **defendant is domiciled**. Competence for patent infringement proceedings likewise pertains to the Mercantile Court at the venue where the **infringement is taking place or producing its effects** (Article 125.3 PA). Appeals against judgments by the first instance Mercantile Courts lie with the corresponding **Provincial Appellate Court** (Article 80.1, Organic Act No. 6/1985).

In terms of procedure, ordinary proceedings follow the rules laid down in Article 249 LCP.

4.3.3. Discovery/verification of facts and interlocutory measures

Articles 129 to 132 PA regulate the formalities for the verification of facts, and are a special case of the provisions laid down in Article 256.1 LCP.

Article 256 LCP was amended by Act No. 19/2006⁴¹, which pointed out in its Preamble that Directive 2004/48/EC⁴² obligated the EU Member States to provide, in the context of civil proceedings, means for obtaining information on the source and distribution channels of the goods or services materializing the infringement of intellectual and industrial property rights⁴³.

⁴¹ Act expanding protective measures for intellectual and industrial property rights and laying down rules of procedure for facilitating the application of diverse regulations, Act No. 19/2006 of 5 June 2006.

⁴² Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights.

⁴³ The Recitals to Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights state that *Given that evidence is an*

4.3.3.1. Formalities for the verification of facts

Regarding formalities for the verification of facts, Article 129.1 PA authorizes parties entitled to bring actions ensuing from patent infringement to petition the court to conduct urgent formalities for the verification of facts where the exclusive right granted under a patent may be infringed, without prejudice to petitioning such measures under Article 256.1 LCP (Act No. 1/2000 of 7

element of paramount importance for establishing the infringement of intellectual property rights, it is appropriate to ensure that effective means of presenting, obtaining and preserving evidence are available. The procedures should have regard to the rights of the defence and provide the necessary guarantees, including the protection of confidential information. For infringements committed on a commercial scale it is also important that the courts may order access, where appropriate, to banking, financial or commercial documents under the control of the alleged infringer. Article 6, Evidence, provides that 1. *Member States shall ensure that, on application by a party which has presented reasonably available evidence sufficient to support its claims, and has, in substantiating those claims, specified evidence which lies in the control of the opposing party, the competent judicial authorities may order that such evidence be presented by the opposing party, subject to the protection of confidential information. For the purposes of this paragraph, Member States may provide that a reasonable sample of a substantial number of copies of a work or any other protected object be considered by the competent judicial authorities to constitute reasonable evidence.* 2. *Under the same conditions, in the case of an infringement committed on a commercial scale Member States shall take such measures as are necessary to enable the competent judicial authorities to order, where appropriate, on application by a party, the communication of banking, financial or commercial documents under the control of the opposing party, subject to the protection of confidential information.* Regarding the measures for preserving evidence, Article 7 provides that 1. *Member States shall ensure that, even before the commencement of proceedings on the merits of the case, the competent judicial authorities may, on application by a party who has presented reasonably available evidence to support his/her claims that his/her intellectual property right has been infringed or is about to be infringed, order prompt and effective provisional measures to preserve relevant evidence in respect of the alleged infringement, subject to the protection of confidential information* 2. *... shall ensure that the measures to preserve evidence may be subject to the lodging by the applicant of adequate security or an equivalent assurance intended to ensure compensation for any prejudice suffered by the defendant* 3. *... that the measures to preserve evidence are revoked or otherwise cease to have effect, upon request of the defendant, without prejudice to the damages which may be claimed, if the applicant does not institute, within a reasonable period, proceedings leading to a decision on the merits of the case before the competent judicial authority, the period to be determined by the judicial authority ordering the measures where the law of a Member State so permits or, in the absence of such determination, within a period not exceeding 20 working days or 31 calendar days, whichever is the longer. Where the measures to preserve evidence are revoked, or where they lapse due to any act or omission by the applicant, or where it is subsequently found that there has been no infringement or threat of infringement of an intellectual property right, the judicial authorities shall have the authority to order the applicant, upon request of the defendant, to provide the defendant appropriate compensation for any injury caused by those measures.* Article 8 deals with the right of information: 1. *Member States shall ensure that, in the context of proceedings concerning an infringement of an intellectual property right and in response to a justified and proportionate request of the claimant, the competent judicial authorities may order that information on the origin and distribution networks of the goods or services which infringe an intellectual property right be provided by the infringer and/or any other person who: (a) was found in possession of the infringing goods on a commercial scale; (b) was found to be using the infringing services on a commercial scale*

January 2000)⁴⁴. Means for discovery and preservation of evidence shall only be ordered where, **in the circumstances of the case, patent infringement is inferable and cannot be verified without resorting to the means being sought**⁴⁵.

The proceedings commence when a petition is filed by the party entitled to institute a patent infringement action. Article 129.4 PA provides that when ordering the requested formalities, the court shall set the amount of **security to be posted by the applicant** to cover any damages that may ensue. According to Article 130 PA, during the formalities for verification of facts, the court, assisted by an expert or experts designated for the purpose, and after having heard the arguments of the party applying for the formalities, shall determine whether the **machines, apparatus or equipment** inspected could be used to carry out the alleged infringement of the patent.

Where the court deems that the means inspected cannot be presumed to have been used to infringe the patent, it shall terminate the formalities and order a separate record of the formalities to be made, to be kept secret even from the applicant, who shall not be apprized concerning the results⁴⁶. Otherwise, the court shall draw up a detailed description of the machines, apparatus, processes, or installations by means of which the alleged infringement was presumably carried out, ensuring that the formalities for verification of facts shall not be used to violate trade secrets or to carry out acts of unfair competition.

The restrictive nature of these formalities is underscored by Article 131 PA, which limits **certifications or copies of the findings of the verification formalities to those meant for the party named in the formalities and those necessary to enable the applicant to institute the corresponding legal proceedings**, adding that the applicant may use that documentation only as a basis for such proceedings and shall be enjoined from disclosing it to third parties. Indeed, if a complaint is not lodged within **two months** from the date of completion of the verification formalities, the formalities shall be without effect and shall not be used in any other legal proceedings (Article 131.2 PA)⁴⁷.

By way of further restraint on having recourse to these verification formalities, the party named in the formalities for verification of facts may claim compensation for any expenses and damages ensuing therefrom, including ceasing gain, without prejudice to the general liability for damages that the

⁴⁴ Wording according to Act No. 19/2006 of 5 June 2006.

⁴⁵ See the judgment issued by the Supreme Court, Civil Division, Section 1 on 4 March 2005.

⁴⁶ Article 130.2 PA according to the wording set out in Article 8 of the Act Reforming Procedural Legislation to Implement the New Office of the Judiciary, Act No. 13/2009 of 3 November 2009.

⁴⁷ See the judgment issued by the Provincial Appellate Court of Saragossa, Civil Division, Section 5, on 22 September 2006.

applicant may incur pursuant to the formalities, as may be applicable (Article 132 PA).

4.3.3.2. *Compiling evidence, preservation, and right of information*

Article 256-1, indent 8, LCP stipulates that *access to **banking, financial, or commercial documents under the control of the alleged infringer** shall be regulated as the content of separate verification proceedings.*

This applies equally to infringements of intellectual and **industrial property** rights committed in the form of **acts carried out for commercial purposes**. The content of these verification proceedings can also take the form of an evidence stage to facilitate compilation of evidence in the course of the legal proceedings. This strengthens the position of a future complainant, enabling him to obtain, before instituting the complaint, material for which the distinction between the strictly “preparatory” purpose that has been a traditional feature of verification proceedings and the “evidentiary” usefulness of that same material has certainly been blurred⁴⁸.

