Guidance Notes on the Knowledge Development Box

Part 29-03-01

This document should be read in conjunction with Chapter 5 of Part 29 of the Taxes Consolidation Act 1997

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Revenue
Cáin agus Custaim na hÉireann
Irish Tax and Customs

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List of acronyms

EEA	European Economic Area
EITC	Enterprise Ireland's Technology Centres
EPO	European Patent Office
EPC	European Patent Convention
KDB	Knowledge Development Box
KTI	Knowledge Transfer Ireland
OECD	Organisation for Economic Co-Operation and Development
R&D	Research and development activities, within the meaning of **section 766 TCA 1997** being systematic, investigative or experimental activities in a field of science or technology that seek to achieve scientific or technological advancement and involve the resolution of scientific or technological uncertainty[1]
RPO	Research Providing Organisation, in the context of a Knowledge Transfer Ireland agreement
TCA 1997	Taxes Consolidation Act 1997 (as amended by Finance Act 2015)

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[1] Refer to the Research & Development Tax Credit Guidelines for more details on research and development, within the meaning of section 766.

Part 1 Introduction

1.1 What is the Knowledge Development Box?

The Knowledge Development Box (KDB) was introduced by Finance Act 2015 for companies whose accounting periods commence on or after 1 January 2016. It is a regime for the taxation of income which arises from patents, copyrighted software and, in relation to smaller companies, other intellectual property that is similar to an invention which could be patented. The regime is only available to companies that carried out the research and development (R&D), within the meaning of section 766 Taxes Consolidation Act 1997 (TCA 1997), which led to the creation of the patent, copyrighted software or intellectual property (IP) equivalent to a patentable invention.

A company which qualifies for the regime will be entitled to a deduction equal to 50% of its qualifying profits in computing the profits of its specified trade. The profits arising from patents, copyrighted software or IP equivalent to a patentable invention are taxed at an effective rate of 6.25%.

1.2 What these Guidance Notes are about

The following Guidance Notes set out how the KDB works. An explanation of the legislative provisions is supplemented with worked examples.

1.3 What law these Guidance Notes cover

The Irish legislation covered by these Guidance Notes is:

- Chapter 5 of Part 29 of the Taxes Consolidation Act 1997 (as amended by Finance Act 2015).
- The Knowledge Development Box (Certification of Inventions) Act 2017

Regard should also be had to:

- OECD (2015), Countering Harmful Tax Practices More Effectively, Taking into Account Transparency and Substance, Action 5: 2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing.

1.4 Terminology

A reference in these Guidance Notes to a section of legislation is a reference to a section of the TCA 1997, unless otherwise stated.

Part 2 The key definitions

A company that:

- carries on R&D (with certain geographic limitations – refer to paragraph (viii) of 2.3.1 below);
- where that R&D leads to a qualifying asset (refer to 2.1 below); and
- where that qualifying asset is exploited as part of a specified trade (refer to 2.2 below);

may be entitled to a deduction in calculating the taxable profits of its specified trade (see Part 3 below).

The relative size of the deduction is calculated with reference to the formula:

$$\frac{\text{Qualifying Expenditure + Uplift Expenditure}}{\text{Overall Expenditure}} \times \text{Profits of the specified trade}$$

(see section 2.2 below for a definition of each of the terms used in the formula).

2.1 Qualifying asset [S. 769G(1), 769H & 769R]

A qualifying asset is a:

- Computer program (refer to 2.1.1)
- An invention protected by a qualifying patent (refer to 2.1.2) or
- IP for small companies (refer to 2.1.4)

that is the result of R&D. Certain supplementary certificates[2] and plant breeders rights[3] may also be qualifying assets.

Any marketing related IP such as trademarks, brands, image rights and other intellectual property used to market goods or services cannot be a qualifying asset.

2.1.1 Computer program [S. 769G(1), 769H]

In section 769G(1) the definition of intellectual property, for the purposes of the KDB, includes:

(a) a computer program, within the meaning of the Copyright and Related Rights Act 2000, but, where a computer program is a derivative work or adaptation, the portion of the computer program that represents the derivative work or the adaptation of the original work and the original work shall be treated as two separate computer programs,

[2] Supplementary protection certificate issued under Council Regulation (EC) No. 469/2009 of 6 May 2009[2] concerning protection for medicinal products or any such certificate extended in accordance with Article 36 of Regulation (EC) 1901/2006 and any supplementary protection certificate issued under Regulation (EC) No. 1610/96 of the European Parliament and of the Council of 23 July 1996 concerning protection for plant protection products

[3] Within the meaning of section 4 of the Plant Varieties (Proprietary Rights) Act 1980

Section (2) Copyright and Related Rights Act 2000 defines a computer program as:

> …a program which is original in that it is the author's own intellectual creation and includes any design materials used for the preparation of the program

Note: The requirement that the invention is the result of R&D means that certain items which are computer programs will not be qualifying assets.

Example 2.1 – Computer program as a qualifying asset

Gaming Ltd has developed a new online game and a new platform for hosting online games. Gaming Ltd.'s intellectual property lawyers advise them that both products would individually be recognised as a computer program, within the meaning of the Copyright and Related Rights Act 2000.

The work on the development of the new game did not qualify for the R&D tax credit as it did not involve the resolution of scientific or technological uncertainty. Therefore, the new game will not be a qualifying asset for the KDB.

The development of the new platform was the result of R&D, and the R&D tax credit was available. It will therefore be a qualifying asset for the KDB.

Note:

While availing of the R&D tax credit is a useful check in determining whether or not the qualifying asset is the result of R&D, it is not necessary to have claimed the credit in order to be in a position to avail of the KDB.

Equally, R&D may have been carried out in such a way that while the activities were R&D activities, the costs did not meet the conditions of the R&D tax credit e.g. because of the restriction on the amount of R&D that can be undertaken by a university (refer to section 4.3 below for more details).

Example 2.2 – Computer program involving an adaptation

High Tech Ltd.'s US parent company developed a very successful piece of software. High Tech Ltd has been undertaking R&D to resolve a range of technological uncertainties surrounding the use of this software and it has developed a new product. High Tech Ltd begins to licence this new software and wishes to avail of the KDB.

The new product is an adaptation of the original computer program. High Tech Ltd will be able to recognise either: the adaptation (being the portion of the program that it developed) as a qualifying asset or

- the entire computer program as a qualifying asset (refer to 2.1.3 for further guidance on recognising a family of assets as a single qualifying asset).

Whether the adaptation is recognised in its own right, or whether the original and the adaptation are recognised as a family of assets will impact on the amount of relief available under the KDB (refer to 2.3 below).

2.1.2 Qualifying patent [s.769G(1)]

A qualifying patent is defined as:

(a) a patent granted following substantive examination for novelty and inventive step, or

(b) a patent, other than a short term patent within the meaning of section 63 of the Patents Act 1992, or an equivalent provision in another jurisdiction, where—

(i) the Patents Office in the State, or equivalent Office elsewhere, has caused a search to be undertaken in relation to the invention and a search report (within the meaning of section 29 of the Patents Act 1992) prepared, and

(ii) either—

(I) the patent was granted prior to 1 January 2016, or

(II) the patent was granted on or after 1 January 2016 and before 1 January 2017 and a patent agent, within the meaning of section 106 of the Patents Act 1992, certifies that in his or her opinion such a patent meets the patentability criteria, in that the invention is susceptible of industrial application, new and involves an inventive step,

but this paragraph is subject to section 769I(6)(a)(i)(VII);

Patent systems can generally be split into registration systems (e.g. the Irish system prior to the passing of the Knowledge Development Box (Certification of Inventions) Act 2017[4]) and systems which only grant patents following substantive examination for novelty and inventive step (e.g. the European Patent Office system). The majority of claims under the KDB, in the long term, are expected to be in relation to income arising from inventions protected by patents granted following substantive examination for novelty and inventive step.

A provisional list of countries and authorities whose patents are granted following substantive examination for novelty and inventive step is set out in Appendix I. If a company has a patent granted following a substantive examination for novelty and inventive step by an authority not listed in the Appendix as having such examination, they should be in a position to provide evidence of that examination if requested by Revenue.

While the patentability criteria of many of the authorities who carry out substantive examination listed in Appendix I follow those set out in the European Patent Convention (EPC), others do not, and, it is not a requirement of the KDB that the invention patented would be patentable if the EPC criteria were applied.

[4] Part 6 of the KDB (Certification of Inventions) Act 2017 amended the Patents Act 1992

Note: The requirement that the invention is the result of R&D means that certain items which are patentable will not be qualifying assets.

A company may only claim KDB treatment in relation to a patent granted under a registration system if a full search report has been carried out by the Intellectual Property Office of Ireland[5], or its equivalent in another jurisdiction, and:

i. The patent was granted prior to 1 January 2016 or

ii. The patent was granted between 1 January 2016 and 31 December 2016 and a Patent Agent (as defined in section 106 Patents Act 1992) certifies that the patent would still have been granted had a substantive examination for novelty and inventive step been carried out.

Revenue's power to consult with an expert (refer to Part 8 below) specifically covers seeking expert advice on whether or not a patent granted under a registration system would have been granted had a substantive examination for novelty and inventive step been carried out. That is, we may engage an IP lawyer (be it a patent agent, or a patent attorney or otherwise) to challenge any such opinion where we believe that opinion is not bona fide, not based on facts or is unreasonable.

Note: Even where a positive opinion from a patent agent is held, a claim under the KDB cannot be made in relation to a patent registered by a Patent Office that did not cause a full search report to be prepared.

Note: A claim under the KDB cannot be made in relation to short term patents, petty-patents or utility models.

[5] Changed from the Patents Office by section 42(b) Copyright and Other Intellectual Property Law Provisions Act 2019.

Example 2.3 – Patents

IP Ltd carries out R&D in Ireland. It has a number of inventions which are protected by patents as follows:

Invention A: patent registered in both the UK and Ireland in 2016, when Ireland operated a registration system for patents, sales of products based on Invention A made in the UK and Australia.

Invention B: patent registered in Spain; sales made in Spain.

Invention C: patent registered by the US; sales made worldwide.

Invention D: short term patent registered in Ireland and a search report was carried out at the request of IP Ltd.

Invention E: patent registered in Ireland on 1 June 2016, a search report was carried out by the Intellectual Property Office of Ireland and a Patent Agent has given her opinion that the patent would have been granted, had a substantive examination for novelty been carried out.

It also has Invention F which was protected by a patent registered in the UK but in respect of which the patent has expired.

While Invention A is protected by a registered patent in Ireland, it is also protected by a patent granted following substantive examination in the UK. Holding the Irish patent (which was granted under the Irish registration system) alone would not qualify Invention A for the KDB. As a UK patent is also in place the invention will be a qualifying asset and all profits which derive their value from that invention will potentially qualify for KDB treatment (refer to Part 2).

Invention B is protected by a registered patent. If a search report was carried out by the Spanish patent office and if it was granted prior to 1 January 2016 it will be a qualifying asset. If a search report was carried out by the Spanish patent office where the patent was granted between 1 January 2016 and 31 December 2016 and if IP Ltd obtains an opinion from a Patent Agent that the patent would have been granted had a substantive examination been carried out, then it will be a qualifying asset.

Invention C is protected by a patent granted following substantive examination. It is therefore a qualifying asset and the worldwide income earned from the exploitation of Invention C is eligible for KDB treatment.

Invention D is a short-term patent. Therefore, regardless of the fact that a full search report has been carried out, it will not be a qualifying asset for the purposes of the KDB.

Invention E is an Irish patent. While it was granted under a registration system, a full search report was carried out by the Patents Office and a patent agent has provided the required opinion. Therefore, it will be a qualifying asset for the purposes of the KDB.

Invention F is no longer protected by a patent. Therefore, IP Ltd would not now be able to make an election to have KDB treatment applied to the income arising from this invention. However, as elections for KDB treatment are irrevocable (refer to 6.1) if IP Ltd had elected for such treatment while the patent was still valid then the fact that the patent lapses, or expires, does not cause the invention to be removed from the KDB. However, if sales proceeds of a product are being apportioned the fact that no valid patent is in force may affect this apportionment (refer to section 2.2.4 below).

2.1.3 Family of products or assets [s.769H]

Where a company has a number of qualifying assets which are interlinked in their use by the company such that any effort to apportion the cost of developing those assets or the income associated with those assets would involve nothing more than an arbitrary allocation, then the company should treat those assets as a single unit – as a family of assets. The collective should be the smallest possible grouping of assets beyond which arbitrary decisions would be required.

Example 2.4 – Family of assets based on sales

TV Ltd manufactures and sells TVs. The TVs incorporate patented components and computer programs which are qualifying assets. It would not be possible for TV Ltd to apportion the sales proceeds of each type of TV to each individual qualifying asset (e.g. each qualifying patent and each computer program). TV Ltd can therefore group the qualifying assets into a family of assets. It should be noted that TV Ltd will have to apportion any sales proceeds between marketing related IP (e.g. brand name), other IP such as know-how, and the qualifying assets.

Example 2.5 – Family of assets based on R&D (pharma)

Pharma Ltd carries out extensive R&D in respect of which the R&D tax credit is available. In trying to resolve a single scientific uncertainty it has developed three separate and distinct drugs. It would not be possible to apportion the expenditure between the three drugs other than by applying an arbitrary apportionment. Pharma Ltd will therefore treat the three drugs as a single family of assets.

Example 2.6 – Family of assets based on R&D (pharma)

Medical Device Ltd has, through R&D, developed a drug delivery system which can be used to administer a range of products. The various products and the drug delivery technology, which has been patented, share a commonality of scientific and engineering challenges as they all treat related illnesses, using the same active pharma ingredient. Medical Device Ltd incurred R&D expenditure on the development of the drug delivery system as a whole taking together all of the integrated parts and incremental improvements. It is not possible to attribute costs to any single element of the drug delivery system used for each product within the product range. Medical Device Ltd would be able to group these related products as a family of assets for the purposes of claiming the KDB.

Example 2.7 – Family of products based on R&D (IT)

SoftwareCo has, through R&D, developed a new cloud-based platform which has natively integrated basic features. In addition, SoftwareCo has also developed additional features which can be customised based on specific customer request. These were developed at the same time and as part of the same workstream, with individuals working on both simultaneously. The platform and the additional features are based on a computer program protected by Copyright.

SoftwareCo charges customers a set amount for the basic platform service and each add on customised feature is charged for separately through increased licence fees. While it is possible for SoftwareCo to determine how much income it receives from each additional feature, it is not possible for SoftwareCo to determine how much it cost to develop each additional customised feature as these were developed as part of the overall platform. Therefore, it is appropriate for SoftwareCo to treat the platform and the add-on features as a family of assets.

Example 2.8 – Family of assets based on burdensome allocation of costs

Exp Ltd has carried out R&D activities which resulted in a number of qualifying assets. Exp Ltd believes that it would be very burdensome to apportion the costs between the different qualifying assets. It would therefore like to claim the KDB in relation to these assets as a family of assets. However, this is not permitted by the legislation which sets out that a family of assets may only be claimed where "*it would be reasonable to conclude that it would not be possible*" to apportion the relevant costs between the assets.

2.1.4 Third category of assets [s.769R]

Intellectual property for small[6] companies' is defined in section 769R(1***)*** as:

> …inventions that are certified by the Controller of Patents, Designs and Trade Marks as being novel, non-obvious and useful;

Inventions of small companies which share features of patents i.e. they are non-obvious, useful and novel, may be eligible for KDB tax relief, provided they are so certified by the Controller of Patents, Designs and Trade Marks. Guidelines and the application form to apply for the KDB Certificate are available on the Intellectual Property Office of Ireland's website[7].

[6] A company which has income arising from intellectual property of less than €7,500,000 in a 12 month accounting period, is a member of a group with group turnover of less than €50,000,000 and the company is a micro, small or medium sized company within the meaning of Annex to Commission Recommendation 2003/361/EC of 6 May 2003.

