Is It Time for the United States to Consider the Patent Box?

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The authors examine the patent box regimes adopted by six EU countries and consider key issues to be addressed in designing a similar tax regime for intellectual property (IP) in the United States that would attract and retain domestic IP development and ownership.

A. Overview

Over the last decade, six European Union countries have adopted "patent box" tax regimes designed to increase innovation activities, create and maintain high-value jobs, and foster global leadership in patented technology.[1] Also, the U.K. government has committed to implementing a patent box regime effective April 1, 2013. Adoption of patent box regimes by EU member states is consistent with the 2000 Lisbon Strategy, an economic development plan seeking to make the EU "the most competitive and dynamic knowledge-based economy in the world."

As illustrated by Table 1, the qualification requirements and mechanics for the six EU patent box regimes now in effect and for the proposed U.K. regime differ significantly. For example, one regime may be limited to patents, while others may provide tax benefits applicable to other types of intellectual property (IP). The general objective is to reduce significantly the corporate tax rate on income from qualifying IP, for example to a nominal rate of 5 to 15 percent, with effective tax rates typically even lower.

Given the tax benefits provided in some EU countries for holding IP, the question arises whether the United States should adopt similar incentives and, if so, how they should be designed. The details of the different regimes adopted in other countries laid out in this article indicate key issues that would need to be addressed in designing a U.S. IP box to

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[1]The "patent box" terminology apparently refers to the application of a lower tax rate to a separate schedule or "box" of income.

attract and retain domestic IP development and ownership. These questions include: What types of IP should be eligible? What types of IP-related income should receive preferential treatment? How should qualified IP income be taxed? What would be the revenue cost of adopting a patent box regime?

B. What Is a Patent Box?

Tax incentives can be provided at the front end of the innovation value chain, in the years when research and development expenditures are incurred, or at the back end, in the years when income is generated from exploiting IP. Front-end tax incentives include ''super deductions'' and tax credits for qualifying R&D expenses, such as the U.S. research tax credit and the recently introduced Dutch R&D ''super'' deduction. By contrast, patent box regimes are back-end incentives that provide a reduced corporate income tax (CIT) rate for certain income arising from the exploitation of IP, generally through a 50 to 80 percent deduction or exemption of qualified IP income.

C. EU Patent Box Regimes

Below are summaries of the current patent box regimes in six EU countries, as well as the proposal released by the U.K. government in December 2011.

1. Belgium. Introduced in 2007, the Belgian patent income deduction (PID) allows a Belgian company or a Belgian permanent establishment (PE) of a foreign company to deduct 80 percent of qualifying gross patent income. Therefore, only 20 percent of gross patent income is taxable at the normal corporate tax rate, resulting in a nominal tax rate of 6.8 percent, because the standard corporate tax rate is 33.99 percent (including the 3 percent surtax).

Development costs and other patent-related expenses, except license fees and amortization related to the acquired patents for which the PID is claimed, remain deductible at the regular corporate tax rate of 33.99 percent. The deduction of these other expenses, as well as other available tax benefits (for example, notional interest deduction and R&D tax credits) may lower the effective tax rate (ETR) on qualifying patent income below 6.8 percent. The PID may not be used to create a net operating loss and thus may not be carried forward.

Patents and supplementary protection certificates (providing extended patent protection) qualify for the PID if owned by a Belgian company or PE as a result of that entity's own patent development activities (partly or fully) in an R&D center in Belgium or abroad. The PID also applies when patents or supplementary protection certificates are acquired by a Belgian company or PE from a related or unrelated party — whether in full ownership, joint ownership, usufruct, or via license agreement — if the Belgian company or PE has further improved the patented products or processes in the company's or the PE's R&D center in Belgium or abroad. To qualify, these improvements do not need to lead to additional patents for the acquired IP.

To qualify under these rules, the R&D center must constitute a ''branch of activity'' or ''line of business''; that is, the center must be a division of an entity that is capable of operating autonomously. The PID rules provide that the R&D center can be located outside Belgium as long as the center belongs to a Belgian legal entity.

Although the Belgian company or PE should have relevant substance to perform and supervise R&D activities, it may use related or unrelated subcontractors in its development of the patents or extended patent certificates. Belgian companies or PEs acting as ''contract R&D'' service providers on behalf of another company cannot qualify for the PID because they are not the owner, holder of beneficial rights to, or licensee of the resulting patents.

The PID is not available for know-how, trademarks, designs, models, secret recipes or processes, or information concerning experience with respect to trade or science. However, the Belgian tax administration has indicated that know-how closely associated with patents or supplementary protection certificates may qualify for the PID. The PID is not available for capital gain realized on the disposal of patents.

To the extent that the Belgian company or PE licenses the patents, the PID is calculated based on royalties received. The amount of royalties eligible for the PID is limited to the amount that is taxable income in Belgium and corresponds to the fee that would have been agreed to between unrelated parties.