Therefore, in addition to filling the purpose of preparing the complaint, the material thus compiled may also be of strictly evidentiary value to the applicant in the future proceedings.

4.3.3.3. *Interlocutory measures (PA)*

Their purpose is to ensure that a future judgment cannot be circumvented, and they are always provisional and accessory in nature. They are regulated in Articles 133 to 139 PA⁴⁹ within the framework of Articles 721 to 747 LCP.

These measures are intended to make certain that the judgment that may be handed down will be effective:

- Article 133 PA requires the party with entitlement to undertake legal proceedings, when applying for such measures, to show that the patent cited as grounds for the proceedings is being exploited in compliance with the terms of Article 83 PA (by being worked in Spain or in the territory of a member country of the World Trade Organization and that working suffices to satisfy demand in the national market) or that serious and effective preparations to that end have been undertaken.
- Measures may also be requested against the defendant or against a third party to be named as the defendant at the appropriate time, or against

⁴⁸ Act No. 19/2006 introduces wording relating to documentary evidence into Article 328.3 LCP, nearly identical in content to Article 256-1, indent 8.

⁴⁹ Worded according to Act No. 19/2006.

intermediaries used by that party, even where their actions do not, in themselves, constitute infringement, provided that the defendant is not protected by a right of prior use (Article 136.3 PA).

Article 134 PA sets out an enumerations of measures that can be taken, including but not restricted to:

- Cessation of the acts infringing the applicant's rights.
- Prohibition of those acts where there is reason to believe that they are about to be put into practice.
- Seizure and impoundment of produced or imported items that infringe the applicant's rights and of the means intended exclusively for the production or carrying out of a patented process.
- Security for possible damages.
- Entries on public registers.

These measures are ordinarily applied for on filing **the main complaint**, though they may be requested **beforehand**. In this case, however, **they shall be without effect if the complaint is not lodged within 20 days** from grant of the measures (Article 730.2 LCP). In addition, where measures are cancelled, the court will assess the amount of damages to be paid to the defendant out of the security posted by the applicant, and the damages awarded may be increased by means of the liability proceedings provided for in Article 139 PA.

The court may also be petitioned to grant interlocutory measures or a bond in their place where the first instance judgment is appealed.

- In this case, the appellee is notified of the appeal and has three days to apply for interlocutory measures (where the complainant is the appellee) or for security to be posted (where the defendant is the appellee).
- The decision to grant interlocutory measures or to order security to be posted is taken by the court of first instance where no order in this respect had previously been issued or the amount ordered was insufficient.
- On granting interlocutory measures the court shall also set the **security to be posted to cover damages** that may be sustained by the defendant.
- In addition, where the measures restrict the defendant's activities, the court shall set security (either a bank guarantee or an actual bond) to take the place of the measures (Article 139.2 PA).

Interlocutory measures cease to have effect where the first instance court's judgment is adverse to the complainant and hence the measures no longer have the benefit of guaranteeing the outcome and, as well, where a favourable judgment is subsequently vacated (Article 139.2 PA).

4.3.4. Negative declaratory actions

Provision for this type of proceedings is made in Article 127 PA, and it is intended to petition for a judgment declaring that the complainant's activities do not infringe another party's rights.

- The party entitled to bring this type of complaint is anyone who carries on industrial activity and is fearful of being sued for patent infringement.
- Before making a petition of this kind, the interested party must first call upon the patent holder to state his position regarding the activity in question and the patent. Where the patent holder fails to respond within one month, or where the petitioner does not agree with the response obtained, he may then petition the court. This type of action may be brought together with nullity proceedings. The court will issue a declaratory judgment where it is satisfied that the petitioner's activity does not infringe the patent.

4.3.5. Legal action petitioning for cessation

The purpose is to stop the acts that allegedly infringe the patent right from being carried out.

- The basis for an action of this type is proving that an act of infringement has been carried out, **either deliberately or unintentionally**, and that there is a likelihood that the infringement will continue or be repeated over time.
- Standing to be named in cessation proceedings attaches to an infringer committing direct infringement, though action may also be taken against intermediaries used by another party to commit infringement (indirect infringement), including information society service providers, providers of data transmission services, etc., exception made of the provisions laid down in the Act regulating Information Society and E-Commerce Services, Act No. 34/2002.

The time bar on cessation actions is **five years** from the time the acts infringing a patent finally come to an end.

4.3.6. Legal action petitioning for measures to prevent continued infringement of the patent

This type of action is supplementary to a petition for cessation of patent infringement and is intended to secure different kinds of measures necessary to prevent continued infringement.

- From transformation of seized goods or means
- To their destruction where this is deemed necessary to prevent infringement from continuing.

These measures may be ordered against an infringer or against intermediaries (indirect infringers) whose services are necessary, in order to prevent continued infringement of the patent right.

4.3.7. Legal action petitioning for indemnification

This is a claim for damages as an indemnity for harm sustained by the patent holder and for profits lost on account of the infringement.

- The basis for indemnification is injuries sustained⁵⁰.
- The petition may cover expenditures made for investigations carried out to verify the infringement (Article 66 PA) and moral damages where the manufactured, imported, or marketed items or processes are defective or improperly packaged or presented (Article 68 PA)⁵¹.

To be successful, the complainant must prove the damage caused by the infringement and the causal relationship between the infringement and the harm sustained, though calculation of damages may be deferred pending enforcement of the judgment⁵².

In calculating the damages, both losses sustained and ceasing gain (the value of revenues the patent holder does not earn because of the infringement) are taken into account. They may, in addition, include expenditures made for investigations to verify the infringement and compile evidence (Article 66 PA) and injuries in the form of discredit caused by flawed implementation or improper packaging or presentation of the invention (Article 68 PA).

The aggrieved party may choose between:

- a) The negative economic consequences of infringement, such as profits the patent holder would have obtained absent the infringement, or profits obtained by the infringer.
- b) The amount the infringer would have had to pay the patent holder for a license bearing in mind the economic value of the patent, its duration at the time of the infringement, and licenses that may have been issued at the time of the infringement.

Pursuant to Article 67 PA, in setting the amount of damages, the court may take into account the profits resulting from goods or items that

⁵⁰ Judgment no. 443/2010 issued by the Provincial Appellate Court of Barcelona, Section 15, on 13 December 2010.

⁵¹ For obvious reasons, as explicitly provided in Articles 70 and 71 PA, petitions for damages may not be brought against parties who are exploiting items put on the market by other parties who have already paid adequate damages for injuries caused. This is intended to prevent unjust enrichment on the part of the patent holder.

⁵² Judgment issued by the Spanish Supreme Court, Civil Division, on 17 July 2008.

contain the patented invention as an essential commercial element, where inclusion of the patented subject matter is a determining factor for their market value (Article 67.2 PA); that is to say, the value of the items that contain the patented subject matter may be taken into account in assessing damages, where the patent is an essential factor in determining their value. By contrast, where the patent holder has exploited the patent during the period of the infringement, the value of amounts received by the patent holder (Article 69 PA) and the value of goods given into the possession of the patent holder shall be deducted from the damages.