[7] Guidelines and application process for the KDB Certificate are outlined on the Intellectual Property Office of Ireland website Guidance on applying for a KDB Certificate

2.1.5 Location of IP

The location of the ownership of the IP is not a factor which impacts on the availability or otherwise of relief under the KDB. It is recognised that group companies may wish all legal ownership of IP to be centralised for IP protection purposes.

Example 2.9 – Location of ownership of IP developed by Irish company

IP Ltd (from **Example 2.3** – Patents) is a member of a group which has its head office in the UK. The head office has staff who specialise in defending and protecting patents. Therefore, the group has chosen to have legal ownership of all patents centralised in the UK head office company.

IP Ltd carried out the R&D that led to the development of the patents and IP Ltd is entitled to exploit the patents. Therefore, IP Ltd is eligible to claim relief under the KDB.

Example 2.10 – Location of ownership of IP developed by other group company

ZYX Ltd is the head of a group whose R&D has been carried out in Israel and whose IP has historically been held by ZYX Ltd, an Israeli company. WVUT Ltd is the member of the group based in Ireland. It has carried out R&D and developed products which are sold as a bundle with products based on the Israeli IP. Both the Israeli and Irish IP are qualifying assets. WVUT Ltd pays ZYX an annual royalty for the ability to sell products based on its IP.

If WVUT is unable to split the sales proceeds between products based on its IP and products based on the licensed IP, then it should treat them as a family of assets. The amount paid to ZYX will then be an acquisition cost, included in the denominator of the fraction.

2.2 Profits from exploiting the qualifying asset

2.2.1 Qualifying profits[s.769I(1)]

For each qualifying asset, the 'qualifying profits' must be calculated by applying the following formula:

$$\frac{\text{Qualifying Expenditure + Uplift Expenditure}}{\text{Overall Expenditure}} \times \text{Profits of the specified trade}$$

2.2.2 Specified trade [s.769G(3)]

The specified trade is the part of a company's trade that involves:

(i) the managing, developing, maintaining, protecting, enhancing or exploiting of intellectual property,

(ii) the researching, planning, processing, experimenting, testing, devising, developing or other similar activity leading to an invention or creation of intellectual property, or

(iii) the sale of goods or the supply of services that derive part of their value from activities described in subparagraphs (i) and (ii), where those activities were carried on by the … company

2.2.3 Profits of the specified trade [s.769I(4)]

The modified nexus formula, in section 769I(1), which calculates the qualifying profits for each qualifying asset, applies a fraction to the 'profit of the specified trade relevant to the qualifying asset'. Revenue accept that companies may choose between applying the formula to the profits of the specified trade as calculated individually for each qualifying asset or to the profits of the specified trade (being all qualifying assets together) calculated as a whole and then apportioned between the qualifying assets on a just and reasonable basis. Companies may therefore choose which method to apply. This is in recognition that where a company has many qualifying assets it might not be possible to calculate the profit for each asset other than by way of arbitrary allocations of expenses.

It should be noted for clarity that where the company does not make any claim to KDB relief in respect of any qualifying asset, the company is not deemed to have a separate specified trade.

Example 2.11 – Profits of the specified trade: actual

	Asset 1	Asset 2	Total
Overall income	7,000,000	2,000,000	9,000,000
Qualifying expenditure (QE)	900,000	100,000	1,000,000
Uplift expenditure (UE)	170,000	30,000	200,000
Overall expenditure (OE)	1,500,000	900,000	2,400,000
Profit of the specified trade(s) (QA)	4,000,000	1,000,000	5,000,000
Calculate the qualifying profit for each asset separately			
Qualifying profit ((QE+UE)/OE) x QA	2,853,333	144,444	2,997,778

Example 2.12 – Profits of the specified trade: apportioned

Using the same two assets as in the previous example but where the company was unable to calculate the profits on a per asset basis. The profits of the specified trade are therefore calculated in totality, rather than on a per asset basis and must be apportioned between the qualifying assets. The apportionment must be on a just and reasonable basis, and in this example the profits are being apportioned between the two assets in proportion to the overall income arising from each qualifying asset. The calculation would be:

	Asset 1	Asset 2	Total
Overall income	7,000,000	2,000,000	9,000,000
Portion of 5,000,000 QA profit per asset	3,888,889	1,111,111	5,000,000
Calculate the qualifying profit for each asset separately			
	Asset 1	Asset 2	Total
QE	900,000	100,000	1,000,000
UE	170,000	30,000	200,000
OE	1,500,000	900,000	2,400,000
QA (apportioned based on OI)	3,888,889	1,111,111	5,000,000
Qualifying profit ((QE+UE)/OE) x QA	2,774,074	160,494	2,934,568

While a company can choose whether to calculate the profit from the specified trade on a per asset basis or calculate it for all assets and then apportion it between the assets, this choice must be applied consistently year on year.

The profits of the specified trade (whether it is individually or cumulatively arrived at) must be calculated as overall income from the qualifying assets (refer to section 2.2.4 below) less:

- expenses incurred in earning that income, and
- any relevant capital allowances claimed in relation to assets used for the purposes of the trade.

Note: The profits of the specified trade are calculated as overall income less the expenses an independent company would incur in earning that income. It is not overall income less qualifying expenditure.

The apportionment of the expenses and capital allowances between the company's 'normal' trade and its specified trade must be done in a just and reasonable way. It must also be done in such a way that the expenses of the specified trade are the expenses that an independent company would incur in earning the same income from the qualifying assets. Any apportionment methodology must be applied consistently year on year, unless there has been a significant change in the conduct of the company's trade or business.

The allocation of costs to different activities and the allocation of profits to qualifying assets of the company are explored through examples below. In addition, it should be remembered that a family of assets can be treated as a single qualifying asset where certain conditions are met (see earlier guidance at 2.1.3).

Example 2.13 – Calculating the profits from a qualifying asset (**Example 2.4** continued)

TV Ltd sells TVs and treats qualifying assets exploited in a range of TVs as a family of assets (i.e. a single qualifying asset) for KDB purposes.

In estimating the taxable profits attributable to these qualifying assets, the company can identify from its management accounts the sales revenues and cost of sales attributable to the TVs which are included in its financial statements for the period.

Other sales, general and administration and finance costs incurred by the company in conducting its activities for the period can be attributed on a reasonable basis (see **Example 2.14** below) to earning the overall profits from the TVs which reflect this family of assets. Similarly, tax adjustments to the accounting measure of the overall trade's profits can likewise be allocated to profits from the products that reflect the family of assets e.g. to substitute accounting depreciation with capital allowances for the production plant and equipment used to manufacture the TVs.

Where expenses or allowances have to be apportioned that apportionment should be done on a just and reasonable basis. The estimate of profit attributable to the qualifying asset (or cumulatively for the specified trade) should be done so that the profit arising from the qualifying asset is the profit that would arise if it had been exploited by a completely independent company.

However, it should be noted that these profits from sale of the TVs reflect the company's exploitation of:

- both patented components and qualifying computer programs (some of which may be qualifying assets and some of which may not);
- know-how;
- return on manufacturing activities; and
- marketing IP (e.g. brand or trademarks).

How the profits are split between those relevant to qualifying assets and to other aspects of TV's trade are covered in **Example 2.17** below.

Example 2.14 – Just and reasonable basis in apportioning expenses

Widget Co, manufactures and sells one patented product. It has 100 employees, 20 of whom are dedicated R&D staff, 60 of whom are dedicated to manufacturing and 20 of whom are dedicated to sales, marketing, finance and administrative activity. It also continues to manufacture other items in respect of which no patents exist.

Widget Co needs to consider how to calculate the expenses it incurred in earning the income from its patented products. It starts with reviewing its management accounting information:

- As manufacturing costs (which include an allocation of energy costs, Plant &Machinery usage, and manufacturing staff) are incurred across the patented and non-patented products which are broadly similar in nature, Widget Co's management accounting system allocates these production costs on a pro rata basis based on the number of widgets produced. The company adopts this approach and allocates production costs and production related capital allowances on plant and machinery and industrial buildings on a similar basis.
- There were no product specific advertising campaigns, so the company decides to allocate marketing and branding costs on a turnover basis to the patented and non-patented products.
- Financial expenses such as interest expense are allocated in proportion to costs incurred
- The costs of the central finance, HR, and administration teams which support the R&D department, the marketing department, and the manufacturing department are allocated using headcount as an allocation key e.g. how many people are involved in producing the patented product as a percentage of total employees.
- The premises rental costs can be apportioned to the patented product either based on a square footage allocation key e.g. how much of the site is taken up by the manufacturing department or using the same headcount allocation key as that used for other overhead costs. The company is aware that once it chooses a method of apportionment then that method must be applied consistently, unless there is a change in its business.
- The current year R&D costs should not be allocated to the patented product on the basis that they relate to future products.

Allocation keys may change from time to time where the underlying facts and circumstances change. For example, if additional products were produced which consumed very different production resources then it may no longer be appropriate to allocate the production cost based on a widget unit basis.

2.2.4 Overall income from the qualifying asset [s.769G(1)]

Overall income from the qualifying asset means:

> …the following amounts arising in respect of an accounting period—
>
> (a) any royalty or other sums in respect of the use of that qualifying asset,
>
> (b) where the sales price of a product or service, excluding both duty due or payable and any amount of value-added tax charged in the sales price, includes an amount which is attributable to a qualifying asset, such portion of the income from those sales as, on a just and reasonable basis, is attributable to the value of the qualifying asset,
>
> (c) any amount for the grant of a licence to exploit that qualifying asset, and
>
> (d) any amount of insurance, damages or compensation in relation to the qualifying asset,
>
> where that amount is taken into account in computing, for the purposes of assessment to corporation tax, the profits of a trade, and overall income from qualifying assets shall be construed accordingly;

Thus, any amount which a company earns from exploiting a qualifying asset which is correctly taxed under Case I will be the overall income from the qualifying asset. Where the company sells a product, which has embedded royalties (which for the purposes of this guidance note includes both actual embedded royalties and any amounts attributable to the sale of copyrighted materials) relating to a qualifying asset then only the portion of the sales price which relates to those embedded royalties will form part of the overall income from the qualifying asset.

Example 2.15 – Embedded royalties and open-source software

Open Source Ltd engaged in R&D to develop a piece of software, which its IP lawyers have confirmed is a computer program. In keeping with its ethos, Open Source Ltd releases its software as open source code. A number of other developers bring out enhancements to the code, also in an open source format.

Any product which Open Source Ltd sells which relies on its computer program may be eligible for KDB treatment. However, if Open Source Ltd incorporates any of the updates developed by others, then it will have to ensure that it apportions its income between its computer program which was the result of R&D by it, and the code that was developed by others.

It may not be possible for Open Source Ltd to split the sales proceeds between the two pieces of IP and therefore it may have to treat them as a family of assets. As a family of assets any amount incurred on acquiring permission to use the enhancements would be an acquisition cost. If the enhancements that Open Source Ltd are using are open source, Nil acquisition costs are likely to be incurred.

Example 2.16 – Embedded royalties and software as a service

Companies can use different business models to exploit the same type of qualifying assets. The different means used to exploit the asset can mean that different approaches are required to identify the income attributable to the asset. If there are identical assets with identical users and functionality, where a robust transfer pricing approach is used, then the resulting estimate of income attributable to the asset should be same, whichever methodology is adopted.

Take two companies operating in the FinTech sector. Both companies develop qualifying assets which are computer programs which provide new algorithms which enhance the security and reduce the risk of fraud/non-permitted user access to secure payment systems. The enhanced security functionality which is offered by the company's programs is of interest to various businesses which are dependent on providing secure payment services to their clients.

One company decides to exploit its computer program by licensing the program to financial institutions which use it while providing secure payment services to their clients. The starting point for identifying the profits attributable to this qualifying asset is the licencing income of the company. Having considered whether the licencing income also reflects income attributable to its brand or other marketing-related IP (which profit should be excluded from the income attributable to the computer program itself), the company must allocate expenses to the licensing income based on a just and reasonable basis. This is likely to include any licencing costs the company has itself incurred in relation to the computer program as well as general and administration overheads and 'sales' costs related to the licence revenues it has earned from its customers.

The second company decides to use its computer program to build a highly secure platform for payment services which it operates itself. It provides secure payment processing services to its customers which pay transaction fees to the company based on the volume of payments processed by the company on their behalf. In this scenario, the company might explore different transfer pricing approaches to estimating the arm's length profit that it would have earned from the computer program had it dealt with an independent company on an arm's length basis – a 'notional royalty'. This approach can be a practical alternative when the company's business and financial records would require arbitrary allocations in order to isolate the overall net income derived from the qualifying asset(s).

If it can establish a third-party comparable royalty or licencing fee under OECD transfer pricing principles, it could use this 'notional royalty' return as the estimate of its income attributable to its use of the computer program (as this 'notional royalty' approach ignores other non-qualifying IP and other costs incurred that contribute to the company's overall profit from its payment platform). This is similar to the analysis that the first company adopts except that the 'notional royalty return' which is benchmarked under transfer pricing principles can more readily exclude any brand or marketing related return.

The company may conclude that it cannot find third party data which provides it with reasonable comparators to estimate a notional royalty in connection with the qualifying asset. However, it may be in a position to estimate returns related to routine processing

activities and marketing related IP using third-party comparables. With this information, the company might alternatively adopt a residual profit approach (following OECD-compliant transfer pricing principles) by firstly estimating the tax adjusted profit attributable to its use of its payment platform and then, deducting from the overall profits, those profits attributable to marketing-related IP, routine returns on transaction processing activity, routine returns on sales and general administrative activities and the use of other assets deployed by it in the provision of its services. Such deductions can be computed on a transfer pricing basis. This residual profit methodology leaves a residual profit which is considered to be the income earned by the company and attributable to the underlying computer program.

Example 2.17 – Embedded royalties (**Example 2.4** continued)

TV Ltd sells TVs and treats patented components and computer programs used in its sales of TVs as a family of assets (i.e. a single qualifying asset) for KDB purposes.

In **Example 2.13**, using its financial statement and management accounting information, the company has identified the taxable profits attributable generally to these products. That example noted that those profits reflected not just a return on the qualifying assets but also a return on marketing IP and manufacturing returns. In order to claim relief under the KDB the company must split its profits between those associated with the qualifying assets and those associated with other aspects of its trade.

The company determines that the most straightforward means of identifying the profits attributable to the patents and computer programs which have been used in producing the TVs is to adopt a residual profits approach using a transfer pricing analysis. Under this methodology, the company estimates and 'strips out' the profits attributable to the manufacturing production activity; sales and marketing; finance costs; and administrative activities (on the assumption that these activities were carried out by an independent party acting at arm's length). This leaves the company with an estimate of the residual profit earned by it and attributable to the qualifying assets, being the patented components and computer programs.

Example 2.18 – Embedded royalties in manufactured goods

The following are examples of companies in the manufacturing sector which have, through R&D, developed patented technologies which enable them to create markets for their product.

Illustrative examples include:

a) A company operating in the forestry sector which can manufacture strips of veneer that are distinguishably thinner than its competitors. This property of the veneer allows it to be used in new ways and creates a new customer market and alternative uses for the veneer.
b) A company in the food and drinks sector patents manufacturing equipment which allows it to process food product for the consumer market and meet the ingredient composition requirements, consistency of appearance, size and weight and achieve an extended shelf life for the product at volumes not achieved by its competitors. It is in a position to sell the product to new and wider consumer markets which provides it with a competitive advantage, and it wins sales in new markets not available to its competitors.
c) A company manufacturing medical device components develops a patented moulding technology that allows it to manufacture parts that are consistently measured to specifications when compared to its competitors which have greater variations in measurements. This new technology results in the company winning greater market share to supply components to a number of independent device companies.
d) A company in the food and drinks sector develops a patented production process which allows it to use by-product from its other products to create a new ingredient which it incorporates into food and drink products and creates a new consumer market for its products.