The PID applicable to patents used by the Belgian company or PE to manufacture patented products, either directly or by a contract manufacturer on its behalf, is 80 percent of the hypothetical license fee (embedded royalty) that the Belgian company would have received had it licensed the patents used in the manufacturing process to an unrelated party.

Tax withheld on foreign-source royalties is creditable against Belgian tax liability, including royalties eligible for the patent box.

The PID generally is applicable for qualifying patents granted or first commercially used on or after January 1, 2007.

2. France. Under the French tax code, revenue or gain deriving from the license, sublicense, sale, or transfer of qualified IP is taxed at a reduced 15 percent corporate tax rate (the standard rate is 33.33 percent) under specified terms and conditions.

Table 1. Comparison of EU Patent Box Regimes and U.K. Proposal

Tax Factors	Belgium	France	Hungary	Luxembourg	Netherlands	Spain	U.K.
Nominal tax rate	6.8%	15%	9.5%	5.76%	5%	15%	10%
Qualified IP	Patents and supplementary patent certificates	Patents, extended patent certificates, patentable inventions, and industrial fabrication processes	Patents, know-how, trademarks, business names, business secrets, and copyrights	Patents, trademarks, designs, domain names, models, and software copyrights	Patented IP or R&D IP	Patents, secret formulas, processes, plans, models, designs, and know-how	Patents, supplementary protection certificates, regulatory data protection, and plant variety rights
Qualified income	Patent income less cost of acquired IP	Royalties net of cost of managing qualified IP	Royalties	Royalties	Net income from qualified IP	Gross patent income	Net income from qualifying IP
Acquired IP?	Yes, if IP is further developed	Yes, subject to specific conditions	Yes	Yes, from non-directly associated companies	Yes, if IP is further self-developed	No	Yes, if further developed and actively managed
Cap on benefit?	Deduction limited to 100% of pretax income	No	Deduction limited to 50% of pretax income	No	No	Yes, six times the costs incurred to develop the IP	No
Includes embedded royalties?	Yes	No	No	Yes	Yes	No	Yes
Includes gain on sale of qualified IP?	No	Yes	Yes	Yes	Yes	No	Yes
Can R&D be performed abroad?	Yes, if qualifying R&D center	Yes	Yes	Yes	Yes for patented IP; strict conditions for R&D IP	Yes, but must be self-developed by the licensor	Yes
Credit for tax withheld on qualified royalty?	Yes	Yes	Yes	Yes	Yes, subject to limitations	Yes, subject to limitations	Yes
Year enacted	2007	2001, 2005, 2010	2003	2008	2007, 2010	2008	2013
Applicable to existing IP?	IP granted or first used on or after Jan. 1, 2007	Yes	Yes	IP developed or acquired after Dec. 31, 2007	Patented IP developed or acquired after Dec. 31, 2006	Yes	Yes

Source: PricewaterhouseCoopers LLP. Information current as of December 31, 2011.

Qualified IP includes patents, patentable inventions, and improvements made to them; industrial manufacturing processes that are the continuation of patents or patentable inventions (but not improvements); and certificates relating to vegetal inventions. Qualified IP rights must also qualify as assets. If IP rights are acquired (that is, do not result from R&D activities performed by the company), they must be held for at least two years to qualify for the patent box regime. Related or unrelated subcontractors may be used in the development of qualified IP, which may take place outside France.

Qualified income includes:

- net royalty payments received under license and sublicense agreements (either exclusive or nonexclusive, covering a portion or all of the qualified IP rights), corresponding to the difference between the gross amount of royalties received and the related costs incurred (by the owner) to manage the qualified IP rights licensed; and

- net capital gain reported by the seller in case of transfer (via sale, contribution in kind, transfer of business, etc.) of qualified IP, corresponding to the difference between the transfer price and expenses incurred by the transferor for the purpose of the transfer.

If the licensee is a French corporation and actually uses the qualified IP licensed, the licensee may deduct the royalty payments from its current income taxable at the standard 33.33 percent rate even if the licensor is taxed at the reduced 15 percent rate.

Tax withheld on foreign source royalties is creditable against French tax liability, including royalties eligible for the patent box.

Income from qualified IP created before 2001, the original effective date of the French patent box regime, is eligible for the reduced tax rate.

3. Hungary. Under the Hungarian patent box regime, companies owning qualified IP may deduct 50 percent of the royalties that related or unrelated parties pay for use of the IP. This deduction, along with other special deductions available, may not exceed 50 percent of the company's pretax income. Currently, Hungary's corporate tax rate is 10 percent on taxable income up to €2 million and 19 percent for income above that amount, resulting in a maximum rate of 9.5 percent on qualified IP income.

Qualified IP rights include patents and other protected intellectual works, know-how, trademarks, business names, business secrets, and copyrights. Specifically, the 50 percent deduction applies to income from:

- rights to exploit patents, design of assets under industrial law, and know-how;
- rights to use trademarks, business names, and business secrets;
- rights to use copyrighted work and similar rights attached to protected work; and
- transfers of the property described above (except for trademarks, business names, and business secrets).