The parties liable shall be:

- Parties who manufacture, import, or use the patented goods or processes (**direct infringers**). They are subject to strict liability⁵³, and proof of damages is not required (judgment issued by the Spanish Supreme Court, Civil Division, on 1 December 2005).
- And/or parties (Article 64 PA) who carry out other, ancillary acts of export or marketing (**indirect infringers**), who are liable for damages where:
 - They have been notified by the patent holder of the existence of the patent, duly identified by its number (Article 46.1 PA) and of the infringement and have been enjoined to stop.
 - The infringement is culpable or negligent.

A party who acquires a patent has to prove the harm sustained and may only claim damages from the time the patent was acquired, that is, from the time he becomes the patent holder⁵⁴, and pursuant to the provisions of Article 71.2 PA, he may not claim damages for any acts committed more than five years earlier.

4.3.8. Legal action petitioning for seizure

Once a declaratory judgment has been issued ruling that a patent has been infringed, proceedings may be brought petitioning for seizure. The purpose is to have the **manufactured or imported goods that infringe the patent right** seized, along with the **means used to commit the infringement** or carry out the patented process.

4.3.9. Legal action claiming ownership

Actions to claim ownership are intended to transfer ownership of the seized goods or means to the patent holder.

⁵³ Judgment issued by the Spanish Supreme Court, Civil Division, on 17 December 2001.

⁵⁴ Judgment no. 443/2010 issued by the Provincial Appellate Court of Barcelona, Section 15, on 13 December 2010.

- The amount of the goods transferred is to be deducted from the damages awarded in the above-mentioned action petitioning for indemnification, where one has been brought and damages awarded.
- Where there is excess value, the patent holder may have to reimburse the infringer, but only where a petition for indemnity has previously been brought and damages assessed. In contrast, where there has been no taxation of damages by the courts, no reimbursement of excess value is required.

4.4. Criminal proceedings

Infringement of a patent of invention is a criminal offence defined in Article 273 of the Criminal Code (CC). Article 273.1 prescribes that *“he who, in the knowledge of the existence of the corresponding registration, manufactures, imports, possesses, uses, offers, or places in the channels of trade the subject matter protected by the said right for industrial or commercial purposes and without the consent of the owner shall be liable to the penalties of imprisonment for a term of from six months to two years and a fine of from 12 to 14 months.”*

Article 273.2 CC defines the offence consisting of infringement of a patented process, prescribing the same penalties and distinguishing between he who uses or offers for use a process protected by a patent and he who possesses, offers, places in the channels of trade, or uses goods obtained directly by the patented process. This Article relates to infringement of process patents and differentiates between the patented process and the goods obtained directly using the patented process.

- In any case, briefly put, to fulfil the requirements for a criminal offence, the infringer must be aware that there is a patent and that he is infringing.
- The offender may be any third party, businessman, or individual, though that party must carry out his activity for industrial or commercial purposes, must not have the consent of the patent holder, and must be aware that there is a granted patent.

Criminal offences (Article 273.1 CC) encompass manufacture, import, possession, use, offering, and placing in the channels of trade of the goods protected by the patent.

5. GLOSSARY OF TERMS

Action (Legal action)

- A complaint, legal proceedings.

Action claiming ownership

- The purpose is to transfer ownership of the seized goods or means to the patent holder. The amount of the goods has to be calculated, because it is to

be deducted from the damages awarded in the action petitioning for indemnification, where one has been brought and damages awarded.

Action petitioning for indemnification

- This is a claim for damages for harm sustained by the patent holder and for profits lost on account of the infringement. The petition may cover expenditures made for investigations carried out to verify the infringement (Article 66 PA) and moral damages where the manufactured, imported, or marketed items or processes are defective or improperly packaged or presented (Article 68 PA). Obviously, as explicitly provided in Articles 70 and 71 PA, petitions for damages may not be brought against parties who are exploiting items put on the market by other parties who have already paid adequate damages for injuries caused. This is intended to prevent unjust enrichment on the part of the patent holder. In calculating the damages, the aggrieved party may choose between:

Action petitioning for seizure

- The purpose is to have the manufactured or imported goods that infringe the patent right seized, along with the means used to commit the infringement or carry out the patented process.
 - The negative economic consequences of infringement, such as profits the patent holder would have obtained had there been no infringement, or profits obtained by the infringer.
 - The amount the infringer would have had to pay the patent holder for a license bearing in mind the economic value of the patent, its duration at the time of the infringement, and licenses that may have been issued at the time of the infringement.
 - The value of the items that contain the patented subject matter may be taken into account in assessing damages, where the patent is an essential factor in determining their value. By contrast, where the patent holder has exploited the patent during the period of the infringement, the value of amounts received by the patent holder (Article 69 PA) and the value of goods given into the possession of the patent holder shall be deducted from the damages. Parties are subject to strict liability⁵⁵, and no proof of damages is required⁵⁶. Furthermore, parties who carry out other, ancillary acts of export or marketing (Article 64 PA) are liable for damages where they have been notified by the patent holder of the existence of the patent, duly identified by its number (Article 46.1 PA)

⁵⁵ Judgment issued by the Spanish Supreme Court, Civil Division, on 17 December 2001.

⁵⁶ Judgment issued by the Spanish Supreme Court, Civil Division, on 1 December 2005.

and of the infringement and have been enjoined to stop, or where the infringement is culpable or negligent.

Applicant (of a patent)

- A natural or legal person who affirms that he is the first and true inventor of an invention, or the assignee of the first and true inventor of that invention. There may be one or more applicants. In the United States, applications may only be filed by the inventors. In Spain, Article 2.1 PA entitles natural or legal persons holding Spanish nationality, natural or legal persons of foreign nationality who habitually reside in or have a real and effective industrial or commercial establishment in the territory of Spain, natural or legal persons who enjoy the benefit of the Paris Convention, nationals of the Member States of the World Trade Organization, and refugees who habitually reside in the territory of Spain to obtain patents of invention in Spain, while Article 2.2 PA entitles other natural or legal persons to do so, provided that the countries of which they are nationals allow Spanish natural or legal persons to obtain patents of invention there.

Bayh-Dole Act

- Federal USA legislation enacted in 1980 regulating the ownership of intellectual property arising from research financed by federal funds.

Chain ladder

- In actuarial terms, a traditional triangular statistical analysis of claims aggregated by accident year and development year.

Claims

- Claims define the subject matter for which a patent has been filed, hence they need to be clear, precise, and based on the description (Article 26 PA).

Countersuit

- A new lawsuit instituted against the complainant by the defendant, to be included in the same proceedings and decided in the same judgment deciding on the initial proceedings.

Doctrine of equivalents

- A legal rule intended to afford efficacious protection for an inventor's rights. Novelty is vitiated simply by adding any unimportant change that causes the contested invention not to be absolutely identical to the invention patented by the complainant, thus informing what is known as the doctrine of equivalents. According to the judgment of the Spanish Supreme Court (Chamber 3) of 10 June 1968, these are understood to be "*variants in shape*,

material, size, arrangement of elements, or even the complete replacement of the said elements by others, which do not alter the fundamental principle of the invention described, claimed, and protected by the patent or utility model” or where “*two means fulfil the same function with a view to achieving the same result even though the modes of embodiment differ*”, the same function being fulfilled “*when they originate from the same fundamental concept, that is, when they apply the same principle in the same way*”, and the result being identical when “*it shares the same nature and the same properties*”. Article 61.2 PA provides that “*where the subject matter of a patent is a process for manufacturing new goods or substances, all goods or substances having the same properties shall be presumed to have been produced by the patented process barring proof to the contrary.*” It is thus a presumption under the law (more strictly speaking, a special rule of evidence), and as such it is related to Article 385.1 LCP, which provides that the parties benefiting from presumption are exempted from having to submit supporting evidence (or in the wording of Article 385.1 LCP 2000, “*a party benefiting from a presumption of fact is exempted from having to prove that fact*”). Barring evidence to the contrary (Article 1251 CC), the aforesaid presumption creates legal certainty of the presumed fact, but this does not exempt the beneficiary from having to prove the underlying premise: the goods manufactured and sold are identical to the patented goods.