For an amount to be treated as 'overall income from the qualifying asset' a company must look at the individual sales price of a unit of a product or service and determine if any portion of that sales price is attributable to an underlying qualifying asset. Therefore, in each of these examples, if the company can charge a premium for its product because of the advancement, then KDB treatment will be available in respect of that premium. In relation to a particularly price sensitive product, the company may not be able to charge a higher price, but it may be able to show that a portion of its sales price is attributable to a qualifying asset and this may be evidenced through increased market share vis a vis competitors' less innovative products.

If, however, the new technology simply reduces the cost of manufacturing the product, then KDB treatment will not be available.

Example 2.19 – Embedded royalties – apportionment of sales price

A company operating in the medical devices sector manufactures and sells devices which are qualifying assets protected by patent together with related pharmaceutical consumables which it did not develop. The product is sold for a single price which includes the device and consumable drugs. Some of the constituent ingredients of the consumables are manufactured by it and some are purchased from third parties.

Based on its management accounting information, the company has identified costs related to its R&D which are excluded from costs allocated to the production and sale of the devices and related consumables. Also using its management accounting systems:

- the company can identify the costs incurred and attributable to the consumables purchased by it from third parties
- based on third-party comparables, it can estimate a manufacturing margin attributable to the production costs of the consumables and the devices manufactured by it
- the company can identify sales and marketing costs and can identify a distribution margin to those costs based on sales and distribution margins retained by third-party distributors for equivalent devices.
- the company manufactures the consumables and devices in a single manufacturing location. Given the single price attributable to the combined products, the company decides not to use turnover as its basis for allocating between consumables and devices its remaining general and administrative overheads (non-sales and non-manufacturing related). Instead, it uses product unit costs as the allocation factor to attribute these costs to the profits estimated from consumables and devices

At this point, the company has identified a profit attributable to its patented devices which is net of direct and general overhead costs allocated on a reasonable basis and after deducting margins attributable to manufacturing and sales/marketing activity which it would have incurred had it purchased these services from independent parties.

It then remains for the company to consider if the adjusted profit which is attributable to the patented devices reflects a return for other marketing related IP. Where it does, this return is deducted from the remaining profits to leave a residual profit attributable to the devices.

Note: The appropriate allocation factor for each cost will vary between sectors, and indeed may vary between companies. The appropriate allocation factor must be determined by each company as one which provides a reasonable nexus with the costs incurred. Where the management accountant, financial controller or an appropriate director with appropriate knowledge of the company documents the reason for choosing the allocation factor and that choice is bona fide, based on facts and not unreasonable, then Revenue will accept that allocation factor for the purposes of the KDB.

Example 2.20 – Embedded royalties – micro companies

Alice owns and runs a micro company which has carried out R&D, patented the result and developed a new product to exploit its qualifying asset. Alice has registered a number of trademarks as she hopes that the company will grow and be more successful in the future.

Alice, from discussions with her customers, believes that the company's name is not well known and nor are any of its trademarks: the product is selling on its own merits. It would therefore be reasonable, given the facts of Alice's case, not to apportion any of the sales price to marketing related IP.

As a micro business owner, Alice cannot afford to have her patent valued professional by a valuations expert and a royalty rate calculated. She understands that many small third-party businesses similarly cannot afford a valuation and that a royalty rate up to 10% is therefore not uncommon in third-party transactions between smaller companies. While she believes that the actual percentage of her product's sales price which is attributable to her patent should be higher, based on a cost benefit analysis she treats 10% of the gross sales price of the product as overall income from a qualifying asset.

Note: Unless there is evidence to the contrary, Revenue will accept a notional royalty rate of up to 10% for key IP used by micro and small[8] sized companies. Evidence to the contrary may include the existence of substantially similar products where brand is the main differentiator, or where the link between the IP and the product may not be adequately evidenced.

Example 2.21 – IP not sufficiently linked to product

Tom undertook R&D which resulted in a qualifying patent. His patent is a refinement to a component which is freely available.

He sells two products which use the refined component. The qualifying patent is integral to one of the products, while the second product would operate just as well and sell for the same sales price if the unrefined and freely available component was used. Therefore, none of the sales price of the second product is attributable to the refinement so none of the sales price will be overall income from a qualifying asset.

Tom may therefore claim KDB treatment in respect of an embedded royalty in respect of the first product, but not in respect of the second.

[8] For the purposes of this paragraph, a company is a micro or small sized company if it has fewer than 50 employees, and whose annual turnover and/ or annual balance sheet total does not exceed €10million. Where a company is a member of a group, then this paragraph only applies where the threshold amounts are met by the group as a whole.

Example 2.22 – Family of assets for pharmaceutical

Pharma Co has, through R&D, developed a patented drug spray coating which it applies to drugs produced in tablet form. The active ingredients in the drugs are protected by both acquired patents and self-developed patents. The IP related to the non-active ingredient mix in the tablet is protected by secrecy (a trade secret). The company has developed considerable production know-how in the manufacture and application of the spray coating technology to the tablets produced. The company has also heavily invested in its brand and reputation for product excellence which it has used to exploit and increase sales in developing markets where local generic manufacturers have suffered reputational damage in their offering of competitor drugs.

The company's sales from its patented drug reflects a return which includes patents which arose from its own R&D but also incorporates a return from the exploitation by it of trade secrets, manufacturing know how and brand related marketing-IP. Depending on the product, the company may be able to establish reasonable comparators which enable it to adopt a transfer pricing approach by pricing a 'notional royalty' as the estimate of its return attributable solely to the patented drug technologies.

The pharmaceutical sector is one sector where third-party comparables may be available in relation to companies which contract with third parties to manufacture equivalent product. Data available from such third-party practices may provide the company with reasonable assurance that it can estimate its income attributable to the patent by estimating 'notional royalties' using third-party comparables. 'Notional royalties' from the use of these types of inventions protected by patents may have comparators since this type of IP, rather than trade secrets and know-how, is often cross-licensed amongst independent pharmaceutical companies.

In the absence of the use of such data, the company may be able to adopt a residual profits approach. Using this approach, and having firstly established the tax adjusted profits attributable to its manufacture and sale of this family of assets, the company 'strips out' its estimate of profit relating to manufacturing activity (which incorporates its return on its trade secrets and production know-how), its distribution activities and brand and marketing-related IP to leave a residual return which is attributable to the underlying patented drug and related technologies.

2.3 Cost of developing the qualifying asset

The ***nexus*** approach involves creating a link between the R&D expenditure incurred by a company and the income arising to that company as a result of that R&D expenditure. The premise of this nexus approach is that R&D expenditure incurred by a company is a proxy for real and substantial activity carried on by that company.

The ***modified nexus*** approach recognises the way companies conduct their business and that acquiring IP and outsourcing to related parties is a part of international business. It therefore allows for an amount of uplift expenditure (refer to 2.3.2 below) calculated as the lower of 30% of a company's qualifying R&D expenditure on an asset or the total of related party outsourcing costs plus acquisition costs to be included in the numerator of the KDB

fraction (refer to 2.2 above). It is therefore necessary to define the various aspects of the cost of developing the qualifying asset.

2.3.1 Qualifying expenditure on the qualifying asset [s.769G(2)]

Qualifying expenditure is expenditure on R&D which leads to the **creation, development** of **improvement** of a qualifying asset. In most cases the R&D will lead to the creation of a new qualifying asset. However, there are occasions when the qualifying asset already exists but that there continues to exist substantial scientific uncertainty which must be resolved through R&D.

Example 2.23 – R&D on the development of an asset (bio-pharma)

Bio-Pharma Co carried out R&D leading to the registration of a US Patent for a new drug. The efficacy of that drug is uncertain until Phase III clinical trials are undertaken. Therefore, any costs relating to those Phase III trials which constitute R&D and are related to the development of the patent and not any other know-how or secret process regarding the manufacture of the drug, will constitute qualifying expenditure on the development of the qualifying asset.

Qualifying expenditure is defined in section 769G(2) and that definition is very similar to the definition of 'expenditure on research and development' used in relation to the R&D tax credit in section 766(1)(a) and the definition of 'relevant expenditure' in section 766A(1)(a). Details of the type of expenditure that qualify for the R&D tax credit are available in the R&D tax credit guidance note[9]. The key differences between the two definitions are:

i. **Unsuccessful R&D.** The R&D tax credit is available in relation to unsuccessful R&D whereas the KDB requires that the R&D activities have resulted in a qualifying asset which has been commercially exploited. Unsuccessful R&D which ultimately leads to the development of a qualifying asset will form part of qualifying expenditure.

Example 2.24 – Unsuccessful R&D and the KDB

PharmaCo is developing a new drug for the treatment of a skin disorder. The development of the new drug has been ongoing for several years and PharmaCo has had a number of failed attempts during the development cycle. However, each failed attempt has led to PharmaCo advancing its scientific knowledge and will contribute to the success of the final product. As the expenditure incurred by PharmaCo on the failed R&D efforts is expenditure on activities that will ultimately lead to the development of a patented product, all the costs incurred can be considered as "qualifying expenditure" for the purposes of the KDB.

ii. **Capitalised R&D.** Amounts may qualify for the R&D tax credit where they are capitalised as part of an intangible asset while for the KDB the definition is less prescriptive and amounts which are capitalised as part of an asset, whether tangible

[9] Available at Research and Development Tax Credit Guidelines

or intangible (refer to paragraph iii below), may qualify, once they meet the other conditions.

> **Example 2.25** – Amounts capitalised as part of a tangible asset (continuation of **Example 2.18**)
>
> In the examples set out in **Example 2.18**, once the patented equipment is put into use, the development cost of the patented technology has been capitalised in the cost of its tangible production equipment on its balance sheet. If the companies in those examples can identify overall income from the qualifying asset, then the cost of developing those patents can be treated as qualifying R&D expenditure on the patent.

iii. Amounts on which allowances are available under section 291A are generally specifically excluded from qualifying for the R&D tax credit (section 766(1)(a) paragraph (ii) of the definition of expenditure on research and development). Those amounts may be included in qualifying expenditure for the KDB if they were acquired other than from a group member, either directly or indirectly. However, it is expected in most cases that amounts to which section 291A apply will be treated as 'acquisition costs' (refer to 2.3.3 below) and therefore specifically not part of the qualifying expenditure for the KDB.

iv. **Charges**. The R&D tax credit allows expenditure to include an expense which is treated as a charge to which Part 8 applies (paragraph (i)(II) of the definition of expenditure on research and development in section 766(1)(a)). For example, this might include patent royalties paid by the company. The KDB specifically does not include any amounts to which Part 8 applies. Both the R&D tax credit (section 766(1A)) and the KDB (section 769G(2)(b)(ii)) specifically exclude interest of whatever kind.

v. **Acquisition costs**. Any amount of expenditure which falls within the definition of "acquisition costs" (refer to 2.3.3 below) is specifically excluded from the definition of qualifying expenditure. Whether or not an expense is an acquisition cost is not relevant to the R&D tax credit.

vi. **Buildings**. Expenditure on buildings may be eligible for relief under the R&D tax credit regime (section 766A) but is not eligible as qualifying expenditure for KDB purposes. Expenditure on plant and machinery in use for R&D purposes may form part of qualifying expenditure for KDB purposes (section 769G(2)(a)(ii)) and be eligible for relief under the R&D tax credit (paragraph (ii) of the definition of expenditure on research and development in section 766(1)(a)).

vii. **Outsourcing**. The KDB provides that where a company outsources its R&D to a non-group company, wherever the location of that R&D activity, then that amount is

deemed to be incurred in such a way as to form part of the qualifying expenditure (section 769G(2)(a)).
However, where a company outsources its R&D to a group member then that amount is specifically excluded from being a qualifying cost for the KDB (subparagraphs (iii) to (v) of section 769G(2)(b)).

If the company outsources its R&D to a third party but the relationship is managed by a group member, then the R&D spend will still form part of the qualifying expenditure for KDB purposes, once it cannot be taken into account as an expense, capital expenditure or otherwise relieved for tax purposes in a territory other than Ireland.

Any amount paid to the group member (e.g. an administration fee) will be excluded (section 769G(2)(b)(v)). The R&D tax credit includes a specific exclusion for any amounts paid to another person to carry out R&D activities unless certain conditions are met (subparagraphs (vii) and (viii) of section 766(1)(b)).

Example 2.26 –Merger and Acquisition activity and third-party / group outsourcing

Generic Ltd carried out R&D in Ireland leading to a number of patents that it exploited. Generic Ltd engaged Science Ltd, a local independent company, to carry on aspects of its R&D on its behalf.

Generic Ltd is a member of a global pharmaceutical group which decides to acquire Science Ltd. To determine whether or not the payments to Science Ltd are third-party outsourcing or group outsourcing, it is necessary to look at the relationship between the two companies at the time the costs are incurred. Therefore, the fact that Science Ltd is now a member of the same group does not cause the historic expenditure to be re-characterised from third-party outsourcing to group outsourcing.

Under the KDB, qualifying expenditure includes any amount incurred by a company outsourcing activity which, if it had carried out those activities itself, would have been R&D (the tail section of section 769G(2)(a)). The R&D tax credit is only available in relation to R&D carried on by the company, or R&D carried on by the person contracted, subject to the conditions set out in (subparagraphs (vii) and (viii) of section 766(1)(b)).

The differences between the R&D tax credit and the KDB in terms of R&D outsourced to a university are set out in 4.3 below.

viii. Location of R&D.

a. **Own R&D:** Both the KDB and the R&D tax credit allow for the company itself to carry out R&D in the EEA, but restrict the amount of eligible expenditure to the extent it is tax deductible in another EEA state (section 769G(2)(b)(vi) for the KDB and paragraph (II) of the definition of expenditure on research and development in section 766(1) for the R&D tax credit).

b. **Outsourcing:** The KDB allows for third-party outsourcing to take place anywhere in the world, while the R&D tax credit allows for outsourcing to a 3rd level

institute within the EEA and outsourcing to another business (whether connected or not) anywhere in the world.

ix. **Grants**. Where R&D expenditure is met by grant assistance then the company may not claim relief under the R&D tax credit (section 766(1)(b)(v)). No equivalent exclusion applies to the definition of qualifying expenditure for the purposes of the KDB.

Qualifying expenditure on the qualifying asset is a cumulative figure (subject to the transitional arrangements in Part 7 below). That is, it is the amount that the company spent on R&D leading to the development of the qualifying asset, no matter what accounting period that amount was incurred in.

In the case of a family of assets which is treated as a single qualifying asset, this means that the fraction applicable to a qualifying asset could vary from one period to the next where, for example, further R&D or other expenditure is incurred in relation to assets forming part of that family of assets.

Table 1 – key differences between "qualifying expenditure" and "expenditure on R&D"

Type of expenditure	**Para.**	**KDB** **"qualifying expenditure"**	**R&D** **"expenditure on R&D"**
Unsuccessful R&D	i	Only to the extent that it resulted, ultimately, in a qualifying asset.	Allowed
Amounts capitalised as part of an asset (tangible or intangible)	ii	Allowed	Allowed, in respect of intangible assets only.
Amounts to which s.291A relate	iii	Allowed (with certain restrictions)	Generally, not allowed
Acquisition costs	iv	Not allowed	Allowed (with certain restrictions)
Patent royalties	v	Not allowed	Allowed (with certain restrictions)
Interest	v	Not allowed	Not allowed
Building costs	vi	Not allowed	Allowed (under section 766A)
Location where R&D is carried on: - By company - third-party outsourced - Group outsourced	vii & viii	EEA (with certain restrictions) Worldwide Not allowed (but see 2.3.2 below)	EEA (with certain restrictions) Worldwide (with certain restrictions) Please refer to section 766 group expenditure)
Grants	ix	Whether or not expenditure is met by grant assistance does not impact upon its being qualifying expenditure.	Expenditure met directly or indirectly by grant assistance will not qualify.

2.3.2 Uplift Expenditure [s.769G(1)]

Uplift expenditure is recognition that companies will acquire certain pieces of IP and that groups of companies will work together on certain pieces of R&D.