For IP developed by a taxpayer through domestic R&D activity, it is possible to deduct 200 percent of R&D costs if specific conditions are met. This "super deduction" results from the ability to expense R&D costs and also claim an extra 100 percent deduction. Alternatively, if the costs of R&D activities are capitalized, companies can reduce their corporate tax base by the annual amount of depreciation connected with that capitalized R&D in addition to the 100 percent normal deduction in the year incurred.

Tax withheld on foreign-source royalties is creditable against Hungarian tax liability, including royalties eligible for the patent box.

Income from qualified IP created before 2003, the effective date of Hungary's patent box regime, is eligible for the reduced tax rate.

As of January 1, 2012, additional incentives are available for holding IP. Any gain on the sale (or a capital increase that is not in cash) for qualifying IP is exempt from CIT if the seller reported the acquisition to the tax authority and held the property for at least one year. Alternatively, if this reporting was not made, gain realized on a sale still would be exempt if the taxable gain is used to purchase qualifying IP within three years of the sale.

4. Luxembourg. The Luxembourg patent box regime provides an 80 percent tax exemption for the net income derived from the use or right to use qualified IP rights acquired or self-developed after December 31, 2007. Therefore, only 20 percent of net qualified IP income is taxable at the standard corporate tax rate (28.8 percent for 2012), resulting in a nominal tax rate of 5.76 percent. Amortization, R&D expenses, interest charges, and other related expenses must be deducted against the gross qualified IP income. The 80 percent exemption also covers capital gain realized on the sale of qualified IP.

Qualified IP includes patents, trademarks, designs, domain names, models, and software copyrights. Know-how, copyrights not related to software, formulas, and client lists do not qualify for the beneficial treatment. Qualified IP may not be acquired from a directly associated company (10 percent direct parent, subsidiary, or sister company).

For self-developed patents used internally by a taxpayer, a notional deduction against the operational income is available equal to 80 percent of the income that the taxpayer would have earned if it had licensed the right to use the patent to a third party.

Tax withheld on foreign-source royalties eligible for the patent box is partially creditable against Luxembourg tax liability, including royalties eligible for the patent box.

Income from qualified IP created before 2008, the effective date of the patent box regime, is eligible for the reduced tax rate if acquired by the Luxembourg company on or after January 1, 2008.

5. The Netherlands. The Netherlands originally adopted a patent box tax regime effective January 1, 2007, with an effective rate of 10 percent. As of January 1, 2010, the regime was expanded, and the rate for qualifying IP income was reduced to 5 percent. The new regime is referred to as the "innovation box."

Before 2010, the maximum amount of income that could benefit from the reduced rate was four times the development costs. Under the regime in force as of January 1, 2010, there is no maximum amount of income that can benefit from the 5 percent rate.

Both resident and nonresident taxpayers can benefit from the Dutch innovation box regime. Taxpayers can elect to apply the innovation box separately for each qualifying IP right. The election is made with the filing of a Dutch corporate tax return.

The Dutch innovation box regime applies to all net positive income (gross income minus related expenses and depreciation) attributable to, and net gains derived from, qualified IP. To qualify for the innovation box, IP must meet the following conditions:

- The IP must be a patent or R&D IP (defined below). Trademarks, logos, and similar rights do not qualify.
- The IP generally must be self-developed for the risk and account of the Dutch taxpayer. Acquired IP may qualify if it is further developed for the risk and account of the Dutch taxpayer.
- The IP must have become a business asset after December 31, 2006, in the case of patents, and after December 31, 2007, in the case of R&D IP.

R&D IP is IP that results from technical innovative activities conducted by or on behalf of a taxpayer for which the taxpayer has obtained an R&D declaration from the Dutch government. Consequently, the innovation box also can be used by companies that do not intend to apply for patents for the products of their R&D efforts or that develop products that are not patentable under EU law, such as software-related intangibles and trade secrets.

For patented IP, the R&D must be conducted for the risk and account of the Dutch taxpayer, but it does not necessarily have to be performed in the Netherlands. For IP for which an R&D declaration has been obtained, generally at least 50 percent of the R&D must be performed in the Netherlands and the Dutch entity must play a decisive coordinating role in the development.

The Dutch innovation box is not restricted to the income directly attributable to the patent or R&D IP; it also can apply to the qualified IP remuneration embedded in the sales price of goods or services. More than 30 percent of the anticipated income to be derived from the IP must be attributable to the patent right (this requirement seems not to apply to R&D IP).

Allocation issues are resolved through transfer pricing methods and are eligible for advance pricing agreements with the Dutch tax authorities. The Dutch tax authorities have a dedicated innovation box team that deals with innovation box rulings. In liaison with taxpayers, the team has developed a practical application of the innovation box, particularly regarding allocation issues, recapture of previously deducted development costs, and grow-in models.