European Patent Office (EPO)

- The executive body of the European Patent Organization in charge of the tasks of receiving applications, searching the relevant prior art, and examining novelty, inventive step, industrial applicability, and sufficiency of the description before granting patents. It also examines oppositions against patent applications and resolves appeals lodged against its decisions.

Infringement by equivalents

- Not just any comparison between the patent and the contested embodiment suffices to determine whether a patent has been infringed: the claimed invention and the contested embodiment have to be compared element by element⁵⁷. The patent has been infringed only when all the elements of the patented invention have been reproduced by the contested embodiment, by virtue of being identical or by virtue of equivalency (rule of identity of elements).
- No infringement of a patent has taken place where a third party has found a separate solution to the problem the patent seeks to solve, either through an innovative solution or through use of the prior art not protected by any

⁵⁷ For instance, the judgments issued by the Provincial Appellate Court of Barcelona, Section 15, on 20 May 2005 and by the Provincial Appellate Court of Madrid, Section 28, on 21 December 2006.

patent, such that the embodiment does not reproduce one or more of the elements in the claimed invention, either by literal or equivalent identity⁵⁸.

- Patent infringement by equivalents, that is, where the contested embodiment does not literally reproduce each and every element in the patented invention but rather replaces one or more of the elements characterizing the invention claimed by the patent by another element or other elements that can be deemed to be equivalent, is more difficult in the case of chemical and pharmaceutical patents than in the case of mechanical patents⁵⁹.

International Authority

- An organization carrying out certain tasks stipulated in the PCT.

International Preliminary Examining Authority

- The agency (national office or intergovernmental organization) appointed by the PCT Assembly to conduct the international preliminary examination. It is tasked with drawing up the international preliminary report on patentability (Chapter II PCT).

International Searching Authority

- The agency (national office or intergovernmental organization) appointed by the PCT Assembly to conduct international searches. It is tasked with drawing up the international search reports and the written opinion by the International Searching Authority.

Novelty

- A legal concept that is attested to where “the invention does not form part of the prior art” (Article 6.1 PA), though a patent must also involve inventive step, the purpose being to prevent the grant of exclusive rights for insignificant contributions to the state of the art.

Patent

- An **industrial property** right to an invention or technical creation that brings an innovative solution to a technical problem applied in industry using specific means, and to that end the invention as such is required to be novel, not

⁵⁸ In any event, as set forth in the aforesaid judgment issued by the Provincial Appellate Court of Barcelona, Section 15, on 7 June 2005, the purpose of the doctrine of equivalents is to “*avoid infringements of an invention by variations that seek to circumvent the scope of protection of the said patent by means of insignificant alterations, to the extent that they can be deemed to be encompassed by the claims of the patent*”.

⁵⁹ See, for instance, the judgments issued by the Provincial Appellate Court of Barcelona, Section 15, on 2 May and 7 June 2005 and 17 January 2008.

being known in or forming part of the prior art at the time of filing, or not being previously disclosed or accessible, at least in the interested sectors or to professionals in the **industrial** sector in which it is applied, which amounts to the same thing. The invention must be useful, capable of being manufactured, or used in the target market while involving inventive step and technical activity that is not obvious, elementary, or readily inferable or applicable by any skilled or expert person (see, as representative, the judgment issued by the Spanish Supreme Court on 18 October 2004 and citations therein).

Patent application

- A document filed by the inventor requesting the grant of a patent for the invention described in the specification submitted with the application.

Patent nullity

- Where a patent is in breach of Articles 4 and 6 PA, it is **null and void** by reason of lacking novelty and inventive step. It is settled doctrine that no compensation can be awarded for harm caused unless that harm can duly be demonstrated, even though infringements of this nature can all be assumed to produce some sort of injury.

Patent prosecution highway

- A system for cooperation between industrial property offices by means of bilateral and multilateral agreements to expedite the procedures for granting patents by exchanging information. Offices taking part in such agreements take advantage of the work already carried out by other Patent Offices in order to reduce their examination work load and enhance patent quality.

Patentable (patentable invention)

- New inventions are patentable where they involve inventive step and are capable of being applied industrially. Article 6 PA provides that “1. An invention shall be considered to be new if it does not form part of the state of the art. 2. The state of the art shall be held to comprise everything made available to the public in Spain or abroad by means of a written or oral disclosure, by use, or by any other means. 3. Additionally, the content of Spanish patent or utility model applications as originally filed, whose dates of filing are prior to the date referred to in the preceding paragraph and which were published on or after that date, shall be considered to be comprised in the state of the art.”

PCT (Patent Cooperation Treaty)

- An international treaty setting up a single procedure for protecting inventions in all the member countries by filing patents (142 countries as of January

2010). On filing a single application, a single international search is carried out and is valid for all the countries, along with one written opinion as to whether the invention fulfils the requirements of novelty, inventive step, and industrial applicability necessary for the grant of a patent. Optionally, preliminary examination of the application may be requested, during which the Examiner will contact the applicant so that the application can be amended to satisfy the requirements. On completion of the PCT procedure, either with a written opinion or with a positive or negative preliminary examination, the applicant has to translate the application and file it in each of the countries in which protection is sought, for it to be granted or rejected according to national law. The PCT procedure does not itself grant patents.

Prior art

- The body of knowledge in any form, be it written or verbal, in existence before the filing or priority date of a given patent application. For purposes of the PCT, the “relevant prior art” is deemed to be all information which has been made available to the public anywhere in the world by means of written disclosure and which is capable of being of assistance in determining that the claimed invention is or is not new and that it does or does not involve any inventive step (i.e., that it is or is not obvious) for purposes of the international search and the international preliminary examination.

Priority

- Under the Paris Convention inventors may file an application in one country and subsequently (up to 12 months later) claim priority on filing application in other countries that are Contracting Parties to the Convention or (through the PCT) members of the World Trade Organization.

Publication of the patent

- Patent law guarantees the inventor an exclusive right to exploit his invention for a specified time period but has not elected a system in which the details of the invention can be kept secret, even though secrecy would make exclusive exploitation by the patent holder easier. To the contrary, publication is the general rule under the patent system. In our country’s PA and IRPA, publication entails the requirement for the protected invention to be described clearly and concisely in a document placed on record in a public Register, so that the said document, available to the public, has to set out the technical problem considered, the solution to that problem furnished by the invention, and the advantages afforded by the invention with respect to the prior art.

One of the basic purposes of publication is to furnish legal certainty for parties engaging in a given sector of technology, that is, to enable them to know

clearly what the patented invention comprises and hence when the scope of protection is and is not infringed, such that if they do not want to pay the inventor the royalties he demands for a license, or if the inventor does not want to license his patent, they may manufacture and sell their own goods without infringing the patent, either by conducting research of their own or by licensing other innovative solutions, or else by resolving the technical problem using means that already form part of the state of the art and are in the public domain, given that the exclusive right conferred by a patent should in no way place an absolute restriction on competition in the market sector concerned.