Up-lift expenditure for each qualifying asset is the lower of—

(a) 30 per cent of the amount of the qualifying expenditure on the qualifying asset, or

(b) the aggregate of acquisition costs and group outsourcing costs.

Example 2.27 – Applying the limits to uplift expenditure

Numbers Ltd has the following costs of developing qualifying asset A:

Qualifying expenditure	€500
Acquisition costs	€300
Group outsourcing	€100
Total	€900

In this example uplift expenditure cannot exceed €500 * 30% = €150.

The total of group outsourcing costs plus acquisition costs is €400. As this is greater than €150 the uplift expenditure will be restricted to €150.

Numbers Ltd has the following costs of developing a qualifying asset B:

Qualifying expenditure	€700
Acquisition costs	€125
Group outsourcing	€75
Total	€900

The total of group outsourcing costs plus acquisition costs is €200. As this is less than €210 (€700 x 30%) the uplift expenditure will be the full €200.

2.3.3 Acquisition costs [s.769G(1)]

Acquisition costs are used in the modified nexus as a proxy for the amounts expended on R&D by the person from whom the intellectual property is acquired.

Acquisition costs are defined, in relation to expenditure incurred on a qualifying asset as:

> …the expenditure incurred on the acquisition of intellectual property, or rights over intellectual property, where that intellectual property is reflected in the value of the qualifying asset, but where expenditure incurred on acquiring the intellectual property is incurred otherwise than by means of a bargain made at arm's length, that acquisition shall, for the purposes of this Chapter, be deemed to be for a consideration equal to the open market value of the intellectual property;

It should be remembered that the narrower definition of intellectual property which applies generally to identifying a qualifying asset for KDB relief (see definition of 'intellectual property' at section 769G) does not apply to this definition. Therefore, intellectual property should be given its normal wider meaning.

Example 2.28 – Acquisition costs and business processes

Research Ltd engages a firm of business consultants to review its R&D processes. The business consultants come up with a new process, for which they obtain a US patent following substantive examination for novelty and inventive step, which they sell to Research Ltd.

Research Ltd uses the process to make its R&D procedures more effective and reduce costs. As a result of the R&D, it develops a number of qualifying assets which it exploits, and on which is claims relief under the KDB.

It may be entitled to claim relief under section 291A in relation to this acquisition of intellectual property.

While the business process may be a qualifying asset, the overall income from the qualifying asset is the income which accrues to the company who developed the process. From Research Ltd.'s perspective, as the process reduces costs, rather than being reflected in the sales price of the resulting product, it is not a qualifying asset in respect of which it is in receipt of any income. Therefore, the acquisition of this process is not an acquisition cost of Research Ltd for the purposes of the KDB.

Example 2.29 – Acquisition costs and work in progress

Manu Ltd buys Research Ltd.'s business. Research Ltd had a substantial body of work done in relation to a new product. Manu Ltd takes that body of work and continues to carry out R&D on it and obtains a qualifying patent in respect of the intellectual property.

The amount spent on buying the body of research from Research Ltd is an acquisition cost for the purposes of the KDB.

Example 2.30 – Acquisition costs and trade secrets

As part of the purchase of Research Ltd.'s business, Manu Ltd acquired a number of trade secrets which were the result of R&D. It decided to do further R&D and to then obtain a qualifying patent in respect of some of those secrets to protect them from an IP perspective and to keep others as trade secrets into the future.

The costs of acquiring any trade secrets which are subsequently protected by a qualifying patent will be an acquisition cost for that qualifying asset.

Where the secret is not protected by a qualifying patent then it is not within the scope of the KDB and any amount spent on acquiring the trade secret is not an acquisition cost.

Where aspects of a trade secret are subsequently protected by a qualifying patent then it will be necessary to apportion the acquisition cost of the trade secret between that portion and the portion that remains unprotected.

Example 2.31 – Acquisition costs and arm's length pricing

(This example is similar to the situation with Enterprise Ireland Technology Centres set out in 4.2 below).

A company which is a member of a global software group conducts R&D activity in Ireland under which its software development teams participate with other R&D global centres (including group members based in India, Israel and the US) in developing new software products which incorporate computer programs (as defined). The group adopts a group-wide collaborative and agile approach to software development which takes advantage of the different time zones across the world in which the group's R&D teams are based.

The global software teams including those based in Ireland work as needed on all of the products of the group, 'handing over' work done on parts of the development project to the other international teams at the close of business each day. Although they participate collectively in the development of the new programs, the R&D entities do not share in the rights to the outcome of the R&D activity. This is done for the benefit of a central group owner.

By reason of the R&D methods used by the group, it is not possible to track the individual company efforts which have contributed to the family of assets which are the outcome of this collective R&D activity.

It is recognised that companies may carry out research and development activities, some of which are R&D (within the meaning of the KDB and the R&D tax credit) and some of which are not. Therefore, in order to be in a position to determine whether or not the work carried out by the Irish team constitutes R&D it will be necessary to track the work of the team to specific projects and to have documentation in place which supports those projects being R&D projects.

The Irish company acquires the right to use the developed IP, on arm's length terms. The developed IP includes computer programs protected by copyright and which are used by it in the course of its Irish trade and are potentially qualifying assets for the KDB. In order to make a claim under the KDB, the Irish company must have documentation which illustrates the nexus between the R&D projects it worked on and the computer programs now being exploited.

The arm's length amount paid to the owner of the IP will constitute an acquisition cost in the KDB fraction.

Example 2.32 – Acquisition costs: capital and revenue in nature

An Irish software company is a member of a US parented group operating internationally. The company is to become the centre of excellence and the lead developer for the next generation of a software platform which is used by customers in the educational sector. The Irish company will licence rights to use the new generation of the platform to customers internationally. The Irish company will acquire the software rights to the existing platform.

In one scenario, the Irish software company pays an upfront sum to acquire the software rights for the existing platform. This expenditure is considered to be capital expenditure in character and is considered to be expenditure on an intangible asset, copyrighted software, which is eligible for allowances under section 291A. Where the company builds upon this platform to create the new platform, it is likely that some or all of this expenditure will be an acquisition cost in relation to a new qualifying copyright protected software resulting from the company's R&D activity.

In a second scenario, the Irish company acquires the rights to the existing platform through licensing the rights through royalties paid annually for the remaining economic life of the existing platform. Although the royalty payments are considered to be costs deductible each year from the company's trading profits, they are nonetheless 'acquisition' costs to be included in denominator in the Modified Nexus formula where the company builds upon this platform in its R&D activity to create the new qualifying software asset which forms part of the new generation software platform. The acquisition costs will therefore increase each year as the annual royalty falls due.

2.3.4 Group outsourcing costs [s.769G(1)]

Group outsourcing costs measure the cost of R&D leading to the development of a qualifying asset where that R&D was not undertaken directly by the company. Group outsourcing costs is a slight misnomer in that it includes items similar to, but not exactly within the common meaning, of group outsourcing.

In addition to any amounts paid to a group member to carry out R&D (section 769G(2)(b)(iii), this definition of 'group outsourcing costs' also includes:

i. Amounts spent by the qualifying company on R&D carried on itself outside of the EEA; and
ii. Amounts spent by the qualifying company on R&D carried out itself elsewhere in the EEA where that amount is not a qualifying expense because that other EEA member gave a tax deduction for the expense (section 769G(2)(b)(vi)).

Group outsourcing does not include costs incurred in buying in services from group companies which do not constitute R&D activity. It is recognised that groups often share centralised resources and that a company may buy in services as part of the conduct by it of R&D. These might include, for example, the use of R&D staff seconded from the group employer company where the costs of the R&D staff are borne by the company engaged in R&D.

In the case where the Irish company buys in third-party R&D related activity through a group member, the cost of the third-party R&D can be included in the amount of qualifying expenditure, but this cost should exclude any mark up or margin which may have been applied to the recharge made and retained by the group member (section 769G(2)(b)(v)).

Example 2.33 – R&D carried out in the EEA

Irl Co carries on most of its R&D activities in Ireland. However, a number of its R&D staff wish to be based in the UK. As any amount spent on R&D in the UK branch will be deductible in arriving at the companies UK tax liability, that amount cannot be included as part of the qualifying expenditure of a qualifying asset. Instead, the UK spend will form part of 'group outsourcing' costs (section 769G(2)(b)(vi)).

Example 2.34 – R&D carried out by 3rd parties

PharmaCo undertakes R&D activity in Ireland developing a new patented drug product. As part of the development of this product it sub-contracts R&D activity to unconnected companies in France and Canada (Toronto). There is no territoriality restriction on where the sub-contracted activity can be conducted. Therefore, the sub-contracted activity is considered to be 'qualifying expenditure' for the purposes of the KDB.

However, PharmaCo also undertakes some activity itself on R&D activities in the USA as it sends its employees there for 6 months to work alongside the parent company. The costs of the employees who worked in the USA for 6 months would need to be excluded from 'qualifying expenditure' as this R&D activity was undertaken outside the EEA. It will form part of the 'group outsourcing' costs.

Example 2.35 – R&D carried out by a group company (continuation of **Example 2.34**)

PharmaCo also sub-contracts some of the R&D activity to connected companies in the UK and USA. Sub-contracted activity to connected companies is not considered to be 'qualifying expenditure' regardless of where it is carried out. However, it would be considered to be 'overall expenditure' for the purposes of the nexus fraction.

Example 2.36 – R&D paid for via a group company (continuation of **Example 2.35**)

PharmaCo decides to engage a new third-party service provider to carry out a once off R&D project. The third party is based in Vancouver in Canada. The group has a local group member in Vancouver which has dealt with this service provider before. PharmaCo engages the Canadian group company to handle routine administrative arrangements with the new R&D service provider on its behalf including arranging for settlement of the payment for the R&D services in Canadian dollars. The Vancouver based group subsidiary arranges for and pays for the R&D activities on behalf of the Irish company but recharges the costs with an administration fee to compensate it for its services.

PharmaCo includes the cost of the R&D services in its qualifying expenditure but does not include the administration fee charged by the group company.

2.3.5 Overall expenditure on the qualifying asset [s.769G(1)]

Overall expenditure on the qualifying asset is the total expenditure actually incurred on the asset which in general **could** have qualified for the KDB, had the company incurred the expenditure itself. It includes the company's own qualifying expenditure, the acquisition costs (a proxy for the R&D undertaken by the person from whom the IP was acquired) and group outsourcing costs. It does not include items such as interest which are specifically excluded from the definition of qualifying expenditure.

Example 2.37 – Overall expenditure on qualifying assets

MedCo undertakes qualifying R&D as part of the development of a new surgical product. It takes out a range of patents in respect of the new product.

To enable the R&D to take place, MedCo built a new R&D technical lab in Ireland. This was funded by bank debt on which it paid interest. It paid amounts to a group company in China to manufacture the product and another connected company in the USA to undertake some of the R&D activity. It also paid an amount indirectly via a group company to an unconnected company in Germany for sub-contracted R&D activities. The group company charged a 5% mark-up for this service. Finally, MedCo initially acquired the underlying IP from a company that it bought over.

When calculating the amount of profit that qualifies for the KDB, 'qualifying expenditure' will include the R&D expenditure incurred by MedCo on its own R&D activities in Ireland and payments made indirectly to the unconnected company in Germany, but excluding the mark-up paid to the group company. 'Overall expenditure' would include these same amounts plus the amounts paid to the related company in the USA for R&D and the acquisition costs of the original IP it purchased. The payments to the Chinese company would be excluded from both 'qualifying expenditure' and 'overall expenditure' as they are for manufacturing activity while the bank interest and building costs are also to be excluded.

2.3.6 Irish Branch companies claiming KDB relief

An Irish branch that carries on a trade of qualifying R&D activity, may qualify for the KDB as it is within the charge to Corporation Tax.

Where an Irish branch is carrying on a trade that includes qualifying R&D activity, and such trade, including the R&D, is incorporated into an Irish entity and the R&D activity of the branch continues uninterrupted upon incorporation, then assuming the ultimate ownership does not change, KDB relief should be available to the incorporated Irish entity. The company must qualify for section 400 relief, allowing the capital allowances and loss relief available to the Irish branch to be transferred to the Irish incorporated company.

It is important to note that the incorporation should take place for bona fide commercial reasoning and not for the avoidance of tax.

Example 2.38 – R&D credit and KDB relief transferring with an Irish branch

An Irish branch of an international food company conducts qualifying R&D in Ireland, with the intention of developing patentable intellectual property, that would be retained and exploited in Ireland. A decision was taken in group headquarters that it would be beneficial to incorporate the Irish branch into an Irish resident company, which would allow the branch to grow independently without any change in the ultimate ownership. The R&D activity of the branch continued uninterrupted upon incorporation. The company claimed section 400 TCA relief, allowing the capital allowances and loss relief available to the Irish branch to be transferred to the Irish incorporated company, providing that the parent company and ownership of the trade remains with substantial common identity.

In these circumstances, the R&D activity incorporated into the Irish resident company should not be considered an acquisition cost for KDB purposes, as there is no material change in the activity of the newly formed company.

2.3.7 A Merger and KDB relief

A merger triggers an acquisition for KDB purposes. The surviving company is treated as acquiring any Intellectual Property (IP), belonging to the company, which is subsumed, at market value.

2.4 Comparison to R&D tax credit

Qualifying expenditure on the qualifying asset is a cumulative figure (subject to the transitional arrangements in Part 7 below). That is, it is the amount that the company spent on R&D leading to the development of the qualifying asset, no matter what accounting period that amount was incurred in.

In the case of a family of assets which is treated as a single qualifying asset, this means that the fraction applicable to a qualifying asset could vary from one period to the next where, for example, further R&D or other expenditure is incurred in relation to assets forming part of that family of assets

Table 1 sets out the key differences between expenditure on which the R&D tax credit is available and expenditure which is qualifying expenditure for the purposes of the KDB.

The other factors which need to be considered when comparing the R&D tax credit and the KDB are:

- A company need not have claimed the R&D tax credit in order to claim the benefit of the KDB. The company must have undertaken R&D and while in most instances it will be expected that the company will have claimed the R&D tax credit it is possible (for example because of timing issues) that the credit was not claimed.
- A company which is involved in contract R&D may be eligible to claim the R&D tax credit. However, such a company will not be in a position to claim KDB treatment in respect of that R&D.

Example 2.39– Contract R&D
Contract Ltd is an Irish based company that undertakes R&D for both group and third-party companies. It charges cost plus 15% for its services to both types of customer. Group Ltd, a sister company, had engaged Contract Ltd to carry out R&D for it and has notified Contract Ltd that its output formed the basis for a patent application and a qualifying patent has been received.

Contract Ltd undertakes R&D and is entitled to the R&D tax credit.

While Contract Ltd has carried out R&D its income is not overall income from a qualifying asset. Its income is calculated with reference to its ability to provide an R&D service and is therefore not attributable to a qualifying asset. That a qualifying asset has resulted from the R&D is not relevant.

Part 3 The relief [s.769I]

3.1 What is the relief [s.769I(1)]

In calculating the profits of the specified trade, a company may claim a deduction calculated as 50% of the profits arising from each qualifying asset (refer to 2.1 above).

3.2 Interaction with other provisions

The deduction is calculated as 50% of the qualifying profits (as defined, refer to 2.2 above). Qualifying profits are the amount of profits after capital allowances but before relief for trading losses [section 769I(1) and (5)].

3.2.1 Double tax relief

The Irish effective rate of tax, for the purposes of calculating double tax relief, is calculated after the deduction for the KDB is claimed.

Example 3.40 – KDB and double tax relief (10% WHT)

A company earned amounts from licencing software in the course of its trade (referred to royalties below for ease of reference). Part of its trade for the 31 December 2016 period was a specified trade. The company made a claim to KDB relief equal to 50% of qualifying profits from the specified trade. The company's trading income for the period is a combination of profits from its specified trade (net of KDB relief) which is not a deemed separate trade for the purposes of calculating double tax relief and the balance of its trading profits from its non-specified trade.