Under the Dutch innovation box regime, losses from qualified IP are deductible at the general corporate tax rate of 25 percent. Losses from qualified IP deducted from taxable profits in previous years first must be recaptured at the general rate of 25 percent before the lower ETR applies. This rule also applies to R&D costs that are deducted before an innovation box election is made for the qualified IP.

Tax withheld on foreign-source royalties is creditable against Dutch corporate tax liability, including royalties eligible for the innovation box, subject to certain limitations.

6. Spain. Effective January 1, 2008, Spain's patent box regime exempts 50 percent of the gross income derived from the cession of the use and the right to use qualified IP. (The Basque country patent box regime is similar, but the legislation states certain advantages.) The patent box regime supplements Spain's R&D tax credit regime.

Qualified IP includes patents, designs, models, plans, secret formulas or procedures, and rights on information related to industrial, commercial, or scientific experiments (know-how). Expressly excluded from the patent box are trademarks; copyrights of literary, artistic, or scientific work (including cinematograph films, image rights, and software); and leases of industrial, commercial, or scientific equipment.

Qualified IP must have been self-developed by the licensor and must be used by the licensee in its business activities. If the licensee is a related company, those business activities cannot result in the provision of goods or services by the licensee that would generate a tax deduction at the licensor's level.

Because the Spanish regime exempts gross rather than net income, all expenses relating to the development and amortization of the qualified IP are deductible at the regular corporate tax rate. If an IP agreement includes other auxiliary services, consideration relating to the use of the qualifying IP must be clearly differentiated within the contract. The licensor must maintain all necessary records to ensure that such net income is properly determined.

The exemption will not apply beginning in the tax period after the revenue derived from the qualified IP exceeds six times the costs incurred to develop the qualified IP. All related revenue earned in the tax period in which the limit is reached is eligible for the tax incentive. Therefore, there is not any special limitation regarding the number of years to apply the incentive; for example, a company could exceed the six times limit in year 1, 4, or 10, etc.

Qualified IP does not necessarily have to be classified as an intangible asset on the licensor's balance sheet. However, there should be sufficient disclosure in the licensor's current or prior years' accounting records to determine properly the direct or indirect revenue and expenses corresponding to the qualified IP being licensed. Also, the taxpayer should maintain sufficient information detailing revenues and development costs and, for mixed contracts (that cover qualified IP rights and other ancillary services), the allocation of revenues.

The patent box exemption applies to intra-group transactions even if the licensee is in Spain or if the licensee belongs to the same Spanish tax-consolidated group as the licensor (in which case, the license transaction is not eliminated as part of the consolidated tax return).

Although Spain's patent box regime does not distinguish between qualified IP income from foreign and domestic sources, the licensee cannot be a resident of a Spanish-listed tax haven or a zero-tax jurisdiction. For royalty revenue generated from sources outside Spain, a credit is granted for withholding taxes paid, but it is limited to the lower of: (1) the amount effectively paid abroad because of a tax that is identical or analogous to Spanish CIT; or (2) the amount levied under this regime if that income would have been earned in Spain.

7. United Kingdom's proposed patent box regime. On December 6, 2011, the U.K. government released a revised proposal for a patent box regime scheduled to take effect April 1, 2013.[2] The patent box regime — at a 10 percent rate — will supplement the United Kingdom's existing R&D tax incentives.

The fundamental design principles reflected in the U.K. patent box proposal include:

- limitation on qualified IP to patents and some other independently verified technological innovations;
- benefit based on *net* income from development and exploitation of qualified IP;
- the inclusion of income from qualified IP derived both directly (for example, by license) and indirectly (for example, by manufacture of a patented product);
- elective application of the patent box;
- minimization of compliance and administrative burdens through the use of a formulaic approach; and
- benefits limited to taxpayers that are actively engaged in development of qualified IP.

Only patents granted by the U.K.'s Intellectual Property Office (IPO) or the European Patent Office (EPO) will be regarded as qualifying patents for the patent box regime. However, the patent box will include worldwide income earned by U.K. businesses from inventions covered by a qualifying patent, not just income that falls within the territorial limitations of the particular IPO or EPO patent.

Supplementary protection certificates, regulatory data protection, and plant variety rights are included in the proposed patent box. Other non-patented IP — such as trademarks, copyrights, and designs — are excluded, because the government perceives them to be less directly linked to technological innovation.

The U.K. patent box will be available to companies that own patents outright or have an exclusive license (at least countrywide) to exploit a qualified patent. The patent may be developed by the taxpayer directly or through a partnership, joint venture, or cost-sharing arrangement.

To qualify, a taxpayer must meet a development and an active management test. The development test requires that the taxpayer or other group member have performed significant activity to develop the IP, any product containing the IP, or the method of applying the IP. The development activity may occur after the IP is acquired. Based on facts and circumstances, a taxpayer's contribution may be significant by virtue of cost, time, effort, or value. The active ownership test requires that the taxpayer or other group member actively manage the IP, with consideration given to the company's resources and responsibilities, and the impact of its decisions in relation to the IP.