Re ipsa

- A doctrine whereby injury is established *ex re ipsa* as a logical consequence of the unlawful act.

Result sought by the invention

- The protection afforded by a patent does not include the result sought by the invention. To do otherwise would seriously constrain both technical advances and the opportunity for competition by unjustifiably extending the monopoly conferred by a patent to the result⁶⁰.

Spanish Patent and Trademark Office (SPTO)

- An independent subsidiary body of the Ministry of the Economy and Competitiveness that fosters and supports technical and economic development by conferring legal protection on the different modalities of industrial property by granting patents and utility models (inventions), industrial designs (creations based on shape and form), trademarks and tradenames (distinctive signs), and semiconductor topographies. It also disseminates information relating to the different types of industrial property protection. Internationally, the SPTO is tasked with representing Spain in the different forums and international organizations dealing with intellectual and industrial property.

State of the art

- The level of development attained in a specific area of technology on a given date by way of a searching guideline. The state of the art consists of all information made available to the public, including patents and non-patent literature. For a given invention the state of the art is crucial in determining the patentability of the invention from the standpoints of novelty and inventive step.

⁶⁰ For instance, the judgment issued by the Provincial Appellate Court of Barcelona, Section 15, on 20 May 2005 made this finding in relation to unconstrained application of the doctrine of equivalents.

ANNEX 2

RISK AND PREMIUM CALCULATIONS. ANALYTICAL MODELS

1. PREMIUM SETTING FORMULAS

The annual premium for legal expenses insurance is calculated by means of an analytical model.

The measure of risk is a granted patent for which the insured has taken out an insurance policy covering the legal expenses that will arise if the patent is infringed and needs to be enforced.

1.1. Risk models

Severity X of a claim can come to different amounts. It is an aleatory variable, and the sections below set out an assumption that it will be distributed a certain way.

1.1.1. Pareto severity

In a Pareto distribution of severity, the probability that the amount of a claim X will be higher than a certain value x is represented by the formula:

$$P[X > x] = \left(\frac{T}{x}\right)^\alpha \quad (1)$$

where the threshold T and index α are the two probability distribution parameters.

Thus, the mean cost of a claim is given by:

$$\langle X \rangle = \int_T^\infty x \frac{\partial P}{\partial x} dx \quad (2)$$

$$= \alpha T^\alpha \int_T^\infty x^{-\alpha} dx \quad (3)$$

$$= \frac{\alpha}{\alpha - 1} T \quad (4)$$

1.1.2. Exponential severity

If the severity distribution is exponential, the probability that the amount of a claim X will be higher than a certain value x is represented by the formula:

$$P[X > x] = e^{-\frac{x-U}{\lambda}} \quad (5)$$

where the threshold U and attenuation λ are the two probability distribution parameters.

Thus, the mean cost of a claim is given by:

$$\langle X \rangle = \int_U^{\infty} x \frac{\partial P}{\partial x} dx \quad (6)$$

$$= \frac{1}{\lambda} e^{-\frac{U}{\lambda}} \int_U^{\infty} x e^{-\frac{x}{\lambda}} dx \quad (7)$$

$$= U + \lambda \quad (8)$$

1.2. Risk spreading

Considering risk spreading between the insured and the insurer by means of:

- Self-insurance.
- A deductible D .
- An insured amount L .

Thus, for a claim of severity X (the amount of the legal expenses of the lawsuit), the part of the risk assumed by insurer Y will be:

$$Y = (1 - \gamma) \min[L, \max(0, X - D)] \quad (9)$$

That is, for any value of claim X the maximum amount paid by the insurer is:

$$Y^{\max} = (1 - \gamma)L \quad (10)$$

Tables 8 and 9 in Chapter 1 depict the coverage mechanism.

1.2.1. Pareto severity

If severity X follows a Pareto distribution, the mean of the insured portion Y is represented by:

$$\langle Y \rangle = (1 - \gamma) \int_D^{D+L} (x - D) \frac{\partial P}{\partial x} dx + (1 - \gamma) \int_{D+L}^{\infty} L \frac{\partial P}{\partial x} dx \quad (11)$$

$$= \frac{1 - \gamma}{\alpha - 1} T^{\alpha} [D^{1-\alpha} - (D + L)^{1-\alpha}] \quad (12)$$

The values of the two parameters (Pareto threshold and index) in Spain are still unknown.

Determining them requires fitting them to the data observed in recent years.

Nevertheless, assuming that the legal expenses of patent litigation are unlikely to be less than 2,500 euros (not even if both parties agree to an out-of-court settlement at the outset) allows us to calculate a theoretical Pareto threshold value of

$$T = 2,500 \text{ EUR} \quad (13)$$

Thus, on the basis that patent litigation will, on average, attain a mean cost of 27,500 euros, applying formula (4) yields a value for the Pareto index of:

$$\alpha = 1.1 \quad (14)$$

1.2.2. Exponential severity

If severity X follows an exponential distribution, the mean of the insured portion Y is represented by:

$$\langle Y \rangle = (1 - \gamma) \int_D^{D+L} (x - D) \frac{\partial P}{\partial x} dx + (1 - \gamma) \int_{D+L}^{\infty} L \frac{\partial P}{\partial x} dx \quad (15)$$

$$= (1 - \gamma) \lambda e^{\frac{U}{\lambda}} \left[e^{-\frac{D}{\lambda}} - e^{-\frac{D+L}{\lambda}} \right] \quad (16)$$

The values of the two parameters (threshold and exponent) in Spain are still unknown.

Determining them requires fitting them to the data observed in recent years.

Still, assuming that the cost of patent litigation may be 0 (especially if both parties agree to an out-of-court settlement at the outset) allows us to calculate a theoretical exponential threshold value of

$$U = 0 \text{ EUR} \quad (17)$$

Thus, on the basis that patent litigation will, on average, attain a mean cost of 30,000 euros, applying formula (8) yields an exponential attenuation value of:

$$\lambda = 27,500 \text{ EUR} \quad (18)$$

1.3. Frequency of claims

If there are n lawsuits in a year and the insured portfolio contains N patents, annual frequency μ is represented by:

$$\mu = \frac{n}{N} \quad (19)$$

Clearly, the frequency of litigation will depend on the type of technology patented and the quality of the underwriting. However, for the Spanish patent market as a whole, the frequency of patent litigation is probably around

$$\mu = 0.3\% \quad (20)$$

1.4. Premium rates

In a first approximation, the premium can be obtained by multiplying the mean insured severity (12,16) by the expected frequency (19,20).

This amount should, however, be increased by the administrative and capital costs. Since these costs depend greatly on each company's policies and strategies, their inputs can be simplified to a multiplicative component, c , representing capital costs, and an additive component, C , representing administrative costs. The annual premium P for a policy is thus written as:

$$P = \frac{\mu \langle Y \rangle}{1 - c} + C \quad (21)$$

Since patent insurance is a comparatively new product, it would be prudent to consider relatively high, variable capital costs, around

$$c = 25\% \quad (22)$$

However, the underwriting process for this commercial product (see Part II, Table 3) is quite simple and only requires formal steps without any *ad hoc* actions. It is thus reasonable to consider that for an insurer that already has an efficient production infrastructure for other branches, administrative costs will only need to account for a few minutes to be able to accept or reject a policy, plus payment collection procedures. Accordingly, a component for relatively low fixed administrative costs can be considered, around

$$C = 50 \text{ EUR} \quad (23)$$

1.5. Model parameters

The parameter values in the models considered are summarized in Table 1 below.

