



European IPR Helpdesk

Fact Sheet

Intellectual Property Valuation

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Introduction

Intellectual property assets such as patents, trade marks or copyrights are increasingly the core of many organisations and transactions. Licensing and assignments of intellectual property rights have become common in the market, and the use of these types of asset as loan security has grown. This new reality has given rise to the growing importance of valuation of intangibles. Trading an asset requires knowing its value.

Several methodologies are commonly used in the market to value these assets. In this fact sheet, the different methodologies will be explained and examples of scenarios of possible use of these methodologies are given. Different tools have been created by public organisations to assist companies performing valuations. These free tools will also be presented in this document to help you save time and money.

¹ This fact sheet was first published in June 2013 and updated in June 2015

1 Why you should care about valuation of intellectual property

Valuation of intellectual property rights is part of the good management of intellectual property within an organisation. Indeed, knowing the economic value and importance of the intellectual property rights you create and develop assists in the strategic decisions to be taken on the assets, but also facilitates the commercialisation and transactions concerning intellectual property rights.

There are many business situations where valuation is required²:

- a) Valuation of a company for the purposes of a merger, acquisition, joint venture or bankruptcy.

Companies are increasingly based on intangible assets and investment in knowledge. Indeed, according to studies, expenditures on knowledge, through investments in R&D or software, have grown at a higher rate than expenditures in tangibles³. This change in investments has consequently been reflected by a heavy importance of intangible assets in companies. Therefore, to know the value of companies it is essential to know the value of their intellectual property.

- b) Negotiations to sell or license intellectual property rights.

As in other business transactions, organisations negotiating agreements to sell or licence intellectual property rights commonly have to agree on a price. Knowing the value of the intellectual property right is essential to reach such an agreement, but also to make sure the parties are engaging in a good deal.

- c) Support in situations of conflict, such as court proceedings or alternative dispute resolution mechanisms (such as arbitration).

In scenarios of conflict, quantification of damages is often a necessary step of the process. The correct valuation of the intellectual property right at stake is therefore essential to guarantee a fair recovery of the damages.

- d) Fund raising through bank loans or venture capital.

Valuation of the intellectual property to be used as security for bank loans or to attract venture capital and investors is essential. Indeed, several studies reveal that, in particular, owning patents and a proper IP management play a crucial role in the decision of venture capitalists⁴.

² IP4inno Study, *Valuation of Intellectual Property*.

³ *Creating Value from Intellectual Assets*, Policy Brief, Organisation for Economic Co-Operation and Development (OECD), 2007.

⁴ Kamiyama, S., J. Sheehan and C. Martinez (2006), "Valuation and Exploitation of Intellectual Property", *OECD Science, Technology and Industry Working Papers*, 2006/085, OECD Publishing.

e) Assisting internal decision making.

Valuation also plays a role on decisions concerning the patenting strategies and country selection for registration of intellectual property rights, or can assist organisations to identify weaknesses such as ownership uncertainties that have an impact in the value of the intellectual property rights and on decisions for the exploitation of such assets.

f) For accounting and taxation purposes.

Organisations are required to report on their assets, including their intangible assets. Valuation is therefore a necessary step, as well as in situations of tax planning involving intellectual property.

Defining the objectives and context of the valuation is essential, since it determines the strategy as well as the type of valuation method(s) that should be used. This is therefore the first step to take when performing a valuation.

2 Who should be involved in the valuation

Valuation of intellectual property can be performed in-house or outsourced to a professional entity. If performing it in-house, organisations must be aware that this should be a team effort, involving several staff members with legal, technical, financial, marketing and strategic expertise.

Tip: if engaging with the services of an external entity to perform the valuation of your intellectual property, do not forget to have confidentiality obligations in place to protect your business information.

To assist in particular SMEs performing basic valuation in-house, several national intellectual property offices in the European Union and other public organisations have created free tools, such as the following:

✓ **IPscore**

IPscore is a unique evaluation tool of the European Patent Office (EPO) developed to provide a comprehensive evaluation of patents and technological development projects. It is a simple, user-friendly tool that can be used by all companies that have a portfolio of patents and development projects⁵.