The U.K. patent box benefit is proposed to be determined using a five-step calculation:

1. Identify relevant IP income (RIPI).

2. Calculate RIPI using profit apportionment or income streaming.

3. Remove routine return, yielding qualifying residual profit (QRP).

4. Remove marketing return, yielding relevant IP profit (RIPP).

5. Apply patent box to RIPP.

[2]HM Revenues & Customs, "Consultation Draft on Profits Arising from the Exploitation of Patents" and "The Patent Box: Technical Note and Guide to the Draft Legislation" (Dec. 6, 2011).

a. Step 1 — Identify RIPI. The starting point for the patent box calculation is total gross income from the company's trade, excluding finance income, ring-fenced oil extraction income, and income from exploitation of nonexclusive patent rights. If the taxpayer has more than one trade, the patent box benefit is calculated separately for each trade. Five types of gross income can qualify as RIPI:

1. receipts from the sale of a patented item or an item that physically incorporates a patented item for its operating life, and receipts from spare parts and items designed to be incorporated into a patented item, if they are sold by the patent holder;
2. license fees and royalties from granting rights to use the company's qualified IP;
3. income from the sale or disposal of qualifying IP rights;
4. payments received as compensation for infringement of the company's qualifying IP; and
5. notional arm's-length royalties for use of qualified IP during the tax year to generate income not otherwise RIPI (for example, process patents and provision of services using qualifying IP).

b. Step 2 — Profit apportionment or income streaming. There are two ways that a taxpayer may calculate net income attributable to RIPI: apportionment of total profits, or allocation of expenses to RIPI (referred to as streaming). Under apportionment, the simpler approach, qualified net income is determined by multiplying the taxpayer's total profits by the ratio of RIPI to total gross income. Alternatively, the taxpayer may elect to allocate expenses between RIPI and non-qualifying income on a consistent and "just and reasonable" basis. The election applies to all trades and future years. In some cases, streaming is mandatory.

For purposes of apportionment or income streaming, several adjustments are made:

1. The enhanced R&D deduction (an incentive for R&D provided under U.K. law) is not taken into account, which increases the amount of income eligible for the patent box.
2. Financial income and expense are disregarded.
3. If during the first four years after the patent box election the R&D deduction is less than 75 percent of the average for the four years before the election (determined on a cumulative basis), the average rather than the actual deduction must be used.

c. Step 3 — Remove routine return to get QRP. Net income deemed attributable to IP is calculated as a residual by subtracting "routine" profits. Routine profits are calculated formulaically as 10 percent of the following costs:

1. personnel, including externally provided workers;
2. premises (if tax deductible);
3. plant and machinery (including capital allowances, lease costs, construction, maintenance, operating, and servicing costs); and
4. miscellaneous services (for example, software, consultancy, utilities, and transport).

These costs are excluded from the calculation of routine profits:

1. expenditures qualifying for the R&D credit or the enhanced R&D deduction (because these are likely to relate to the creation of qualifying IP);
2. financing expense; and
3. costs of raw materials and goods purchased for resale.

d. Step 4 — Remove marketing return, yielding RIPP. The portion of residual profits deemed attributable to qualified IP is determined as a residual by subtracting from QRP the excess of the notional marketing royalty (NMR) over any actual marketing royalties. The NMR is determined by multiplying RIPI by the arm's-length annual royalty rate that an unrelated party would charge for the exclusive right to exploit marketing assets associated with RIPI (including trademarks, customer information, etc.). If the excess of the NMR over actual marketing royalties is less than 10 percent of QRP, no marketing deduction is required. Alternatively, the taxpayer may elect to deduct 25 percent of QRP, but the amount of income that can qualify for the patent box is limited to £1 million.

e. Step 5 — Apply patent box to RIPP. Relevant IP profits are taxed at an effective rate of 10 percent by allowing a deduction equal to X percent of RIPP, where X = (T - 10)/T and T is the statutory corporate tax rate (23 percent in 2013). Rather than limiting the benefit of the patent box to IP developed after the effective date of the legislation, the patent box deduction will be phased in over five years. The portion of the patent box deduction allowed in 2013 will be 60 percent, increasing by 10 percentage points each year to 100 percent in 2017.

If a taxpayer has negative RIPP, referred to as a relevant IP loss (RIPL), the loss must be offset against RIPP of any other trade or any other group company. The balance of any RIPL must be carried forward and used to offset future RIPP of the group. For pending patents, RIPP earned in the six years before patent grant may be taken into account in the year of grant.

Credits for foreign royalty withholding taxes are allowed up to the amount of U.K. tax on royalty income after the patent box deduction.

The patent box will be available at the taxpayer's election, on a company-by-company basis, and will apply to all of the taxpayer's trades and future periods. If a company elects out of the patent box, it cannot elect back in again for five years.

f. Antiavoidance rules. The arm's-length standard will apply to transactions between associated companies.