Royalties received from Japanese companies during the period were subject to withholding tax (WHT) at a rate of 10%. The company claimed double tax relief for the Japanese WHT against the net income from its trading activities attributable to the Japanese royalties.

	Royalty revenues	€	WHT rate	Net
A	Royalties [net received was €450,000] which form part of specified trade	500,000	10%	450,000
	Taxable income			
	Specified trade profits	5,000,000		
	KDB claim for relief	-1,250,000		
	Remainder of trading profits - non-specified	8,000,000		
B	Case I income for the period (after KDB)	11,750,000		
C	Turnover from trading activities	25,000,000		
D	WHT at 10% on royalties	50,000		
E	Irish measure of foreign income *(B x A /C)*	235,000		
F	Net Foreign Income *(E - D)*	185,000		

	Credit (F re-grossed at the lower effective rate):	
	Irish effective rate	12.50%
	Foreign effective rate *(D / E)*	21%
	Re-grossing:	
	€185,000 / (100 - 12.5%)	211,429
G	Credit @ 12.5%	26,429
H	Deduction *(D - G)*	23,571
	Calculation of Corporation tax	
I	Specified trade profits	5,000,000
J	KDB claim for relief	1,250,000
	Additional expense deduction for excess non-creditable tax restricted to the extent of KDB relief calculated as follows [H x [(I - J)/I]	-17,679
	Remainder of trading profits - non-specified	8,000,000
	Case I income for the period (after KDB)	11,732,321
	Irish corporation tax @ 12.5%	1,446,540
	Credit for WHT suffered	-26,429

Example 3.41 – KDB and double tax relief (20% WHT)

A company earned royalties from licencing software in the course of its trade. Part of its trade for the 31 December 2016 period was a specified trade. The company made a claim to KDB relief equal to 50% of qualifying profits from the specified trade. The company's trading income for the period is a combination of profits from its specified trade (net of KDB relief) which is not a deemed separate trade for the purposes of calculating double tax relief and the balance of its trading profits from its non-specified trade.

Royalties received from company's resident in one DTA country during the period were subject to withholding tax (WHT) at a rate of 20%. The company claimed double tax relief for that WHT against the net income from its trading activities attributable to the royalties.

	Royalty revenues	€	WHT rate	Net
A	Royalties [net received was €400,000] which form part of specified trade	500,000	20%	400,000
	Taxable income			
	Specified trade profits	5,000,000		
	KDB claim for relief	-1,250,000		
	Remainder of trading profits - non-specified	1,000,000		
B	Case I income for the period (after KDB)	4,750,000		
C	Turnover from trading activities	25,000,000		
D	WHT at 20% on royalties	100,000		
E	Irish measure of foreign income (B x A /C)	95,000		
F	Net Foreign Income (E - D)	Nil		
H	As D > E, the Irish measure of income is reduced to Nil and no foreign tax credit relief is available and the foreign tax deduction is limited to the Irish measure of the foreign income.	95,000		

For the purposes solely of this illustrative example, it is assumed that additional unilateral relief is not available under paragraph 9DB of Schedule 24

	Calculation of Corporation tax	
I	Specified trade profits	5,000,000
J	KDB claim for relief	1,250,000
	Additional expense deduction for excess non-creditable tax restricted to the extent of KDB relief calculated as follows [H x [(I - J)/I]	-71,250
	Remainder of trading profits - non-specified	1,000,000
	Case I income for the period (after KDB)	4,678,750
	Irish corporation tax @ 12.5%	584,844

3.2.2 The R&D tax credit [section 766, 766A & 766B]

Section 769J specifically provides that the payable tax credit, calculated in accordance with section 766(4B)(a), should be calculated before any relief is given for the KDB.

Example 3.42 – Restricting the payable R&D tax credit

R&D Ltd has the following results for the year:

R&D expenditure	€100,000
KDB deduction	€20,000
Case I profits (after KDB)	€175,000

The R&D tax credit calculation is as follows:

Corporation tax:	€
Case I @ 12.50%	21,875
Case I (before KDB deduction) @ 12.5%	24,375
R&D tax credit available	25,000
R&D tax credit used	21,875
R&D tax credit left	3,125
Refundable credits [€25,000 - €24,375]	625
Excess credits carried forward [balance]	2,500

3.2.3 The Intangibles regime [section 291A]

Section 291A(5)(a) requires that the activities of the company which relate to managing, developing or exploiting the IP to which section 291A applies be treated as a separate trade.

There may be overlap between activities which are part of the separate trade for section 291A purposes and activities which are part of the separate trade for KDB purposes.

As relief under the KDB is given after capital allowances, a company must calculate the relief available under section 291A and must then carry out the required apportionments to determine what relief is available under the KDB.

Example 3.43 – KDB and s. 291A (US MNC pharma)

A US parented MNC has pharmaceutical operations in Ireland which manufactures and sells products to non-US markets through a variety of distribution arrangements, depending on the customer market. In the past, the Irish company paid royalties to a group member to licence the right to use patents and other IP owned by the group in the course of its manufacturing and sales activities. The licences did not provide the company with any ownership interests in the underlying IP, all of which was retained by the group licensor.

The group decided to expand the Irish operations, to establish the Irish subsidiary as a European R&D centre for one range of products and to provide funding to the Irish subsidiary to enable it to pay an upfront sum to acquire exclusive rights to use existing patents and related group IP for the product range outside of the US.

The R&D conducted by the Irish company results in new patents granted to the company. It exploits those patents both through sales of the products which incorporate the new patented technologies and through licensing the new patented technologies to group members for use in their business. For transfer pricing purposes, the company found that there is sufficient benchmark market data on licensing of similar pharmaceutical patents so that it can price an arm's length license fee to group members for the new patents.

The Irish company decides to make a KDB claim in respect of income arising from its patent royalties on the qualifying assets licensed to group companies and in relation to its profits attributable to the new patented technologies which have been incorporated in its product range.

The company carries out a transfer pricing analysis to determine that part of its patent royalty income that can be said to be a profit or return on its costs of creating and maintaining the patent and related income. It also adopts a transfer pricing approach to estimate an appropriate portion of income earned from product sales that is attributable to the new patented technology incorporated in those products. The same market data used to price the patent license fee to group members is used to determine a 'notional royalty' for the Irish company's own use of the new patents to manufacture and sell the products.

The company analyses its upfront acquisition costs to identify that part of the total expenditure incurred on patent rights which relate to the new qualifying assets which have been exploited by it. In the case of one patented invention, there was no related patent rights acquired. In the case of another qualifying patent, the R&D that resulted in the new patent built upon a series of previous patents which the company is treating as a family of assets for KDB purposes. The price paid by the Irish company to acquire the rights to those patents forming part of this family of assets will be included in 'Acquisition costs' in the Modified Nexus formula.

3.2.4 Loss relief [section 769K]

Relief under the KDB is given in arriving at the taxable profits / losses of the specified trade. Relief for losses forward or trade charges, relevant to the specified trade, is given after this point in the calculation. Therefore, relief for losses and charges incurred in the specified trade is given after reducing the losses or charges by 50%.

Losses and charges from a specified trade can be relieved against the other profits of the company, or the group, on a value basis, as is in keeping with the general scheme of relief for losses and charges.

Where a company incurs a specified trading loss and a trading profit, then the company can offset an amount calculated as 50% of the specified trading loss against its trading profits (under section 396A or group relieved under section 420A). Where a company wishes to offset a specified trading loss against non-trading income (under section 396B or 420B) the relief is equally reduced by 50%.

Trade charges may also be offset against other trading profits (under section 243A) or against non-trading income (under section 243B) and the relief available is 50% of that available for other trade charges.

Example 3.44 – KDB losses forward

Loss Ltd had the following results for the years ended 31 December 2016, 2017 and 2018.

	2016	2017	2018
Case I profits / (losses)			
Specified trade (after KDB deduction)	5,000	(100,000)	15,000
Trade 1	50,000	40,000	60,000
Trade 2	(10,000)	(15,000)	(12,000)
Case III (interest income)	2,000	2,000	2,000
Trade charges (royalties)			
Specified trade	5,000	5,000	5,000

Loss Ltd.'s corporation tax for the years, making full use of its losses and charges is:

Corporation Tax for the accounting period ended	31-Dec-16	31-Dec-17	31-Dec-18
Case I - Trade 1	50,000	40,000	60,000
Case I - Trade 2	-	-	-
Case I - specified trade	5,000	-	15,000
Current year loss relief for Trade 2 loss (**s.396A(3)(b)**)	(10,000)	(15,000)	(12,000)
Current year loss relief (**s.396A(3)(b)** as amended by **s.769K(2)(b)**)		(25,000)	
Carry-back loss relief (**s.396A(3)(b)** as amended by **s.769K(2)(b)**)	(5,000)		
Trade Charges (**s.243A(3)** as amended by **s.769K(2)(a)**)	(2,500)	-	(2,500)
Carry forward (**s.396(1)**)			(15,000)
Case III	2,000	2,000	2,000

Taxable income					
@ 12.5%		37,500	-	45,500	
@ 25%		2,000	2,000	2,000	
Tax					
@ 12.5%		4,688	-	5,688	
@ 25%		500	500	500	
Current year charges - value basis (**s.243B** as amended by **s.769K(2)(c)**)		-	(313)	-	
Current year losses - value basis (**s.396B** as amended by **s.769K(2)(c)**)			(188)		
Total tax		5,188	-	6,188	
Loss memo					
	Year used	**€**	**s.769K(2)(b)**	**s.396B**	**s.243B**
Incurred	2016	100,000			
Value basis			50,000	6,250	
Used					
Current year	2017	(50,000)	(25,000)		
Prior year	2016	(10,000)	(5,000)		
Carry/forward	2018	(30,000)	(15,000)		
Current year	2017	(3,000)		(188)	
Trade charges (s.396(7))		5,000			
Used		(5,000)			(313)
Balance		7,000			

Part 4 Knowledge Transfer Ireland and Enterprise Ireland's Technology Centres

4.1 Knowledge Transfer Ireland

Where a company enters into a collaborative research project with a research performing organisation ("RPO") e.g. a University, an Institute of Technology or other State funded research organisation, this is generally done under one of two types of agreement. While not all such contracts will be for R&D, as defined, it is anticipated that many will. The following paragraphs are in respect of R&D undertaken with an RPO which results in a qualifying asset. The paragraphs are general in nature and are based on the model Knowledge Transfer Ireland (KTI) agreements.

4.1.1 Wholly industry-funded collaborative research

A wholly industry-funded collaborative research contract will apply where the company is engaged in R&D and they wish to collaborate with the RPO in respect of the R&D. The company bears the full cost of the R&D. The company and the RPO will have signed a collaborative research agreement prior to the start of the project and this will include how the company will benefit from any intellectual property generated during the project, as well as how the results, materials and other items generated or supplied during the project may be used.

The agreement will list the IP which each party is bringing to the project, ownership of which will not change (the Background IP). The agreement will state the rights which the company will have to the IP developed during the project (the Foreground IP). The company will be entitled, in this situation, to take assignment of the Foreground IP if it so chooses. In some situations, an exclusive or more specific licence may be satisfactory to the company and the RPO.

4.1.2 Partially industry-funded collaborative research

A part industry-funded collaborative research contract will apply where the company is engaged in R&D and they wish to collaborate with the RPO in respect of the R&D. The company bears part of the cost of the R&D, either in cash, and/or in kind (including participating in the R&D) and the State meets part of the cost. The company and the RPO will have signed a collaborative research agreement prior to the start of the project and this will include how the company will benefit from any intellectual property generated during the project, as well as how the results, materials and other items generated or supplied during the project may be used.

The agreement will list the IP which each party is bringing to the project, ownership of which will not change (the Background IP). The company will also list any Significant IP which it brings to the project, which is the IP without which the project could not take place and/or that is subject of a granted patent. Any IP which is developed during the project (Non-severable IP) and which cannot be used without infringing upon the company's Significant IP will, in most cases, be assigned to the company at fair market value.

The company will be granted an option to negotiate a licence to certain (or all) of the Foreground IP generated during the project, at fair market rates. It may choose instead to negotiate a non-exclusive royalty free (NERF) licence to all Foreground IP in a specific field and territory at the time of negotiating the collaboration contract.

4.1.3 Application of the KDB to the collaborative agreements

Where a company has engaged with an RPO to carry out R&D, and that R&D ultimately results in a qualifying asset, the question arises as to whether the amounts spent by the company are qualifying expenditure or acquisition costs, for the purposes of the KDB.

Any amount paid by the company to the RPO to carry out the R&D which leads to the qualifying asset will be qualifying expenditure.

Once the R&D is complete, then there are a number of options on how the resultant IP can be treated:

- **Assignment of Foreground IP:** In the situation where the company pays the full cost of the research and elects to take assignment of Foreground IP the beneficial ownership of that IP rests with the company at all times. Therefore, even where there is a legal assignment of the IP, Revenue would not view this as an acquisition of IP.
- **Assignment of Non-several IP:** Where the non-several IP is reflected in the value of the qualifying asset, and it has been assigned to the company at fair market value, that amount will be an acquisition cost for the qualifying asset. If the fair market value is Nil, then the acquisition cost will be Nil.
- **Licence of Foreground IP:** Where the company elects to take an exclusive or restricted licence to the Foreground IP then Revenue view any licence fees, including any royalty payments, which will be the fair market value of that licence, as an acquisition cost. It is understood that there are cases where the fair market value will be nil and as such a royalty free licence will be used. In this instance, the acquisition cost will be nil.

Where the company negotiates a licence to any of the RPO's Background IP, perhaps because it is necessary in order for it to commercially exploit the Foreground IP, then that amount may also be an acquisition cost for the Foreground IP.

Example 4.45– Background IP as an acquisition cost

Phones Ltd entered into a collaborative research agreement with University, where both parties carried out R&D into a potential technological advancement Phones Ltd hoped to exploit commercially. At the end of the contract it was determined that Phones Ltd could not exploit the Foreground IP without also having the ability to exploit know how and a patent held by University (both of which were listed as Background IP in the collaborative research agreement). Phones Ltd therefore enters into license agreements with University in respect of both the know-how and the patent. Phones Ltd undertakes additional work on the Foreground IP and registers a patent. It introduces a new product to the market, the sales value of which is attributable to both the newly registered patent (developed from the Foreground IP) and the patent licensed from University. As the two patents are so closely linked in their usage in the product, it is not possible to split the sales proceeds and the two will be treated as a family of assets for KDB purposes.

- Any amount Phones Ltd contributed to University while the R&D was being carried out will be qualifying expenditure.
- Any amount paid for the license of the patent will be an acquisition cost.
- Any amount incurred by Phones Ltd in carrying out R&D itself will be qualifying expenditure.

The know-how is not a qualifying asset and therefore the cost of licensing that from University is not relevant for KDB purposes.

4.2 Enterprise Ireland's Technology Centres (EITC)

EITCs are a forum whereby academics and industry partners engage in market focussed research to solve sector-wide problems. IP developed by the EITC is owned by the EITC and anybody, whether they participated in the research or not, can access the results via a licence agreement. The licence agreement will be at fair market value, with a company's contribution to the R&D being taken into account when setting that licence rate.

4.2.1 Application of the KDB to the EITC licences

Where the R&D undertaken by the EITC results in a qualifying asset, the treatment of that qualifying asset for the KDB would be as follows:

- Any amounts incurred by a company in carrying out R&D through an EITC which leads to the creation of a qualifying asset will be qualifying expenditure.
- The fair market value of the licence payments will be acquisition costs, representing the amount that the company is paying to use IP developed by another party.

4.3 Key differences from the R&D tax credit

There is a limit on the amount of R&D which a company can outsource to a university or 3rd level institution and on which R&D tax credits can be claimed (section 766(1)(b)(vii)). The university or institution must be located in the EEA and the amount of outsourcing which can qualify is the higher of 5% of the R&D expenditure or €100,000.

For the KDB a company can outsource R&D to a university or institution located anywhere in the world and there is no limit on the amount of that expenditure which can be treated as qualifying expenditure on a qualifying asset.