⁵ This tool applies a qualitative approach. Further information on this valuation method is provided in part 3 of this fact sheet. To know more about IPscore, we suggest you to check our Bulletin number 8, January to March 2013, which is available in our online library.

It provides:

- a basis for identifying the conditions that create value for the patent or development project. A strong evaluation profile, with tried and tested assessment factors and new reports, provides a comprehensive evaluation of the various conditions determining the value of a patent or development project.
- a basis for assessment and valuation of the patent or development project. A quantitative financial module works out a financial forecast and thereby determines the financial order of magnitude in the overall qualitative evaluation.

✓ **IP Tradeportal**

The Danish Patent and Trademark Office has developed a portal with the purpose of helping businesses to better exploit their knowledge by trading their intellectual property rights. On the portal page you can find a set of tools for trading rights, including on valuation⁶.

✓ **IP Panorama**

IP PANORAMA was developed jointly by the Korean Intellectual Property Office (KIPO), the Korea Invention Promotion Association (KIPA), and the World Intellectual Property Organization (WIPO). It consists of a set of e-learning modules, one of them dedicated to valuation of intellectual property assets⁷.

✓ **IP Healthcheck**

As part of the IP Healthcheck series, the UK Intellectual Property Office has published a booklet on *Agreeing a price for intellectual property rights* to help companies on the valuation of their intellectual property assets in the context of business transactions⁸.

3 How is valuation performed?

Different approaches of intellectual property valuation are used by organisations. Generally, these approaches are divided in two categories: the quantitative and qualitative valuation.

While the quantitative approach relies on numerical and measurable data with the purpose to calculate the economic value of the intellectual property, the

⁶ The IP Tradeportal is available at the Danish Patent and Trademark Office: <http://www.ip-tradeportal.com/>

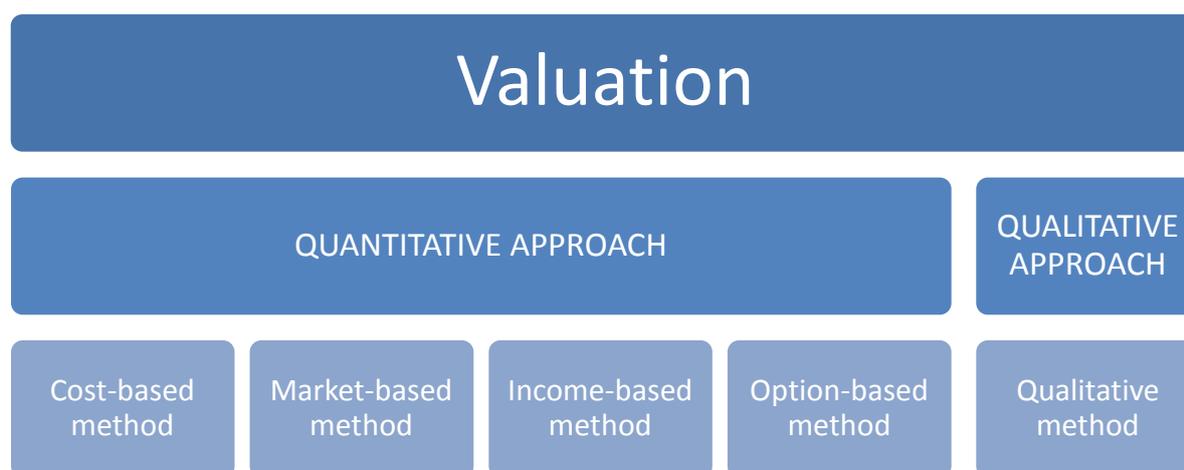
⁷ The IP Panorama e-learning modules are available at WIPO's website: <http://www.wipo.int/sme/en/multimedia/>

⁸ The booklet *Valuing your intellectual property* is available in the UK IPO website at: <https://www.gov.uk/valuing-your-intellectual-property>.

qualitative approach is focused on the analysis of the characteristics (such as the legal strength of the patent) and uses of the intellectual property⁹.

Several methodologies are used on the quantitative approach, but generally they can be grouped in four methods¹⁰:

1. cost-based method;
2. market-based method;
3. income-based method; and
4. option-based method.