To prevent abuse of the patent box, the U.K. government proposes to include rules that will prevent:

- inclusion of commercially irrelevant patents in products solely to qualify income for the patent box;
- addition of spurious exclusive rights to a license agreement solely to qualify income for the patent box;
- artificial manipulation of income or expenses; and
- transfers of patents within groups to artificially increase patent box income.

D. Designing a U.S. Patent Box Regime

Even if other countries had not adopted patent box regimes, the U.S. tax system would be one of the least attractive among OECD member countries for developing and holding technological IP.

According to the most recent OECD data, as of 2009 the United States ranked 24 out of 38 countries (including 32 OECD members plus Brazil, China, India, Russia, Singapore, and South Africa) in the value of tax incentives provided per dollar of R&D.[3] Because the U.S. research credit expired December 31, 2011, the U.S. incentive provided for R&D is now even lower than indicated by the OECD ranking.

Moreover, according to 2011 OECD data, the combined federal and average state statutory corporate tax rate in the United States (39.2 percent) is second highest among OECD countries, and more than 14 percentage points greater than the average for the other countries (25.1 percent). Therefore, royalty and license income earned from U.S.-held IP is taxed at a 50 percent higher rate than IP held in the average OECD country. The disparity in taxation of IP is even greater when compared with countries with patent box regimes, where qualified IP typically is taxed at rates between 5 and 15 percent.

Because IP is relatively mobile, U.S. policymakers may wish to consider adopting a patent box — as a stand-alone measure or as part of more fundamental tax reform — to provide a more attractive tax environment for creation and commercialization of IP in the United States.

To design an IP box for the United States, several questions must be addressed, including:

1. What types of IP should qualify?
2. What types of IP-related income should receive preferential treatment?
3. How should qualified IP income be taxed?
4. What would the revenue cost be?

1. What types of IP should qualify?

a. IP definition. The first issue is defining the scope of qualifying IP. Some EU countries (Belgium, France, the Netherlands, and Spain) limit the scope of their IP box regimes to patents and certain IP with industrial application, such as secret formulae and processes resulting from qualifying R&D activities. Other EU countries (Hungary and Luxembourg) have included a much wider range of IP, such as copyrights (including copyrights on software, which generally is not patentable under EU law) and marketing intangibles, such as trademarks and trade names. Countries that have taken the narrower approach primarily seek to promote patent-based technological innovation, and countries that have taken the broader approach are more concerned with attracting and retaining IP within the national tax base.

b. Domestic development. A second issue is whether substantially all IP development activities should have to take place within the United States to qualify for IP box treatment. This requirement would be consistent with the U.S. research tax credit, which is limited to research performed within the United States. None of the EU patent box regimes requires IP development activities to be performed domestically, because this would be a prima facie violation of the European Treaty.

c. Acquired IP. A third issue is whether qualified IP must be self-developed or can be acquired from others. Except for Spain, EU patent box regimes do not completely exclude acquired IP; however, to obtain patent box benefits, the taxpayer generally must further develop the IP and must deduct the costs of acquiring IP rights from patent box income.[4] Thus, in principle, only the value added by the taxpayer to acquired IP qualifies for patent box

[3]OECD, *OECD Science, Technology, and Industry Scoreboard 2009*.

[4]France also requires that acquired IP be owned for more than two years before qualifying for the patent box.

benefits, and patent box benefits may not be claimed by more than one taxpayer on the same income.

d. Contract IP. A fourth issue is whether IP development activities must be carried out by the taxpayer directly or may be carried out by other persons, whether related or unrelated. Belgium, the Netherlands, and Hungary do not require that the taxpayer directly carry out IP development activities and permit contract R&D and cost-sharing arrangements under certain conditions.

e. Preexisting IP. A fifth issue is whether preexisting IP should be excluded from the patent box regime, as in Belgium, Luxembourg, and the Netherlands. This approach limits the revenue cost with no diminution of the incentive effects of the IP box. The disadvantage is the complexity in separating income attributable to new and preexisting IP, particularly for products covered by multiple patents. An alternative to excluding preexisting IP is to phase in the benefit of the patent box over several years, as has been proposed in the United Kingdom.

2. What types of IP-related income should receive preferential treatment?

a. Embedded royalties. Some countries (France, Hungary, and Spain) provide IP box benefits only for income derived from the licensing of qualified IP. As a result, a company that self-exploits qualified IP rather than licensing it to other parties generally does not qualify for IP box benefits in those countries. This limitation could be avoided by licensing to a related party that is not a member of the taxpayer's consolidated group (for example, a foreign affiliate).[5]

In other countries (Belgium, Luxembourg, and the Netherlands), companies that self-exploit qualified IP may claim patent box benefits for the notional (embedded) royalty that could be earned by licensing to an unrelated party. Although the determination of arm's-length values for embedded royalties raises complex transfer pricing issues, similar issues arise under present law when companies license IP to related parties outside their tax affiliated group (for example, foreign affiliates).

b. Gross or net income. A second issue is whether gross or net IP income should be eligible for patent box benefits. Other than the Netherlands, EU countries with patent box regimes generally do not require that development costs be deducted from IP box income. As a result, the effective tax rate on qualified IP can be substantially lower than the nominal patent box rate; indeed, it can be negative.