Part 5 Documentation requirements [section 769L]

Section 769L, in line with the OECD guidance on this issue, sets out very specific and extensive documentation requirements which must be complied with to claim relief under the KDB. These documentation requirements do not apply to expenses incurred prior to 1 January 2016 and guidance is instead set out in the transitional measures in section 769O (refer to Part 7 below).

Note: Revenue has the power to make regulations (section 769L(6)) in relation to the administration of the documentation requirements. It is not anticipated that regulations will be made in the short term, but the facility is there should administrative difficulties or uncertainties arise as companies commence applying this section.

5.1 What the documents must show [section 769L(1)]

At a very high level, paragraph (a) requires that a company have records as may reasonably be required for the purposes of determining whether, for each asset, the profits in respect of which relief is claimed were calculated in accordance with the Chapter. That is:

- What is the asset?
- Is the asset a qualifying asset (refer to 2.1 above)?
- Is the qualifying expenditure (refer to 2.3.1 above) correctly identified?
- Are all acquisition costs (refer to 2.3.3 above) and group outsourcing costs (refer to 2.3.4 above) all identified?
- What are the profits arising from the qualifying asset (refer to 2.2.3 above)?
- Do the profits of the specified trade correctly include all relevant expenses which they would include if the trade was carried on by a separate company (refer to 2.2.2 above).

Paragraph (b) is more specific in that it requires that the company have records that demonstrate that the three components of the modified nexus fraction (qualifying expenditure, overall income and overall expenditure) have been tracked and that demonstrate how they are linked to the qualifying asset.

5.1.1 Family of assets [section 769L(1)(c)]

Specific documentation requirements apply to companies who are claiming the KDB in relation to a family of assets (refer to 2.1.3 above). In this instance paragraph (c) requires that the documentation must support the company's choice to use a family of assets rather than individual assets, and the choice of the grouping of that family. These records are not as computationally focussed as other records required by this section and focus on documenting the reasons why an apportionment of income or expenses would of necessity involve an arbitrary apportionment.

5.1.2 Derivative works or adaptations [section 769L(1)(d)]

Where a computer program, in respect of which a claim is made under the KDB, involves both an original work and an adaptation therefrom then the company must have records which identify the original work and the adaptation therefrom. The records must identify the expenditures associated with each and support any apportionment of income between the two.

Using the fact pattern set out in **Example 2.2**

High Tech Ltd.'s US parent company developed a very successful piece of software. High Tech Ltd has been undertaking R&D to resolve a range of technological uncertainties surrounding the use of this software and it has developed a new product. High Tech Ltd begins to licence this new software and wishes to avail of the KDB.

The new product is an adaptation of the original computer program. High Tech Ltd will be able to recognise either:

- the adaptation (being the portion of the program that it developed) as a qualifying asset, or
- the entire computer program as a qualifying asset (refer to 2.1.3 for further guidance on recognising a family of assets as a single qualifying asset).

Whether the adaptation is recognised in its own right, or whether the original and the adaptation are recognised as a family of assets will impact on the amount of relief available under the KDB (refer to 2.3 below).

Example 5.46– Documentation required to support the qualifying asset

In order to prove that the adaptation is a qualifying asset, it is necessary to show that it is the result of R&D. This will include evidence of the systematic, investigative or experimental activities which were undertaken during the R&D process. It will also include details of technological advancement sought and of the technological uncertainty that was resolved. Documents to support that the uncertainty existed or that the advancement was required will include research into competitor's offerings in the same field as well as similar developments in other fields.

Where the company has claimed the R&D tax credit a lot of this documentation should already be in place to support that claim. Care must be taken that some of the work undertaken to link the two programs will not relate to the adaptation and so the R&D claim may be in relation to a broader piece of R&D than the claim under the KDB will relate to.

Example 5.47 – Documentation required to support adaptation

High Tech Ltd must have documentation which illustrates clearly the dividing line between the original work and the adaptation. As the software is licenced from another entity it may be relatively straightforward to do this.

Example 5.48 – Documentation required to support adaptation claimed as part of a family of assets

If High Tech is to treat the original work and the adaptation as a family of assets two sets of documentation will be required.

Firstly, it will be necessary to show that the licenced program is a qualifying asset. If it cannot be demonstrated that the original work is a qualifying asset, then it will not be possible to treat the it and the adaptation as a family of assets.

Secondly, there must be documentation to support the contention that it would not have been possible, other than through arbitrary apportionments, to split the sales proceeds between the two products.

5.2 When the documents must be prepared [section 769L(1), (3) & (7)]

Section 769L does not specifically require that the documentation be prepared contemporaneously with any claim for relief. However, subsection (3) requires that it be prepared on a timely basis and subsection (1)(a) provides that the company shall have available such records as may reasonably be required. Section 769L(7) states that a failure to have available any documentation that is required under section 769L will result in a company not being eligible to claim relief under the KDB for the accounting period to which the failure relates.

Documentation should therefore be prepared in advance of making a claim under the KDB.

Example 5.49 – Absolute failure to have documents

Paper Ltd, a large MNC, carried out many large R&D projects. It applied group wide standards to its documentation of those projects. Those standards were not sufficiently prescriptive in relation to the items which must be documented in support of a claim for relief under the KDB.

Revenue opened an aspect query into the KDB claim and asked Paper Ltd to provide copies of the documentation supporting the definition of the qualifying assets used within 21 days. Paper Ltd provided the officer with copies of its patent but was unable to provide any documentation supporting their claim that they undertook the R&D which lead to the creation or development of those patents. As Paper Ltd were unable to provide the Revenue Officer with the documentation required on a timely basis, the relief Paper Ltd claimed under the KDB will be withdrawn.

Example 5.50 – Partial failure to have documents as illustrated by a change in claim

Development Ltd carried out a number of R&D projects. One of these R&D projects was partially funded by a grant from Enterprise Ireland and Development Ltd had documentation in place to satisfy the requirements of the grant.

Revenue opened an aspect query into Development Ltd.'s R&D tax credit claim and its claim for relief under the KDB. In answering the aspect query Development Ltd tried to retrospectively document the difference between its grant documentation and its claim for the R&D credit and the KDB. Development Ltd was unable to document the difference and therefore reduced the claim for both the R&D credit and the KDB.

The required documentation was not in place to support a claim for relief under the KDB. Therefore, Development Ltd is not a qualifying company and will not be eligible to claim relief under the KDB. While strictly speaking Development Ltd is not entitled to make any claim for relief under the KDB, Revenue agree that the failure was isolated to a single project.

Note: Where the failure to maintain documents of a sufficient standard relates only to a single project, and there are no concerns in relation to the documentation of all other projects, then Revenue will only deny claims for relief under the KDB in respect of that project.

Example 5.51 – Change in claim not always equalling partial failure to have documents

During an enquiry into a KDB claim, Mug Ltd and Revenue disagree on whether or not the R&D science test is met in respect of one part of a development project. Revenue appoint an expert to review the project and the expert notes that while the project is very impressive and is development, of a kind, it did not quite come within the definition of experimental development in the Frascati manual and therefore does not qualify as R&D for the purposes of a KDB claim.

While the claim is amended downwards it is not due to a deficiency in the documentation and therefore impacts only on the quantum of Mug Ltd.'s claim for relief under the KDB and not on its eligibility to claim such relief.

Example 5.52 – Genuine attempt to have documentation in place

Ice Ltd is a small company which is in receipt of Enterprise Ireland grants and carries out a number of small R&D projects. It has put in place a substantial amount of detailed documentation, however, during a Revenue enquiry it transpires that they have not documented a few of aspects of the claim in sufficient detail. Because of resource constraints, it is not in a position to prepare the documentation in sufficient detail within 21 days. On the basis that this is the companies first claim for relief, and that the balance of the documentation is prepared to a satisfactory standard, the officer allows Ice Ltd additional time to prepare the required documentation.

5.3 Requirement to retain records [section 769L(3) & (4)]

The linking documents required by section 769L must be kept for a period of 6 years from the end of the accounting period in which a tax return claiming relief under the KDB is filed. This test is applied to each qualifying asset separately.

5.4 Application of transfer pricing standards [section 769N]

Large companies (broadly speaking this will be a member of a group with 250 or more employees, or with an annual turnover exceeding €50million, or with a balance sheet total exceeding €43million) are subject to the transfer pricing rules in Part 35A in relation to their trading transactions. Section 769N requires that the documentation to support any apportionments or market value requirements underpinning any claim for relief under the KDB made by a large company must be drawn up in line with the OECD transfer pricing guidance.

Note: It is important to note here that unlike *Part 35A,* which requires that costs are not overstated, or income understated, the KDB requires that certain transactions are at a market value or apportioned on a just and reasonable basis. This means that the Transfer Pricing standard documentation must also support that income is not overstated nor expenses understated.

This requirement of the KDB is in addition to any requirements the company may have separately under Part 35A.

5.5 Standard of proof for SMEs

Companies which are not large companies are not expected to have documentation at transfer pricing standard. Revenue will expect that the closer the group gets to being a large enterprise who must apply transfer pricing rules, the documentation available will be closer to the standard required by transfer pricing rules. That is, what Revenue will accept as adequate proof of a just and reasonable apportionment, for example, will place a far lower burden of proof on smaller simpler enterprises than on larger more complex ones.

When apportioning expenses smaller companies should determine the key driver of the expense and they should use that driver to apportion expenses. Larger or more complex groups may need to also take account of other factors which impact on the incidence of an expense.

When valuing IP it may be appropriate for a smaller company to value it based on cash flow expectations, appropriately discounted. Larger more complex companies may have to engage IP experts to value the IP. It may also be appropriate for smaller companies to use a notional royalty rate of up to 10% without significant documentation to support that royalty rate (refer to **Example 2.20** – Embedded royalties – micro companies).

When apportioning sales income to embedded royalties' smaller companies are likely to require less documentation. This will be due to their simpler structures and usually due to their not having significant marketing IP or trade secrets to which profits must be allocated. A reasonable apportionment by the Directors, identifying the various IPs which are involved (e.g. trade secrets, brand, patents, 3rd category of assets etc.) based on stated and sound assumptions, will be acceptable in smaller companies while larger companies will require expert reports supporting any apportionments.

5.6 Link with R&D tax credit documentation

As set out in 2.3.1, 2.4 and 4.3 above, while there are similarities between the expenditure which qualifies for the R&D tax credit and qualifying expenditure for the purposes of the KDB, there are a number of specific differences. The documentation which supports the claim for the R&D tax credit will be a useful starting point for the documentation which supports the claim for relief under the KDB.

As noted above, some differences apply and these are set out in **Table 1** – key differences between "qualifying expenditure" and "expenditure on R&D".

5.7 Examples of documentation

Example 5.53 – Acquisition costs and arm's length pricing

Micro Co acquires a qualifying patent from its sister company. It manufactures widgets which incorporate both the invention protected by the purchased qualifying patent and other qualifying assets which Micro Co developed itself. Because Micro Co cannot reasonably apportion the sales price between the different qualifying assets, it opts to treat them as a family of assets. Micro Co and its sister company decide that the price of the patent should be based on 5% of the expected annual turnover of Micro Co from the sale of its widgets. Micro Co will need to have documentation which supports the choosing of 5% of the turnover of the widgets as an appropriate base for the acquisition of the qualifying patent. It will also have prepared sufficient evidence to show that it was correct to use a family of assets.

Example 5.54 – Documentation requirements related to KDB and section 291A

A US medical devices company with established operations in the US and Canada decides to expand into European markets and has chosen Ireland as its European headquarter location. The Irish subsidiary will manufacture and sell to European markets through local distributor companies. The Irish subsidiary will also carry out local market customisation of its products to meet European regulatory requirements and will conduct R&D activity in Ireland to create new enhancements across the European product ranges. The Irish Company pays an upfront sum to its US parent to acquire, under an exclusive licence, the rights to exploit in Europe patented technologies relating to the medical devices, supplementary protection rights where relevant, brands and other intangible assets.

In setting up its accounting and information systems, the Company is mindful of the possibility to claim allowances under section 291A on its eligible expenditure in acquiring the intangible assets, the R&D tax credit on R&D activity and possible future relief under the KDB where its R&D activity results in qualifying assets such as patents or supplementary protection rights.

The Company:

- Identifies the capital expenditure it incurred in acquiring rights to intangible assets and determines the expenditure attributable to intangible assets eligible for capital allowances under section 291A ("section 291A intangibles"). The Company also identifies the accounting amortisation period for the section 291A intangibles which will determine the period of claim for the allowances
- Identifies the product sales and income attributed to its exploitation of the section 291A intangibles it acquired and related manufacture, sales, marketing and distribution costs. The profits from its exploitation of the section 291A intangibles will be treated as a separate trade for tax purposes requiring both income and expenses to be attributed to the deemed trade on a just and reasonable basis in order to arrive at the taxable profit (after allowances) for that trade.
- Sets up management accounting systems and R&D project records to document the R&D activity relating to each R&D project and the expenditure incurred in conducting R&D which is eligible for R&D tax credit relief. Expenditure which is eligible for R&D tax credit relief (but not included in qualifying expenditure for KDB purposes is flagged for future reference). The Company also maintains records on outsourced R&D activity, noting the jurisdiction where the contracted R&D activities take place and distinguishing between third-party and group contracting parties.
- The Company tracks the product or product group related to the R&D project. Where relevant, the Company also identifies that part of the upfront price paid to acquire the intangible assets from its US parent that relate to the R&D project/s. This may include rights to a single patented technology where the R&D focus is on a single patented technology or expenditure on a group of patents taken together where the R&D work on a product or group of products seeks to build upon a number of existing patented inventions which are reflected in the product. This *acquisition expenditure* could be relevant for a future claim to the KDB in the event that R&D results in a qualifying asset used by the company for the purposes of its trade.

Part 6 Making a claim

6.1 How to make a claim [section 769I(2)]

An irrevocable election into KDB treatment must be made once for each qualifying asset. The election is made in the CT1 in the year in which the asset is brought within the KDB.

The CT1 will require that companies identify how many qualifying assets they have at the start of the accounting period, how many new assets are elections made for during the accounting period and how many qualifying assets are there at the end of the accounting period. It will require that the number of qualifying assets be split between; qualifying patent, computer program, family of assets, section 769R assets, and other assets.

The following information will be sought on the Form CT1 in respect of an election for a qualifying asset to be within the KDB:

Number of Qualifying Assets in respect of which the above relief is being claimed	Prior Years		New Claims	
	No. of Assets	Value of Assets (€)	No. of Assets	Value of Assets (€)
Computer programs				
Qualifying patents				
Claims pursuant to section 769R				
Family of Assets				
Other assets				

Figure 1: Claiming under section 769I(2) on CT1

While the box does not ask for the number of qualifying assets discontinued during the year (e.g. a patent which is no longer used, or which no longer has any overall income attributable to it) the Total Assets figure should exclude these figures.

When completing the CT1, the value of the qualifying assets should be taken as the carrying value of the assets, i.e. the original cost of the asset, less the accumulated amount of any depreciation or amortisation, less the accumulated amount of any asset impairments. In some cases, the value will be zero, for example where the costs are not capitalised.

Example 6.55 – KDB treatment of an expired patent

Engineering Ltd has a patent, which is a qualifying asset, which it registered in 1997. It has been exploiting that patent since its registration and earns overall income from it. In its CT1 for the accounting period ended 31 December 2016 Engineering Ltd elects for the invention protected by that qualifying patent to be included within the KDB.

During 2017 the invention comes off patent. However, the election into the KDB in relation to the invention which was protected by the patent is irrevocable. Therefore, the invention remains within the KDB after the patent expires. However, it needs to be determined how much of the income earned by Engineering Ltd is attributable to that invention, now that it is no longer protected, and how much may relate to brand, know-how, returns on manufacturing or other aspects of Engineering Ltd.'s business.