3.1 Quantitative approach

3.1.1 Cost-based method

This method is based on the principle that there is a direct relation between the costs expended in the development of the intellectual property and its economic value.

Different techniques are used to measure costs:

- i. **Reproduction cost method:** Estimations are performed by gathering all costs associated with the purchase or development of a replica of the intellectual property under valuation.
- ii. **Replacement cost method:** Estimations are performed on the basis of the costs that would be spent to obtain an equivalent IP asset with similar use or function.

⁹ Lagrost, C., D. Martin, C. Dubois and S. Quazzotti (2010), "Intellectual property valuation: how to approach the selection of an appropriate valuation method", *Journal of Intellectual Capital*, vol. 11 n. 4, Emerald Group Publishing Limited.

¹⁰ Flignor, P., D. Orozco "Intangible Asset & Intellectual Property Valuation: A Multidisciplinary Perspective", 2006.

In both methods we take today's price into account, i.e. the expenditures as of the valuation date and not the historical costs when these actually happened¹¹. Costs of two sorts should be included:

- a) Direct expenditures, such as costs with materials, labour and management; and
- b) Opportunity costs, relating to the lost profits due to delays in market entrance or investment opportunities lost with the aim of developing the asset¹².

3.1.2 Market-based method

The market-based valuation method relies on the estimation of value based on similar market transactions (e.g. similar licence agreements) of comparable intellectual property rights. Given that often the asset under valuation is unique, the comparison is performed in terms of utility, technological specificity and property, having also in consideration the perception of the asset by the market.

Data on comparable or similar transactions may be accessed in the following sources:

- a) company annual reports;
- b) specialised online databases such as:
 - Royalty Source – Intellectual Property Valuation and Licensing: www.royaltysource.com;
 - Recap: www.recap.com;
 - PharmaVentures: www.pharmaventures.com;
 - Royaltystat: www.royaltystat.com;
 - Knowledge Express: www.knowledgeexpress.com;
 - Intellectual Property Research Associates: www.ipresearch.com;
 - ktMINE: www.ktmine.com; etc.
- c) in publications dedicated to licensing and royalties such as the *Licensing Economics Review*;
- d) in court decisions concerning damages.

3.1.3 Income-based method

This method is based on the principle that the value of an asset is intrinsic to the (expected) income flows it generates. After the income is estimated, the result is discounted by an appropriate discount factor with the objective to adjust it to the present circumstances and therefore to determine the present value of the intellectual property.

¹¹ Drews, D., "The Cost Approach to IP Valuation: Its Uses and Limitations", IP Metrics Intellectual Property Valuation, 2001.

¹² See footnote 10.

There are different methods of calculation of the future cash flows, such as:

- i. *Discounted cash flow method*: This method aims to estimate future cash flows, which are projected and after discounted by applying an appropriate discount factor. The main source of information to estimate the cash flows is generally the business plan of the company that exploits or intends to exploit the asset.
- ii. *Relief-from-royalty method*: In this method the value of the asset is considered as the value of the royalty payments from which the company is relieved due to its ownership of the asset. Hence, the appropriate royalty rate must be determined, allowing the estimation of the future royalty income stream. A discount rate is applied to determine the present value of the asset.

3.1.4 Option-based method

Differently from the other methods, the option methodology takes into consideration the options and opportunities related to the investment¹³. It relies on option pricing models (e.g. Black-Scholes) for stock options to achieve a valuation of a given intellectual property asset.

3.2 Qualitative approach

This method, also commonly referred as evaluation, does not rely on analytical data. In fact, the valuation in this method is performed through the analysis of different indicators with the purpose of rating the intellectual property right, i.e. of determining its importance.

The indicators cover all the aspects that can impact the value of an intellectual property asset, covering legal aspects, the technology level of the innovation, market details and company organisation. Commonly, the method is implemented through a questionnaire comprising all these different criteria. Examples of questions included in such questionnaires can be:

- ✓ How would you define the intellectual property innovation compared to the actual state of the art?
- ✓ Which level of its life cycle has the intellectual property right (e.g. patent) reached?
- ✓ What is the geographic coverage of the reference market?