2. ASSUMPTIONS

- There is no adverse selection by the insured. That is, starting up an insurance scheme will not increase the propensity by patent holders to litigate.

Table 1.
Parameter values

	Symbol	Amount
Pareto threshold	T	5,000 EUR
Pareto index	α	1,2
Exponential threshold	T	0 EUR
Exponential attenuation	λ	30,000 EUR
Self-insurance	y	5.0%
Deductible	D	variable
Limit	L	variable
Frequency	μ	0.3%
Variable costs	c	25%
Fixed costs	C	50 EUR

- Discounts due to possible delays in the payment of the amount of losses have been disregarded. In fact, though patent lawsuits in Spain usually take a long time, this effect is probably minimal in the current framework of very low interest rates.
- The possibility of appealing a first instance judgment to the next instance has been disregarded in view of the low level of contentiousness of the patent sector in Spain compared to other jurisdictions.
- Claim severity follows a Pareto distribution or an exponential distribution. Extreme cases have a fat tail distribution in the former and a thin tail distribution in the latter.

Administrative and capital costs are added to premiums by means of a fixed additive component in the case of the former and a variable proportional component in the case of the latter.

ANNEX 3

INSTITUTIONAL STRUCTURE AND PROGRAMMES FOR FOSTERING INNOVATION AND PATENTS IN SPAIN

There follows a recapitulation of the main organizations and instruments for supporting innovation and patenting in our country.

1. ORGANIZATIONS

1.1. Ministry of the Economy and Competitiveness

The government body bearing final responsibility for innovation.

1.2. Secretary of State for Research, Development, and Innovation

Office responsible for scientific and technical research, development, and innovation policy, including international relations in these fields and representing Spain in international programmes, forums, and organizations and in the European Union.

1.3. National Scientific Research Council of Spain (CSIC)

The largest public institution dealing with research in Spain and the third largest in Europe. It is a subsidiary body of the Ministry of the Economy and Competitiveness under the Secretary of State for Research, Development, and Innovation.

Its mission is to foster, coordinate, develop, and disseminate multidisciplinary scientific and technical research to help advance knowledge and cultural, social and economic development and staff training, and to advise public and private organizations in the field.

Its principal objective is to carry out and promote research in the service of scientific and technical progress. Its duties include:

- Multidisciplinary technical and scientific research.
- Technical and scientific advisory services.
- Transfer of results to the business sector.

- Helping to create technology enterprises.
- Training specialized personnel.
- Managing infrastructures and large-scale installations.
- Promoting the culture of science.
- Representing Spain internationally in the scientific fields.

1.4. Government Research Agency

An agency set up in the current Government Plan for Scientific and Technical Research and Innovation, subsidiary to the Ministry of the Economy and Competitiveness. It is tasked with fomenting scientific and technical research and managing a substantial portion of the programmes, subprogrammes, and initiatives that had been the responsibility of the Secretary of State for Research, Development, and Innovation, the Bureau of Scientific and Technical Research, and the Bureau of Innovation and Competitiveness.

Its main objectives include:

- Funding, assessing, and verifying scientific and technical activity promoted by the General Government Administration on its own initiative or in conjunction with other Spanish territorial administrations or entities or the entities of other countries and/or international organizations.
- Boosting scientific and technical research for purposes of generating know-how in all areas of knowledge.
- Competitive allocation of public resources.
- Bringing best international practices to bear in fomenting and evaluating science and technology.
- Furnishing advice for defining and planning public research, development and innovation policies.
- Enhancing funding, assessment, execution, and follow-up of plans, actions, and initiatives used to implement the General Government Administration's research, development, and innovation policies.
- Fundraising to finance scientific and technical research and innovation and promote a culture of science and technology in society.

1.5. Centre for Industrial Technical Research (CDTI)

A Public Business Entity subsidiary to the Ministry of the Economy and Competitiveness for promoting **technical innovation and development** by Spanish businesses.

Its main objective is for the Spanish business sector to generate scientific and technical knowledge and transform it into sustainable, globally competitive growth.

Pursuant to the Government Plan for Scientific and Technical Research and Innovation, it is to allocate resources using evaluation criteria based on the technical merit, novelty and aptness, industrial applicability and viability, proximity to the marketplace, and socio-economic repercussions of the results.

1.6. Science, Technology and Innovation Information System (SICTI)

Set up in Act No. 14/2011 of 1 June 2011 for data collection and information analysis intended to yield a unified and uniform information system for preparing data to be accessed by the General Government Administration and Spain's Autonomous Regions.

It has been designed to be a tool to be used in defining organization and coordination mechanisms for governmental bodies responsible for managing science, technology, and innovation.

1.7. Others

1.7.1. Permanent Working Group for Follow-up of the Government Plan for Scientific and Technical Research and Innovation

Created on the recommendation of the Government Task Force on a Permanent Working Group for Follow-up of the Government Plan for Scientific and Technical Research and Innovation in order to:

- Strengthen coordination for actions taken by the General Government Administration in scientific and technical research matters and innovation.
- Assess the results and repercussions of each programme entailing public involvement in R&D+i by the various departments of the different ministries.
- Furnish technical support for strategy review and design and for the Government Plan for Scientific and Technical Research and Innovation, including its annual programme of initiatives.

1.7.2. National Strategic Technical Research Consortiums (CENIT)

Its objective is to boost cooperation among businesses, universities, public research bodies and centres, science and technology plant, and technology centres. Cofunded by the public and private sectors, they are a basic tool for advancing public and private sector cooperation to foster R&D.

1.7.3. National Evaluation and Prospection Agency (ANEP)

A unit subsidiary to the Bureau of Research and Management of National R&D Plans under the Secretary of State for Research of the Ministry of Science and Innovation.

Its objectives include:

- Evaluating the scientific and technical quality of proposals applying for public funding put forward either by the Department or by other public and private entities.
- Enhancing the capabilities of the public system of science and technology.
- Helping to ensure that decision-making concerning resource allocation for R&D+i is based on considerations of excellence and scientific and technical quality.

2. STRATEGIES AND PROGRAMMES

2.1. Government Plan for Scientific and Technical Research and Innovation 2013-2016

It sets out the basic design for activities aimed at promoting and coordinating R&D+i.

It was drawn up amid the discussions surrounding the preparation of the Horizon 2020 future framework programme for R&D+i in the European Union and consequently amid the consideration of the main challenges and opportunities related to R&D+i policies in the European Union and its Member States.

The **objectives** set forth in this Plan are:

- Promoting talent and employability.
- Fostering excellence.
- Driving business leadership.
- Promoting R&D+i aimed at meeting the challenges faced by society.

Its priorities are: (a) knowledge generation in all fields of research that will help foster excellence and international leadership of Spain's science, technology, and innovation system (SECTI) and (b) primary scientific, technical, and social goals integrated in the government's R&D+i Programme for Meeting the Challenges Facing Society intended to point scientific and technical research and business R&D+i efforts in the direction of the principal challenges confronting society today, including:

- 1) Health, demographic change, and well-being.

- 2) Food safety and quality; sustainable agricultural production, natural resources, ocean and maritime research.
- 3) Safe, efficient, clean energy.
- 4) Integrated, sustainable, intelligent transportation systems.
- 5) Action on climate change and efficient resource and raw material utilization.
- 6) Social change and innovation.
- 7) Digital economy and society.
- 8) Security, protection, defence.