Example 6.56 – Interaction of irrevocable election and losses

During its accounting period ended 31 December 2016 Lettuce Ltd made an irrevocable election for KDB treatment in respect of all of its qualifying assets. During 2017 it realised that one of its qualifying patents would not generate any future profits and would indeed generate losses. It therefore decided to stop paying the annual registration fee and to let the patent lapse. Lettuce Ltd did this in the hope of removing the qualifying patent from the KDB loss restrictions and of claiming trading loss relief in an unrestricted way.

However, as the election into the KDB is in relation to the invention protected by a patent, and that election is irrevocable, the fact that the patent is allowed to lapse does not change that election. Therefore, the loss that Lettuce Ltd realises on the qualifying patent will continue to be restricted in accordance with section 769K

Example 6.57 – Interaction of a single election and family of assets

TV Ltd constantly carries out R&D and develops new qualifying patents or computer programs to improve its TVs. As set out in **Example 2.4**, it is not possible for TV Ltd to apportion its sales price between the various qualifying assets and so it treats them as a family of assets. TV Ltd will make a KDB election in respect of the family of assets. As it develops new assets that form part of that family it will not be required to make any additional election.

As the KDB is a separate trade for the purposes of Part 41A (section 769I(3)) the details of the KDB trade will be collected separately in the CT1. It is important that amounts relating to the KDB trade are not included in the normal trading details and are instead entered in the KDB trade section of the CT1.

The relevant extracts from the CT1 are as follows:

The Trading Results tab in the Form CT1 is amended to clearly set out that this section of the CT1 should not include any profits arising from a specified trade.

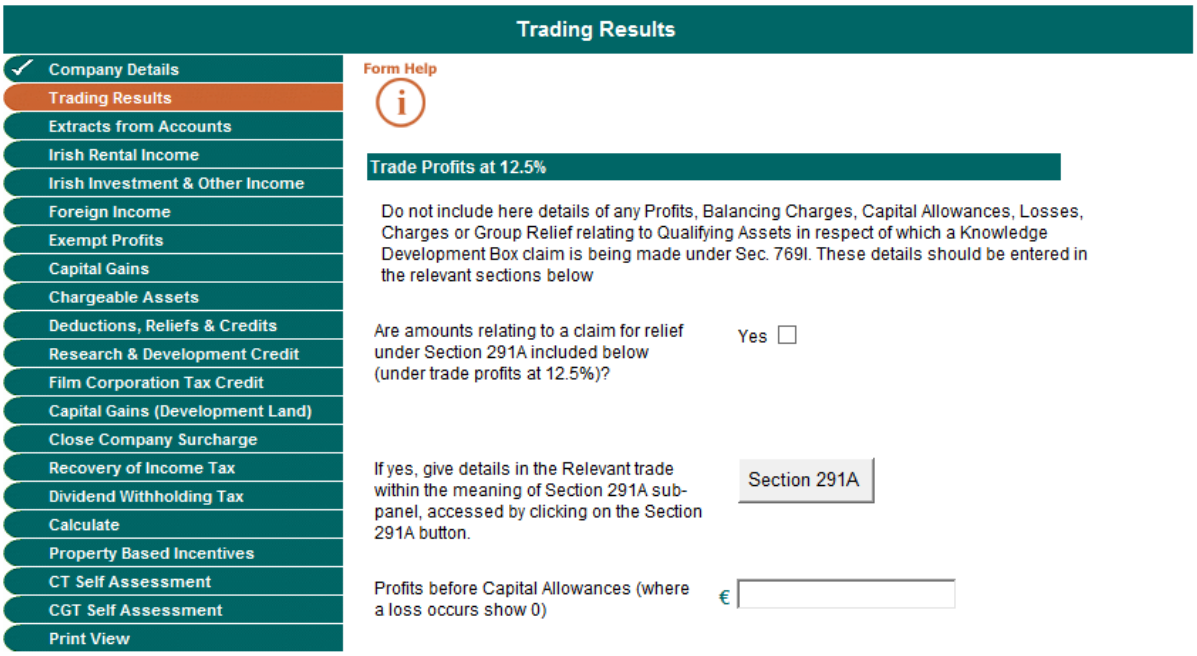

Figure 2: Trading Results screen of CT1

Where a taxpayer selects that they wish to enter the profits from a specified trade they will be presented with an almost identical trading results panel into which to enter the details relevant to the specified trade:

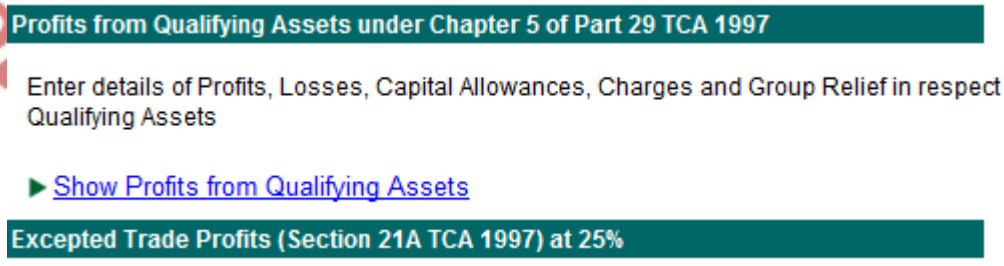

Figure 3: Profits from specified trade panel on CT1

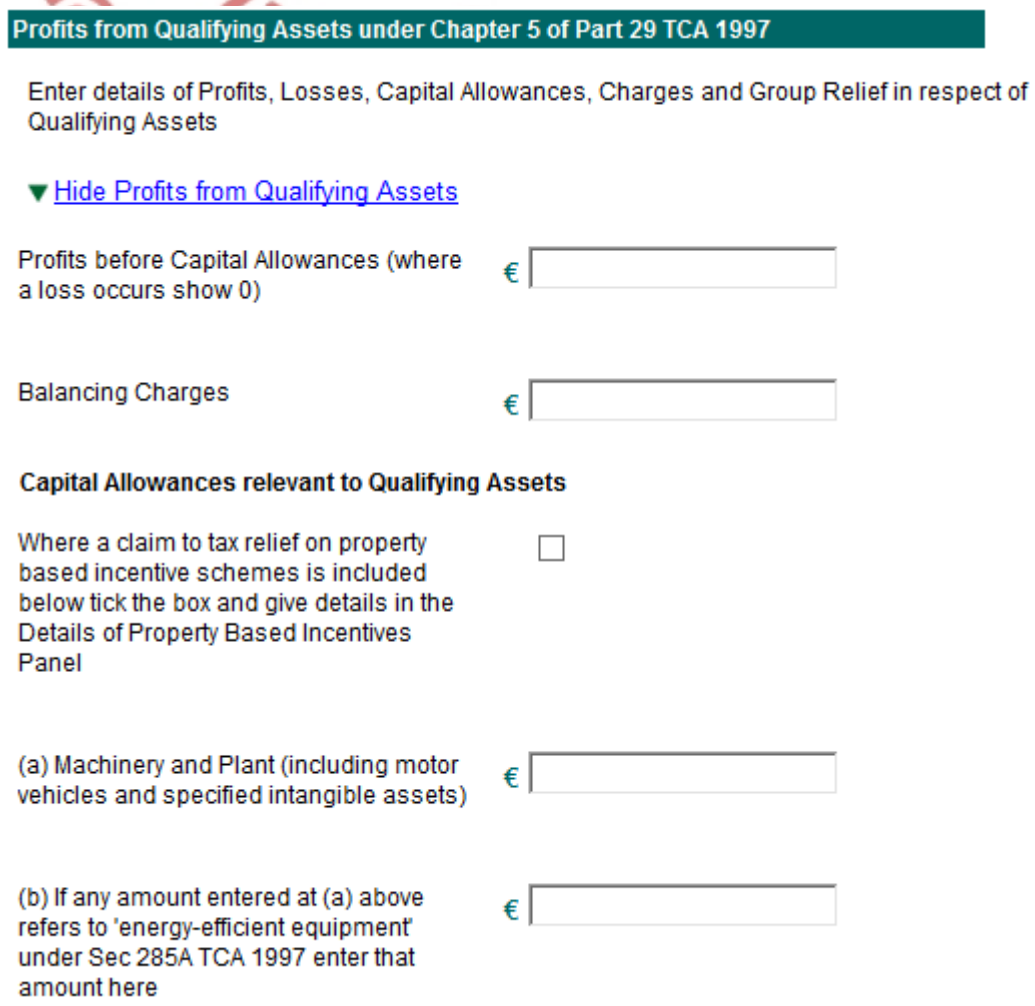

Figure 4: Profits from specified trade panel on CT1 - expanded.

In addition to the details of the qualifying assets (as set out above), the KDB specific parts of this trading results panel will be:

Knowledge Development Box

Enter amount of Relief Claimed under Sec. 769I and provide the following information	€
(i) Qualifying expenditures incurred to develop IP asset	€
(ii) Overall expenditure incurred to develop IP asset	€
(iii) Overall income from IP asset	€
(a) Trading Losses forward relevant to Qualifying Assets (from earlier accounting period(s))	€
(b) Amount of losses at (a) above utilised in this accounting period	€
(c) Amount of losses forward not used in this accounting period and available for carry forward to succeeding accounting periods	€
Total Losses appropriate to this trade, before Capital Allowances, in this accounting period	€
Charges relevant to Qualifying Assets (Enter Sec.247 non-trade charges and Group Relief non-trade charges in Deductions, Reliefs & Credits Panel)	€
(a) Group Relief relevant to Qualifying Assets	€
(b) If any amount at (a) refers to Excess Capital allowances enter that amount here	€
(c) If any amount at (a) above refers to Excess Trade Charges enter that amount here	€

Figure 5: Profits from specified trade panel on CT1 - expanded -continued.

Time limits for making a claim

6.1.1 Initial claim per asset [section 769I(2)(b)]

Section 769I(2)(b) provides that there is a time limit, of 24 months from the end of the accounting period to which the election relates, for electing that the KDB treatment apply to a qualifying asset. There is no specific time frame, other than the general provisions of section 865(4), within which a deduction (under section 769I(5)) must be claimed.

Example 6.58 – Making a retrospective claim

Bacon Ltd has a single qualifying asset. Its development of the qualifying asset was completed in 2014 and Bacon Ltd has been exploiting the asset ever since. Bacon Ltd first considered making a KDB claim in 2019.

The first accounting period in respect of which a claim can be made under the KDB is its accounting period ended 31 December 2016. However, any election in respect of that period would have to have been made prior to 31 December 2018. Therefore, as Bacon Ltd is considering its KDB claim in 2019 it is only within time to make an election in relation to its 2017 accounting period.

6.1.2 Options re time limit for patent pending [section 769P]

Patents may take more than one year from application to grant. Therefore, provision has been made in section 769P for companies to choose between claiming KDB treatment from the date of application or waiting and retrospectively claiming KDB treatment once the patent is granted. A claim may be made at any point between when the accounting period in which the application is submitted, or when the application is granted.

Where a company claims relief under the KDB in respect of a pending patent which is subsequently refused (either in full or in part), then that company must amend the affected tax returns and interest is due on any resultant underpayment.

Where a company wishes to wait until a patent is granted, then that company must make a protective claim each year in which they will be able to claim KDB treatment if the patent is granted.

The protective claim is made in the CT1 as follows:

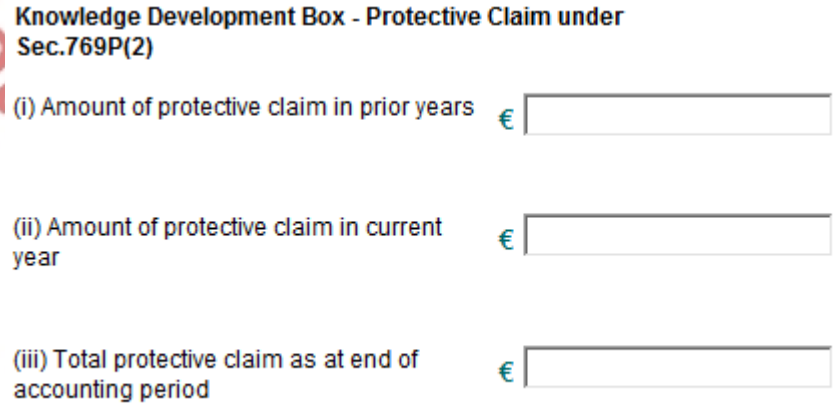

Figure 6: CT1 panel for protective claim under section 769P92)

Any subsequent claim for a repayment of tax cannot exceed the protective claims submitted.

Example 6.59 – Patent pending: claim in year of application – full grant

Development Ltd applied for an Irish patent on 1 February 2016. It had a positive opinion from a patent agent with respect to the patentability of the invention. The invention was the result of R&D and if the patent is granted, will be a qualifying asset.

In its CT1 for the accounting period ended 31 December 2016 Development Ltd therefore elected for the patent to be treated as a qualifying asset. The patent was granted during 2017. Development Ltd therefore does not need to amend its tax returns.

Example 6.60 – Patent pending: claim in year of application – full refusal

Development Ltd applied for another patent on 1 February 2017, in respect of a new invention which would also be a qualifying asset if the patent was granted. This patent was to be granted following a substantive examination for novelty and inventive step.

In its CT1 for the accounting period ended 31 December 2017 Development Ltd therefore elected for the patent to be treated as a qualifying asset. The patent was refused during 2019.

Development Ltd must therefore immediately amend its 2017 and 2018 CT1s and pay any additional tax due plus interest from the date that tax would have been payable, had the claim for relief under the KDB for the patent not been included.

Example 6.61 – Patent pending: claim in year of application – partial grant

If the patent in **Example 6.60** had been partially refused, rather than fully refused, Development Ltd would still have to amend its CT1s for 2017 and 2018. The overall income allocated to the patent would have been calculated based on all of the claims set out in the application for the patent. If some of those claims were not accepted by the Patent Office, then the income allocated to those claims would not be eligible for KDB treatment. Equally, any costs incurred in the R&D resulting in those aspects of the invention would no longer be eligible for treatment as qualifying expenses.

Example 6.62 – Patent pending: claim in year of grant

Development Ltd applied for a third patent during 2017, which would again be grated following substantive examination for novelty and inventive step. This time Development Ltd chose to wait until the patent was granted before claiming relief under the KDB.

Each year Development Ltd must make a protective claim for KDB treatment each year.

The patent was finally granted in full in 2023. While this is outside of the normal 4-year period within which repayments of tax can be claimed, Development Ltd is permitted to make a claim for repayment of tax under the KDB, up to the amount of its protective claims each year.

Example 6.9 - Patent pending: claim submitted between year of submission and year of grant.

Development Ltd. applied for a patent in 2010. The patent has not yet been granted.

The company makes a KDB claim in 2016 pending the grant of the patent.

While the company applied for a patent in 2010, income has been earned from the patentable activity, the 2016 KDB claim will be valid.

This is because a company may make a claim at any point between the accounting period in which the application is submitted, or when the application is granted.

Part 7 Transitional arrangements [769O]

7.1 Acquisition costs incurred prior to 1 January 2016

Acquisition costs, no matter when they are incurred, must be included within the modified nexus formula.

Example 7.63 – Transitional arrangements – acquisition costs

A pharmaceutical company incurred acquisition costs in 2010 on purchasing the rights to a drug which had been successful in early stage clinical trials from a third party for €15,000,000. In the period 2011 to 2016 inclusive the following costs were incurred by the company to develop a drug which it protected under patent in 2010 and commenced to sell in 2016.

Year	Companies own R&D activities to develop the drug	R&D conducted by 3rd Party
2011	€10,000,000	€2,000,000
2012	€10,000,000	€2,000,000
2013	€10,000,000	€2,000,000
2014	€10,000,000	€2,000,000
2015	€10,000,000	€2,000,000
2016	€10,000,000	€2,000,000

No further R&D costs were incurred by the company on developing the drug after 2016.

The transitional provisions that pre 2016 acquisitions costs must be taken into account in calculating the formula for qualifying profits. However, for qualifying R&D activities, only those in the 48-month period ending on the last day of the accounting period are taken into account in the formula.