Example: A patent is developed at a cost of $100 and generates a stream of licensing income with a present value of $200. Under the Belgian patent box, the present value of taxable income will be *negative* $60 (20 percent of $200 license income less $100 of R&D expense) because only 20 percent of the license income is subject to tax due to the 80 percent patent income deduction. At the Belgian CIT rate of 33.99 percent, the present value of tax liability on patent income in this example is *negative* $20.4 (-$60 times 33.99 percent), corresponding to an ETR of *negative* 20.4 percent.[6] If more than 100 percent of the R&D expenditures are deductible under Belgium's tax incentive for in-house R&D, the effective tax rate in this example would be even lower.

Requiring development expenses to be allocated against patent box income adds administrative complexity but protects against erosion of the tax base on unrelated income. As an alternative to expense allocation, some countries cap patent box benefits. For example, patent box deductions may offset up to 50 percent of pretax income in Hungary and up to 100 percent in Belgium (that is, the patent box deduction cannot create an NOL). In Spain, IP income in the patent box may not exceed six times development costs; however, this approach does not avoid the complexity of expense allocation.

c. Gain from sale. A third issue is whether gain from the sale of qualified IP should qualify for patent box benefits, as is the case in France, Hungary, Luxembourg, and the Netherlands. If gains from the sale of IP are excluded from the patent box regime, and buyers are ineligible for the same patent box benefits that the seller would have received absent a sale, there will be a disincentive to sell, as opposed to license, qualified IP. In this case, if the IP is sufficiently valuable, the buyer may choose to purchase the company rather than its IP to preserve patent box benefits. One way to avoid such distortions is to include gain on the sale of qualified IP in the patent box and to require the purchaser to reduce its patent box income by the acquisition cost (so there is no double benefit).

d. Pre-patent income. The often lengthy patent approval process leads to a fourth issue — how to treat income earned pending approval of a patent. The United Kingdom has proposed to allow patent box benefits, in the year of patent grant, for prepatent income (not to exceed six years). The Netherlands also has a mechanism to allow application of the innovation box effectively to qualifying IP income earned before the year of patent grant. The U.K. proposal avoids penalizing a patent holder for

[5]In Spain, an intra-group license qualifies, because the intragroup royalty is not consolidated for purposes of the patent box.

[6]Determined as the present value of tax liability (-$20.4) divided by the present value of net patent income ($100).

delays in the approval process that are outside its control (for example, challenges by other inventors).

e. Foreign exploitation. A fifth issue is whether the patent box should include income from foreign exploitation — for example, where a related or unrelated company manufactures a patented product abroad and pays a royalty to the taxpayer for use of qualified IP. None of the six EU member countries limits its patent box regime to income from domestic exploitation of qualified IP, because this would violate the EU Treaty. But the United States would not be similarly constrained and could choose to limit IP box benefits to income from domestic exploitation. For example, Congress chose to limit the domestic manufacturing deduction (DMD) in this manner (see section 199).

f. Infringement payments. A sixth issue is the treatment of payments received by the owner of qualified IP for infringement of its IP rights. Under the U.K. patent box proposal, payments received for infringement of qualified IP are eligible for patent box benefits. To the extent infringement payments represent license fees that should have been paid but were not, treating the infringement payments in the same manner as license fees is consistent with the purpose of a patent box.[7] Infringement payments should also be deducted from the patent box of the payer. A related issue is the treatment of revoked patents. In principle, patent box benefits claimed before revocation should be recaptured, but the United Kingdom has proposed a more lenient rule under which patent box benefits are denied only prospectively without any recapture.

g. Bundled IP. In some cases, a company includes rights to a portfolio of IP within a single license agreement. If the license covers both qualified and non-qualified IP, it will be necessary to bifurcate license payments to ensure that only the portion attributable to qualified IP is included in the patent box. In theory, to avoid tax abuse, the license fee should be bifurcated based on arm's-length principles; however, as a practical matter, it may be difficult to assign separate valuations to the components of a portfolio of IP rights when the value in aggregate is greater than the value of the individual items of IP. Similar issues may arise where taxpayers cross-license IP with or without net cash payments.