It is implemented in government programmes designed to promote and coordinate R&D+i in order to achieve the general objectives of the plan itself (the same objectives as set out in Spain's Strategy for Science, Technology, and Innovation. The government programmes, in their turn, take the form of subprogrammes according to the subject matter concerned and the nature of the actions taken, and these make use of specific management structures with the resulting deployment of suitable options for participation and financial instruments in keeping with the features of the activity to be funded and the nature of the beneficiaries.

It promotes activities in the form of Dynamic Actions aimed at:

- a) Fostering the culture of science, technology, and innovation.
- b) Disseminating creativity and entrepreneurship as key values in our society.
- c) Improving scientific and technical education at all levels of society.
- d) Encouraging active participation by society in the R&D+i process.

It takes the form of government programmes designed to promote and coordinate R&D+i.

1. Government programme for promoting talent and employability in the field of R&D+i.
2. Government programme for fostering excellence in scientific and technical research.
3. Government programme for business leadership in R&D+i.
4. Government programme for meeting the challenges of society through R&D+i.

2.2. National R&D Plan (2008-2011) (Extended through 2013)

Until 2013 the National R&D+i Plan was the programming instrument used by Spain's science, technology, and business system (SECTE), structured

around four areas directly related to its general objectives and linked to implementation programmes: knowledge and skill generation; strengthening cooperation in R&D matters; sector technical development and innovation; and strategic actions.

- For each of the above-mentioned objectives and areas the plan lays down six instrumental action initiatives (LIAs) carried out by means of thirteen national programmes (PNs) representing the major instrumental actions to be taken under the plan.
- In addition to the six instrumental action initiatives, the plan makes provision for five horizontal strategic actions (AEs) implemented through specific activities.
- Under the national plan the national programmes represent the main approaches adopted by the national plan based on public involvement directly related to the instrumental action initiatives.

2.3. Spain's Science, Technology, and Innovation Strategy (EECTInn 2013-2020)

This position paper was drawn up with the participation of the main players involved in Spain's science and technology system. It sets forth the main principles and general objectives underpinning the science and technology policies of Spain and its various autonomous regions.

The objectives are:

- Development in an environment conducive to R&D+i.
- Invigorating knowledge and talent generation.
- Management and transfer of know-how.
- Regional innovation and competitiveness.
- Internationalization.
- Culture of science, innovation, and entrepreneurship.

EECTInn 2013-2020 replaces:

- The National Science and Technology Strategy approved in 2007, intended to operate through 2015.
- The Government Innovation Strategy (e2i) which had defined five priority initiatives: (1) creation of an environment conducive to innovation, (2) using public demand as a basis for promoting innovation, (3) international reach, (4) strengthened territorial cooperation, and (5) human capital, with the transfer of know-how as the hub at the centre of the initiatives.

2.4. Europe 2020. Horizon 2020

Europe 2020 is the European Commission's strategy for achieving a solid economic recovery, drawn up in 2010. It is a frame of reference for promoting R&D in Spain and in all the Member States of the EU. It puts forward a series of mutually reinforcing priorities:

- Smart growth: developing a knowledge and innovation-based economy.
- Sustainable growth: promoting a greener and more competitive economy making more efficient use of resources.
- Inclusive growth: promoting an economy with high levels of employment and social and territorial cohesion.
- Included in its objectives: proposed R&D investments of 3 % of GDP.

Horizon 2020 is the financial instrument implementing the Innovation Union, one of the flagship initiatives of the Europe 2020 strategy, an EU programme replacing the EU's Seventh Framework Programme for R&D (2007-2013). It is an EU programme for research, innovation, and competitiveness with a budget of 80,000 million euros for implementation from 2014 to 2020.

3. PROGRAMMES DIRECTLY RELATED TO INDUSTRIAL PROPERTY

3.1. Plan for Promoting Industrial Property in Spain, 2010-2012

It is based on the consideration that Knowledge is the main key to increased competitiveness, both of business and of government, what has come to be known as Institutional Competitiveness. What is more, knowledge as a factor in competitiveness cannot be contemplated without also considering protection and the security to profit from it and create value for consumers, producers, and society as a whole. That is why positioning our businesses and our country in the global economy requires, among other factors, our procuring for ourselves an efficient industrial property (IP) system that affords security and confers on grantees rights that will enable them to profit from their investment in know-how by securing an advantageous competitive position vis-à-vis their competitors. IPRs, from this standpoint, play an important role on three different levels: business, consumers, and the system of the market economy itself¹.

Its objectives are to:

- Increase the share of the industrial sector in economic activity.
- Increase the competitiveness of Spanish industry.
- Align Spain's industrial policy with Europe's.

¹ http://www.planpi.es/pdf/plan_pi.pdf (last accessed on 12 January 2012).

3.2. Industrial Property Strategy for Business and Entrepreneurs, 2012-2014

An initiative by the Ministry of Industry, Energy, and Tourism, it is aimed at making industrial property into a tool, indeed a key factor, in day-to-day decision-making by business and enterprise.

Its objective is to boost the performance of Spain's production system and in so doing aid in improving the competitive position of our country's companies in global markets by means of the strategic use of the instruments for protecting industrial property, particularly by small and medium-sized enterprises (**SMEs**) and by **entrepreneurs**.

It comes under the framework of the Europe 2020 Strategy.

Table 1²

STRATEGIC ACTIONS	OBJECTIVES
A.1. Support for business in obtaining IPRs	Full-service support for businesses <ul style="list-style-type: none"> • Legal, financial, and technical tools for improving IP management. • Internationalization. • Accords. • Spanish-American support platform for SMEs.
A.2. Increased business awareness of IP	Boosting use of IP by Spanish businesses by strengthening the business and social culture surrounding IP: <ul style="list-style-type: none"> • Cooperation with universities. • Centre for support for SMEs in managing industrial property (CEVIPYME). • On-line training courses.
A.3. Boosting compliance with IPRs	Ensuring the effectiveness of IPRs. <ul style="list-style-type: none"> • Measures for agencies in charge of enforcing protective laws. • Measures for publicizing and increasing awareness of the consequences of infringing IPRs.
A.4. Lessening administrative burdens when obtaining IPRs	Increasing, developing, and streamlining SPTO services to lower charges on obtaining rights: <ul style="list-style-type: none"> • Decreasing the number of time limits. • New management tools.

² SPTO, http://www.oepm.es/es/estrategia_20122014.html.

STRATEGIC ACTIONS	OBJECTIVES
A.5. Support for entrepreneurs in obtaining IPRs	Support for businessmen in obtaining IPRs: <ul style="list-style-type: none"> • Decreasing official fees on applications for inventions by 50 % for natural persons without means and for entrepreneurs. • Supporting and promoting the internationalization of technologies created in Spain by lowering the PCT international searching fee by 75 %. • Measures for lessening administrative burdens, e.g.: <ul style="list-style-type: none"> ○ Automating administrative procedures. ○ Streamlining the granting process. ○ Enhancing cooperation with officials with national and international organizations. ○ Creating a Master Plan for combined information access for IP and the Company Registration Office.

ANNEX 4

ABBREVIATIONS. OFFICES SURVEYED. DOCUMENT REFERENCES AND BIBLIOGRAPHY

1. MAIN ABBREVIATIONS EMPLOYED

AE. Strategic Actions under the National R&D+i Plan.

AGE. General Government Administration.

ANEP. National Evaluation and Prospection Agency.

AP. Provincial Appellate Court.