The company ceased its R&D activity on the asset at the end of 2016, but the 2010 acquisition costs continue to be taken into account, the proportion of qualifying expenditure to overall expenditure on the qualifying asset is diluted by the level of acquisition costs which remain constant in the formula.

Transitional provisions need not apply where the company has adequate records to support a claim to relief based on actual R&D costs incurred by it on the asset.

Calculation of formula for qualifying profits: 2016

Acquisition costs pre 2016 (incurred in 2010)	15,000,000
Qualifying expenditure in 48 months ending 31 December 2016*	48,000,000
Overall expenditure	63,000,000

* Expenditure on R&D activities carried on in 2011 and 2012 is not taken into account under the transitional provisions, the €48,000,000 is calculated as the 4 years costs for 2013, 2014, 2015 and 2016 [(4*10,000,000) + (4*2,000,000)],

Uplift on qualifying expenditure	
Lower of [€48,000,000 x 30%] or 15,000,000	14,400,000
Formula	
48,000,000 + 14,400,000 =	99%
63,000,000	
Calculation of formula for qualifying profits: 2017	
Acquisition costs pre 2016 (2010)	15,000,000
Qualifying expenditure in 48 months ending 31 December 2017*	36,000,000
Overall expenditure (no costs incurred in 2017)	51,000,000
* €36,000,000 = [(3*10,000,000) + (3*2,000,000)]	
Uplift on qualifying expenditure	
Lower of [€36,000,000 x 30%] or 15,000,000	10,800,000
Formula	
36,000,000 + 10,800,000 =	92%
51,000,000	
Calculation of formula for qualifying profits: 2018	
Acquisition costs pre 2016 (2010)	15,000,000
qualifying expenditure in 48 months ending 31 December 2018	24,000,000
Overall expenditure	39,000,000
Uplift on qualifying expenditure	
Lower of [€24,000,000 x 30%] or 15,000,000	7,200,000
Formula	
24,000,000 + 7,200,000 =	80%
39,000,000	

7.2 Group outsourcing costs incurred prior to 1 January 2016

Group outsourcing costs, no matter when incurred, must be included within the modified nexus formula. In recognition that detailed tracking and tracing documentation requirements were not in place prior to 1 January 2016 there is provision made for an apportionment of group outsourcing costs incurred in relation to more than one asset prior to that date, on a just and reasonable basis.

Example 7.64 – Transitional arrangements – group outsourcing

In the following example, in addition to the above expenditure, the company also incurred annually group outsourcing costs in the amount of €10,000,000 in supporting a range of its R&D projects conducted in Ireland each year.

Year	Companies own R&D activities to develop the drug	R&D conducted by 3rd Party	Group outsourcing costs (to be restricted to 25%)
2011	€10,000,000	€2,000,000	€10,000,000
2012	€10,000,000	€2,000,000	€10,000,000
2013	€10,000,000	€2,000,000	€10,000,000
2014	€10,000,000	€2,000,000	€10,000,000
2015	€10,000,000	€2,000,000	€10,000,000
2016	€10,000,000	€2,000,000	€10,000,000

The group charges for R&D were based on hourly costs plus a mark-up applied by the group company. The company reviewed its R&D project records and determined that an allocation of the group-wide outsourcing costs based on the headcount of its R&D teams engaged in this R&D project as a percentage of its total headcount for R&D during the period was a reasonable allocation basis for estimating the group outsourcing costs for that project.

It estimated that 25% of its R&D headcount was involved in the R&D project that lead to this qualifying asset and estimated on this basis that group outsourcing in the amount of €2,500,000 (i.e. 25% of €10,000,000) was incurred each year from 2011 to 2016 inclusive.

The group outsourcing costs incurred in 2011 onwards remain to be taken into account in the formula for qualifying profits in like manner to acquisition costs. As the group outsourcing costs continue to be taken into account in the same manner as the acquisition costs, the proportion of qualifying expenditure to overall expenditure is diluted in the formula in 2017 and 2018 by the cumulative level of acquisition costs and group outsourcing costs during the years from 2010 onwards.

Transitional provisions need not apply where the company has adequate records to support a claim to relief based on actual group outsourcing costs incurred by it on the asset.

Calculation of formula for qualifying profits: 2016

Acquisition costs pre 2016 (incurred in 2010)	15,000,000
Group outsourcing costs (2011 to 2016 inclusive) (€2,500,000*6)	15,000,000
Qualifying expenditure in 48 months ending 31 December 2016*	48,000,000
Overall expenditure	78,000,000

* Expenditure on R&D activities carried on in 2011 and 2012 is not taken into account under the transitional provisions, the €48,000,000 is calculated as the 4 years costs for 2013, 2014, 2015 and 2016 [(4*10,000,000) + (4*2,000,000)].

Uplift on qualifying expenditure		
Lower of [€48,000,000 x 30%] or [€15,000,000 +15,000,000]	14,400,000	
Formula		
48,000,000 + 14,400,000 =	80%	
78,000,000		
Calculation of formula for qualifying profits: 2017		
Acquisition costs pre 2016 (2010)		15,000,000
Group outsourcing costs (2011 to 2016 inclusive, none in 2017)		15,000,000
Qualifying expenditure in 48 months ending 31 December 2017		36,000,000
Overall expenditure		66,000,000
Uplift on qualifying expenditure		
Lower of [€36,000,000 x 30%] or [15,000,000+15,000,000]		10,800,000
Formula		
36,000,000 + 10,800,000 =		71%
66,000,000		
Calculation of formula for qualifying profits: 2018		
Acquisition costs pre 2016 (2010)		15,000,000
Group outsourcing costs (2011 to 2016 inclusive, none in 2018)		15,000,000
Qualifying expenditure in 48 months ending 31 December 2018		24,000,000
Overall expenditure		54,000,000
Uplift on qualifying expenditure		
Lower of €24,000,000 x 30% or [15,000,000+ 15,000,000]		7,200,000
Formula		
24,000,000 + 7,200,000 =		58%
54,000,000		

However, if a company can support a claim for actual group outsourcing costs, rather than an apportionment thereof, with documentation at the standard required by section 769L (refer to Part 5 above), then that company may use actual group outsourcing costs (section 769O(4))

7.3 Qualifying expenditure incurred prior to 1 January 2016

Qualifying expenditure incurred prior to 1 January 2016 is subject to a moving 4 year average up to the point where the earliest point in that rolling average is 1 January 2016. From that point onwards, qualifying expenditure is a cumulative amount and only includes amounts incurred on or after 1 January 2016 and tracked and traced in accordance with section 769L (refer to Part 5 above).

Example 7.65 – Transitional arrangements – qualifying expenditure

A computer software company incurred acquisition costs in 2012 in purchasing from a third party for €10,000,000 the rights to a computer program and related rights. In 2013, 2014 and 2015 the company conducted R&D activities based on the acquired program to create a new computer program which it deployed in providing services in its trade during 2016. During each year in the period 2013 to 2015 inclusive, the company incurred €4,000,000

R&D on its own activities, paid third parties €1,000,000 annually to conduct R&D and incurred group outsourcing costs of €2,000,000. No further R&D costs were incurred by the company on developing the program in 2016 onwards.

The transitional provisions provide that pre 2016 acquisition costs must be taken into account in calculating the formula for qualifying profits. However, for qualifying R&D activities, only those in the 48-month period ending on the last day of the accounting period are taken into account in the formula.

As the company ceased its R&D activities on the asset at the end of 2015, the qualifying expenditure incurred by it in conducting its own R&D activities and in incurring costs on paying third parties to conduct the R&D 'rolls off' as less qualifying expenditure is taken into account in each period from 2016 onwards. This dilutes the formula percentage for qualifying profits from 2016 onwards.

Transitional provisions need not apply where the company has adequate records to support a claim to relief based on actual R&D costs incurred by it on the asset.

Where transitional provisions did not apply in 2018 in this example, the formula percentage for qualifying profits in 2018 would be the same as that applying in 2016 as the qualifying expenditure incurred on the asset during 2013 to 2015 would continue to be taken into account.

Calculation of formula for qualifying profits: 2016

Acquisition costs pre 2016 (incurred in 2013)	10,000,000
Group outsourcing costs (2013 to 2015 inclusive, none in 2016)	6,000,000
Qualifying expenditure in 48 months ending 31 December 2016*	15,000,000
Overall expenditure	31,000,000

Uplift on qualifying expenditure	
Lower of €15,000,000 x 30% or [10,000,000 +6,000,000]	4,500,000
Formula	
15,000,000 + 4,500,000 =	63%
31,000,000	
Calculation of formula for qualifying profits: 2017	
Acquisition costs pre 2016 (2013)	10,000,000
Group outsourcing costs (2013 to 2015 inclusive, none in 2017)	6,000,000
Qualifying expenditure in 48 months ending 31 December 2017	10,000,000
Overall expenditure	26,000,000
Uplift on qualifying expenditure	
Lower of €10,000,000 x 30% or [10,000,000+6,000,000]	3,000,000
Formula	
10,000,000 + 3,000,000 =	50%
26,000,000	
Calculation of formula for qualifying profits: 2018	
Acquisition costs pre 2016 (2013)	10,000,000
Group outsourcing costs (2013 to 2015 inclusive, none in 2018)	6,000,000
Qualifying expenditure in 48 months ending 31 December 2018	5,000,000
Overall expenditure	21,000,000
Uplift on qualifying expenditure	
Lower of €5,000,000 x 30% or [10,000,000+ 6,000,000]	1,500,000
Formula	
5,000,000 + 1,500,000 =	31%
21,000,000	

However, if a company can support a claim for actual qualifying expenditure going back any number of years, rather than this rolling average, with documentation at the standard required by section 769L, then that company may use actual qualifying expenditure (section 769O(4))

If the company had sufficient records to substantiate its qualifying expenditure (perhaps by reason of R&D tax credit claims made in previous periods), the formula for qualifying profits in 2018 for example would remain at 63% as total qualifying expenditure of €15,000,000 (from 2013 to 2015) remains a constant percentage of overall expenditure of €31,000,000 (which includes acquisition costs of €10,000.000 and group outsourcing of €6,000,000).

Example 7.66 – Transitional arrangements – qualifying expenditure

Taking the same company as in **Example 7.64** – Transitional arrangements – group outsourcing above, but on the basis, that the company can substantiate the actual R&D spend, the formula will be:

Calculation of formula for qualifying profits: 2016	
Acquisition costs pre 2016 (incurred in 2010)	15,000,000
Group outsourcing costs (2011 to 2016 inclusive)	15,000,000
Qualifying expenditure (2011 to 2016)	72,000,000
Overall expenditure	102,000,000
Uplift on qualifying expenditure	
Lower of €72,000,000 x 30% of [15,000,000 +15,000,000]	21,600,000
Formula	
72,000,000 + 21,600,000 =	92%
102,000,000	

Part 8 Engaging independent experts [section 769I(6)]

8.1 Introduction

As with the R&D tax credit, Revenue may wish to consult with an independent expert to help them understand a company's claim for relief under the KDB. The powers and protections around Revenue's consulting with an independent expert are very similar to those in relation to the R&D tax credit.

8.2 Similarity to R&D tax credit

Before disclosing any information to the independent expert under section 769I(6)(b)(i), Revenue would have to notify the company of:

- The intention to use an independent expert
- The information that it is intended to share with the independent expert
- The identity of the expert.

The company has 30 days to decide if the use of that independent expert would in any way prejudice its trade or business. If it would, then Revenue will identify a different independent expert and will notify the company accordingly and give them a chance to respond. If there is a dispute between Revenue as to whether or not the appointment of the expert would be prejudicial, the matter can come before the Appeal Commissioners for their determination.

Please refer to Tax and Duty Manual Part 29-02-05 which outlines that when an independent expert is appointed off the R&D panel they sign a confidentiality agreement before any information is disclosed to them. An Independent expert is bound by Revenue's taxpayer confidentiality provisions, set out in section 851A, which provides that it is a criminal offence to disclose taxpayer information other than in very specific circumstances.

8.3 What can the independent expert opine on?

Revenue can ask the independent expert to opine on:

(I) Whether or not expenditure is qualifying expenditure,
(II) Whether the overall expenditure on the qualifying asset figure is complete
(III) Whether the overall income figure is correct,
(IV) Whether IP forms part of a qualifying asset,
(V) Whether any apportionments done are done on a just and reasonable basis,
(VI) Whether arm's length values have been correctly calculated, or
(VII) A patent, which was granted without a substantive examination for novelty and inventive step, is actually in respect of a patentable invention.

Experts will therefore vary from IP lawyers to valuations experts to commercial experts.

Part 9 Steps to claiming relief under the KDB

9.1 High level review to determine which IP should be the subject of a claim

i. Identify each product sold, the value of which is attributable to either a computer program or a patent or a combination of these.
ii. Determine if those computer programs or patents were the result of R&D by the company.

9.2 Detailed review to calculate the KDB claim

i. Identify the computer program or patent in respect of which a claim might be made.
ii. Determine if the patent is a qualifying patent.
iii. At a high level, determine if there are any other computer programs or patents which are developed or exploited in an interlinked manner, so that consideration can be given as to whether or not there is a family of assets
iv. In respect of each computer program or patent identify the R&D activities, including failed steps along the path to success, carried out by the company which resulted in that computer program or patent. At this point definite families of assets may start to emerge.
v. Determine the costs incurred in carrying out those R&D activities. For a company who has claimed the R&D tax credit:
    a. Identify the portion of the R&D tax credit that relates specifically to the development of each qualifying asset.
    b. Adjust the R&D tax credit claim for differences between the R&D tax credit and the KDB.
vi. Determine if any related party outsourcing took place and how much was incurred.
vii. Determine if any IP was acquired which is reflected in the value of the qualifying asset or which is included in the family of assets.
viii. Calculate the KDB modified nexus formula.
ix. Determine how the qualifying asset is exploited.
x. If the company sells goods or services which derive their value from the qualifying asset, determine the appropriate portion of the sales price which is attributable to that qualifying asset.
xi. Determine the trading expenses incurred in exploiting the qualifying asset.
xii. Calculate the profits or losses earned in exploiting each qualifying asset or family of assets.
xiii. Apply the KDB modified nexus formula to the profits / losses for each qualifying asset / family of assets.
xiv. Where a profit arises for a qualifying asset, calculate the additional 50% deduction available.
xv. Where a loss arises for a qualifying asset, ensure that the loss is appropriately restricted.

Appendix I

Provisional list of patents granted after conducting a substantive examination for novelty and inventive step

- European Patent Office

- Austria
- Bulgaria
- Czech Republic
- Denmark
- Estonia
- Finland
- Germany
- Hungary
- Ireland[10]
- Japan
- Poland
- Portugal
- Romania
- Slovakia
- Sweden
- United Kingdom
- United States

[10] For patents granted following the amendment of the Patent Act 1992 by the Knowledge Development Box (Certification of Inventions) Act 2017

Appendix II

Schedule of updates

August 2016

Minor typos Example 3.1 and Example 3.3 and formatting updates

September 2018

- Updated to take account of the passing of the Knowledge Development Box (Certification of Inventions) Act 2017 as commenced by SI 204 of 2017:
    - Section 1.3
    - Section 2.1.2
    - Section 2.1.4
    - Appendix I
- Section 1.5 on the Status of these Guidelines was deleted as unnecessary as there is a general disclaimer on the website.
- Clarification on group outsourcing:
    - Section 2.3.1 – paragraph (vii) and Table 1 thereof
- Clarification on the KDB consequences of the incorporation of an Irish branch (section 2.3.6)
- Clarification on the KDB consequences of a merger (section 2.3.7)
- Clarification on completion of the CT1 (section 6.1)
- Clarification on the timing of claims made in respect of patents pending (section 6.2.2)
- Examples in Part 7 are amended to give greater clarity to the make-up of certain figures.
- Section 8.2 is updated to cross reference to the TDM on appointing independent experts off the R&D panel.
- Minor typos and formatting errors were also amended.