4 Selecting the right method

Selecting the valuation method to use in a given situation is complex. Several factors should be considered in the procedure, such as the type of intellectual property at stake, the level of development of the technology as well as the purpose of the valuation. The advantages and disadvantages of each

¹³ Kamara, A., "Introduction to real options", CFO Forum, 2002.

methodology should also be weighted. There is no specific rule on this matter. However, there are some situations where certain methods are more likely to be used, even though in theory all methods may be applied.

In the table below you can see examples of scenarios where methods are more likely to be used.

	Method	When/Why	Advantages	Disadvantages
QUANTITATIVE	cost-based	<ul style="list-style-type: none"> ✓ Valuation of an asset in the early stages of development ✓ Cases where there is no market revenue data ✓ Accounting and tax purposes 	<ul style="list-style-type: none"> ✓ Simplicity ✓ Information gathered easily since most of it is in the accounting sheets 	<ul style="list-style-type: none"> ✓ May be difficult to isolate the costs related to the intellectual property assets from the other research costs ✓ The economic benefits associated with the assets are not taken into account
	market-based	<ul style="list-style-type: none"> ✓ Valuation for internal purposes ✓ Valuation for IP transactions ✓ Valuation in litigation situations ✓ Trade mark valuation 	<ul style="list-style-type: none"> ✓ Accuracy, since it is close to market reality ✓ Objectivity 	<ul style="list-style-type: none"> ✓ May be difficult to gather comparable or similar data, since transactions are often confidential
	Income-based	<ul style="list-style-type: none"> ✓ Valuation for fund raising 	<ul style="list-style-type: none"> ✓ Analytic 	<ul style="list-style-type: none"> ✓ May be difficult to use in high risk sectors ✓ Subjective assumptions can be made
	Option-based	<ul style="list-style-type: none"> ✓ Valuation of an asset in the early stages of development ✓ Sectors of high uncertainty 	<ul style="list-style-type: none"> ✓ Deeper analysis since it takes into account the uncertainty of potential cash-flows 	<ul style="list-style-type: none"> ✓ Complexity
QUALITATIVE	Qualitative method	<ul style="list-style-type: none"> ✓ Internal management decision making 	<ul style="list-style-type: none"> ✓ Simplicity 	<ul style="list-style-type: none"> ✓ Subjective

Useful Resources

For further information on the topic please also see:

- *Valuing your intellectual property*, published by the UK Intellectual Property Office: <https://www.gov.uk/valuing-your-intellectual-property>
- *IP Valuation at Research Institutes; an essential tool for technology transfer*, published by the Hungarian Intellectual Property Office: http://www.sztmh.gov.hu/hirek/kapcsolodo/IP_Valuation_for_Technology_Transfer_EN_web.pdf
- *The use of IP valuation in IP transactions: a global survey of IP brokers*, European IPR Helpdesk Bulletin n.4: www.iprhelppdesk.eu/bulletin_issue_4

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ABOUT THE EUROPEAN IPR HELPDESK

The European IPR Helpdesk aims at raising awareness of Intellectual Property (IP) and Intellectual Property Rights (IPR) by providing information, direct advice and training on IP and IPR matters to current and potential participants of EU funded projects. In addition, the European IPR Helpdesk provides IP support to EU SMEs negotiating or concluding transnational partnership agreements, especially through the Enterprise Europe Network. All services provided are free of charge.

Helpline: The Helpline service answers your IP queries within three working days. Please contact us via registration on our website – www.iprhelppdesk.eu – phone or fax.

Website: On our website you can find extensive information and helpful documents on different aspects of IPR and IP management, especially with regard to specific IP questions in the context of EU funded programmes.

Newsletter and Bulletin: Keep track of the latest news on IP and read expert articles and case studies by subscribing to our email newsletter and Bulletin.

Training: We have designed a training catalogue consisting of nine different modules. If you are interested in planning a session with us, simply send us an email at training@iprhelppdesk.eu.

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This Fact Sheet has been initially developed under a previous edition of the European IPR Helpdesk (2011-2014). At that time the European IPR Helpdesk operated under a service contract with the European Commission.

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