CC. Criminal code.

CENIT. National Strategic Technical Research Consortiums

CEVIPYME. Centre for support for SMEs in managing industrial property.

CPC. Community Patent Convention (Luxembourg Convention).

CSIC. National Scientific Research Council of Spain.

EECTInn. Spain's Science, Technology, and Innovation Strategy 2013-2020.

ENCYT. National Science and Technology Strategy (2007-2015).

EPC. European Patent Convention (Munich).

EPO. European Patent Office.

EU. European Union.

GVA. Gross Value Added.

IBNER (Incurred But Not Enough Reserved). Actuarial reserves calculated by means of traditional statistical analysis of aggregate claims triangulation by accident year and development year

IBNYR (Incurred But Not Yet Reported). Claims that have occurred but have not yet been reported to the insurer.

IP. Industrial property.

IPA. Insurance Policy Act.

IPRs. Intellectual and industrial property rights.

IRPA. Implementing Regulations to the Patent Act.

LCP. Law on Civil Procedure.

LIA. Instrumental Action Initiatives under the National R&D+I Plan.

MINECO. Ministry of the Economy and Competitiveness.

NP. National Programme.

NSI. National Statistics Institute.

OIPG. *Official Industrial Property Gazette* of Spain.

PCT. Patent Cooperation Treaty.

PDU. Patent Defense Union.

PE. Preliminary examination.

PEICTI. Government Plan for Scientific and Technical Research and Innovation.

R&D. Research and development.

R&D+i. Research, development, and innovation.

SECTE. Spain's Science, Technology, and Business System.

SEGAPI. Galician Regional Government's Industrial Property Promotion Service.

SICTI. Science, Technology and Innovation Information System.

TRIPS Agreement. Agreement on Trade-Related Aspects of Intellectual Property Rights.

WIPO. World Intellectual Property Organization.

WTO. World Trade Organization.

2. OFFICES AND EXPERTS SURVEYED (SELECTED)

In the course of preparing this paper a number of specialists have been surveyed by e-mail, Internet, telephone, and occasionally, by means of a personal interview.

- *European Patent Office*. Isar Building, Erhardtstr. 27, 80469 Munich, Germany. <http://www.epo.org/>
- *European Observatory on Infringements of Intellectual Property Rights*. Office for Harmonization in the Internal Market (Trade Marks and Designs). Avenida de Europa 4, E03008 Alicante, Spain. <http://oami.europa.eu/ows/rw/pages/OBS/index.es.do>

- *World Intellectual Property Organization*, WIPO: <http://www.wipo.int/portal/index.html.es>

National Patent Offices

- *Australia*. IP Australia Department of Innovation, Industry, Science, Research and Tertiary Education (DIISRTE); Ground Floor, Discovery House 47 Bowes Street Phillip ACT, 2606. <http://www.ipaustralia.gov.au>
- *Austria*. Das Österreichische Patentamt; Dresdner Str. 87 PO Box 95 1200 Vienna <http://www.patentamt.at/>
- *Belgium*. L'Office belge de la propriété intellectuelle (ORPI), SPF Économie, PME, Classes moyennes et Énergie North Gate III Boulevard du Roi Albert II, 16 B1000 Brussels; <http://economie.fgov.be/opridie.jsp?>
- *Brazil*. Instituto Nacional da Propriedade Industrial (INPI); Ministério do Desenvolvimento, Indústria e Comércio Exterior; Rua São Bento 1 ; CEP 20090010 ; Rio de Janeiro, RJ ; Brazil <http://www.inpi.gov.br>
- *Canada*. Canadian Intellectual Property Office (CIPO) Industry Canada; Place du Portage I 50 Victoria Street, Room C114 Gatineau, Québec K1A 0C9; <http://www.cipo.ic.gc.ca>
- *China*. Patent Office State Intellectual Property Office of the Peoples' Republic of China (SIPO); 6, Xitucheng Lu Jimenqiao Haidian District 100088 Beijing. <http://www.sipo.gov.cn>
- *Czech Republic*. Industrial Property Office. Antonína Čermáka 2^a. 160 68 Prague. <http://www.upv.cz>
- *Denmark*. Danish Patent and Trademark Office Ministry of Trade and Industry; Helgeshøj Allé 81. 2630 Taastrup; <http://www.dkpto.org>
- *Finland*. National Board of Patents and Registration of Finland. Arkadiankatu 6 A 00101 Helsinki P.O. Box 1140. 00101 Helsinki. <http://www.prh.fi>
- *France*. National Institute of Industrial Property (INPI). 15 rue des Minimes 92400 Courbevoie. <http://www.inpi.fr>
- *Germany*. German Patent and Trade Mark Office (DPMA); Zweibrückenstraße 12. 80331 Munich <http://www.dpma.de/>
- *Greece*. Patent Office Industrial Property Organization (OBI). 5 Pantanassis St. Paradissos Amaroussiou 151 25 Athens. <http://www.obigr>
- *Hungary*. Hungarian Intellectual Property Office (HIPO). Garibaldi utca 2. 1054 Budapest. PO Box 552 1374 Budapest. <http://www.hipo.gov.hu>
- *India*. Office of the ControllerGeneral of Patents, Designs and Trademarks Department of Industrial Policy Promotions Ministry of Commerce and

Industry Government of India. Bhoudhik Sampada Bhavan S.M. Road, Antop Hill Mumbai 400037. <http://www.ipindia.nic.in>

- *Ireland*. Patents Office Department of Enterprise, Trade and Employment. Government Buildings Hebron Road Kilkenny. <http://www.patentsoffice.ie>
- *Israel*. Israel Patent Office. Agudat Sport Hapoel St. 1 Technological Garden Building No. 5 Jerusalem 96951 Israel. <http://www.patent.justice.gov.il/MojHeb/RashamHaPtentim>
- *Italy*. Ufficio Italiano Brevetti e Marchi Direzione generale per la lotta alla contraffazione Dipartimento per l'impresa e l'internazionalizzazione (UIBM). 19, via Molise 00187 Rome. <http://www.uibm.gov.it>
- *Korea*. Korean Intellectual Property Office (KIPO). 189, Cheongsaro, Seogu, Daejeon Metropolitan City, 302701 Republic of Korea. <http://www.kipo.go.kr>
- *Luxembourg*. Ministère de l'économie et du Commerce extérieur, Direction de la propriété intellectuelle. 1921 Boulevard Royal L2449 Luxembourg. dpi@eco.etat.lu
- *Mexico*. Instituto Mexicano de la Propiedad Industrial (IMPI). Periférico Sur No. 3106 Piso 9, Col. Jardines del Pedregal Mexico, D.F., C.P. 01900. <http://www.impi.gob.mx/>
- *Netherlands*. NL Patent Office. Prinses Beatrixlaan 2. 2595 AL Den Haag. <http://www.agentschapnl.nl/en>
- *Norway*. Patentstyret (Norwegian Industrial Property Office) (NIPO). Sandakerveien 64, 0484 Oslo. <http://www.patentstyret.no>
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- *Sweden*. Swedish Patent and Registration Office (SPRO). Patent Department. Box 5055 102 42 Stockholm. <http://www.prv.se>
- *Switzerland*. Swiss Federal Institute of Intellectual Property. Stauffacherstrasse 65 CH3003 Berne. <http://www.ige.ch>
- *United Kingdom*. Intellectual Property Office. Information Centre. Concept House Cardiff Road Newport South Wales NP10 8QQ. <http://www.ipo.gov.uk>
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