3. How should qualified IP income be taxed?

a. Deduction or reduced rate. All the EU countries, except France, with patent box regimes implement the reduced rate on qualified IP income through a PID. This approach is similar to the U.S. DMD. One alternative would be to provide a separate tax calculation, at a reduced rate, for income qualifying for the patent box, like the U.S. reduced individual income tax rate on capital gains. Although similar tax treatment can be achieved through either mechanism, the deduction approach appears to be simpler and, unlike a separate income tax rate, has no effect on the valuation of deferred tax accounts for financial statement purposes.[8]

b. Eligible taxpayers. A second issue is whether the U.S. patent box regime should be limited to corporate taxpayers and, if not, whether it should apply to domestic branches of foreign companies.

c. Cap on benefits. Third, should there be a limitation on the amount of benefit claimed? As noted above, the IP deduction is limited to 50 percent of pretax income in Hungary and 100 percent of pretax income in Belgium. A related question is whether the benefit of an IP box regime should be taken into account in computing alternative minimum tax liability.

d. Elective nature. Fourth, should a patent box regime be elective or automatic and, if elective, should there be an option to elect on a company-by-company or item-by-item basis? The ability to make selective elections is particularly important if expenses must be allocated against IP box income; in that case, taxpayers will want to exclude losses from the IP box to maximize tax benefits.

e. Foreign tax credit. If foreign-source royalties were to be included in a U.S. IP box, it might be appropriate to impose additional limitations on the credit otherwise allowable for foreign taxes withheld on these royalties. For example, if an IP box deduction is allowed for 80 percent of foreign royalties, foreign tax credits might be allowed only for 20 percent of associated withholding taxes.

f. Antiabuse rule. Another issue is whether an antiabuse rule, similar to that in Spain, might be needed to address situations where royalties from a foreign related party qualify for the IP box and the U.S. taxpayer simultaneously makes deductible payments to the foreign related party. Such an antiabuse rule might be unnecessary because the U.S. anti-deferral rules are quite robust and include foreign base company sales and services income.

4. What would the revenue cost be? Although no revenue estimates of the U.S. cost of a patent box

[7]Any portion of infringement payments that represents punitive damages presumably would not be included in the U.K. patent box.

[8]The timing and amount of tax under the separate tax calculation (schedular) approach may be different than a patent income deduction, depending on whether losses within each schedule may offset income in the other and how loss carryovers are treated.

regime have been released by congressional or Treasury staffs, the experience of other countries may provide a useful reference point.

According to the Belgian Ministry of Finance, patent income deductions increased from €26.5 million in 2008 to €605.7 million in 2010, resulting in tax savings of about €206 million in that year. Scaled based on the relative levels of domestic expenditures on R&D, the U.S. cost of a Belgian-type patent box would be about $11 billion at 2010 levels.[9]

Although the U.K. patent box proposal has not yet come into effect, the U.K. government estimates the revenue cost will be about £1.1 billion when fully phased in (about $1.7 billion in 2017). Scaled based on relative levels of domestic expenditures on R&D, the U.S. cost of a U.K.-type patent box would be about $14 billion per year in 2017.[10] Assuming the revenue cost grows at 7 percent per year, the U.S. revenue cost would be about $9 billion at 2010 levels.

By comparison, the Joint Committee on Taxation staff estimates that the tax expenditure for the research tax credit was about $4 billion in 2010, less than half of the comparable cost of the Dutch and U.K. patent boxes scaled to U.S. levels. The cost of adopting a Dutch or U.K.-style patent box in the United States can also be viewed as approximately equal to the cost of a 1 percentage point reduction in the U.S. CIT rate.

E. Conclusion

The United States is a relatively unattractive location, from a tax perspective, in which to develop and own IP. U.S. tax incentives for R&D rank in the bottom half of OECD countries, and the statutory CIT rate is second highest (and will be highest as of April 1, 2012, when Japan reduces its corporate tax rate). Adoption of IP box regimes in six EU member countries over the last decade has further reduced U.S. competitiveness. Consequently, U.S. policymakers may wish to consider adopting a patent or IP box, either separately or as part of tax reform.[11]

An IP box could have a significant revenue cost and impose substantial compliance and administrative burdens, so it is important that there be adequate time to develop a U.S. IP box. In the United Kingdom, the government announced its intention to introduce a patent box three years in advance, and it has thus far used this time to release a consultation document, solicit comments from the public, and issue a preliminary draft of statutory language. This deliberative and consultative approach would be a good model for the United States to follow.

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[9]Based on $1.2945 per euro as of January 2, 2012, and 2008 R&D expenditure data from the OECD.

[10]Based on $1.5512 per pound as of January 2, 2012, and 2008 R&D expenditure data from the OECD.

[11]As part of proposals for a territorial tax system, Treasury analyzed a proposal that would exempt half of foreign-royalty income. The rationale for this proposal was to offset the increase in tax burden on foreign-royalty income for taxpayers that use foreign tax credits on high-tax dividends to offset U.S. tax on foreign-royalty income. *See* Treasury, ''Approaches to Improve the Competitiveness of the U.S. Business Tax System for the 21st Century'' (Dec. 20, 2007), *Doc 2007-27866*, *2007 TNT 246-31*. On October 26, 2011, House Ways and Means Committee Chair Dave Camp, R-Mich., released a territorial income tax proposal that included three anti-base-erosion rules, one of which would

(Footnote continued in next column.)

provide a 40 percent deduction for IP income of U.S. corporations (including intangible income of foreign affiliates included in the income of the U.S. parent as foreign base company intangible income) to the extent attributable to the provision of goods and services to non-U.S. customers.