PATENT BOX – HOW TO CALCULATE THE PATENT BOX BENEFIT

Summary

We outline here the accounting steps which are necessary to calculate the Patent Box benefit.

We also present a simplified example calculation which may help you to estimate the amount of saving in UK Corporation Tax you might expect to make if you were to *elect in* to the Patent Box regime under either the pre- or post- 1 July 2016 Patent Box rules.

A fully reasoned Patent Box calculation might place a large accounting burden on a SME. The original legislation therefore provided the option of using a simplified formulaic way of calculating the Patent Box benefit which places a smaller accounting burden on SMEs. However, for Patent Box claims under the post- 1 July 2016 Patent Box rules, a streamed calculation in which income and outgoings need to be accounted for on a by income stream (e.g. by product) basis is mandatory, rather than optional.

You will need to seek the advice of your corporate tax advisor for an accurate estimate of savings you might achieve and the best accounting approach to make the biggest saving and for advice regarding transitional rules where an income stream may benefit from protection of IP rights filed before and after 1 July 2016.

Calculating the Reduction in Corporation Tax

The tax calculation required by the Patent Box legislation is complicated and specialist tax advice is required. We set out below the basic approach to assist with a preliminary assessment of the likely benefit to a company from the Patent Box.

In order to determine the available deduction from UK Corporation Tax, the original legislation provided for a formulaic calculation in which profits of the trade are apportioned pro rata on the basis of the ratio of *relevant IP income* to total gross income. This was intended to make the calculation less onerous for smaller businesses. Under the pre- 1 July 2016 Patent Box rules companies may elect to perform a more detailed calculation (a so-called streamed calculation) which will benefit many larger entities. HMRC may insist on a streamed calculation for larger companies and for companies whose profits attributable to IP will otherwise be grossly over-estimated by applying the formulaic approach. For Patent Box claims under the post- 1 July 2016 Patent Box rules, a streamed calculation is mandatory.

In the calculation, it is not necessary to estimate the proportion of profit attributable to each *qualifying IP right*. Instead, the legislation requires the calculation of a *routine return* and a *marketing deduction* to be made. The *routine return* is defined in the legislation as 10% of the deductions on the balance sheet (excluding R & D expenses and capital expenditure). The *routine return* is subtracted from a profit attributed to the *relevant IP income* to give a *qualifying residual profit*. The *qualifying residual profit* is then reduced by the marketing deduction to take account of marketing costs in order to arrive at the *relevant IP profits*. The *relevant IP profits* are essentially the profits HMRC attributes to the existence of the *qualifying IP right*. In effect under pre- 1 July 2016 Patent Box rules the Patent Box allows companies to pay a lower rate of UK Corporation Tax on the calculated *relevant IP profits*.

Under post- 1 July 2016 rules the *relevant IP profits* are limited by the nexus fraction for each income stream which is the lower of 1 and:

$$\frac{(D + S1) \times 1.3}{D + S1 + S2 + A}$$

Where

D = qualifying expenditure on in-house R&D relevant to the income stream

S1 = 65% of qualifying expenditure on 3rd party sub-contracted R&D relevant to the income stream

S2 = 65% of qualifying expenditure on connected party (i.e. a company in the same group) sub-contracted R&D

A = expenditure on acquisition of qualifying IP rights

The chart below sets out the five steps of the pre-July 2016 formulaic calculation to arrive at the *relevant IP profits* attributable to IP from which the UK Corporation Tax deduction available under the Patent Box can be calculated.

STEP 1
CALCULATE TOTAL GROSS INCOME AND *RELEVANT IP INCOME*

↓

STEP 2
CALCULATE RATIO OF *RELEVANT IP INCOME* TO TOTAL GROSS INCOME

↓

STEP 3
DETERMINE TAXABLE TRADING PROFIT AND MULTIPLY BY RATIO FROM STEP 2

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STEP 4
CALCULATE A *ROUTINE RETURN* AND SUBTRACT THIS FROM THE AMOUNT GIVEN IN STEP 3 TO ARRIVE AT A *QUALIFYING RESIDUAL PROFIT*

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STEP 5
MAKE A *MARKETING DEDUCTION* FROM THE *QUALIFYING RESIDUAL PROFIT* TO ARRIVE AT *RELEVANT IP PROFITS (and for post- 1 July 2016 Patent Box rules, multiplying by the nexus fraction)*

↓

CALCULATING THE *PATENT BOX DEDUCTION FROM CORPORATION TAX*
RELEVANT IP PROFITS x (MAIN RATE OF CORPORATION TAX – PATENT BOX RATE)/MAIN RATE OF CORPORATION TAX

Steps 1 to 5

In the formulaic calculation allowed under pre- 1 July 2016 Patent Box rules, Step 1 requires *relevant IP income* and gross total income to be determined. This involves considering all income streams and apportioning them either as *relevant IP income* or as non-relevant IP income. For post- 1 July 2016 Patent Box rule claims this first step and all subsequent steps will need to be calculated on a streamed basis.

In Step 2 the ratio of *relevant IP income* to gross total income is determined.

In Step 3 the taxable trading profit is adjusted, for example by adding back in any R&D tax credits claimed and any R&D expenditure to determine an adjusted trading profit. The adjusted trading profit is then multiplied by the ratio determined in Step 2 to arrive at a pro rata trading profit. (Step 3 may also be performed in a streamed calculation under pre- 1 July 2016 Patent Box rules in which *relevant IP profits* is calculated on a reasoned basis and not on a pro rata basis.)

In Step 4 routine deductions (costs) to the business (excluding R&D costs) are calculated. A *routine return* is calculated by multiplying the routine deductions by 10% (a routine mark-up rate fixed by the legislation in both the pre- and post- 1 July 2016 Patent Box rules) and multiplying that by the ratio derived from Step 2. A *qualifying residual profit* is then determined by subtracting the calculated *routine return* from the *amount calculated in Step 3*. (Step 4 may also be performed in a streamed calculation under pre- 1 July 2016 Patent Box rules in which the routine costs resulting in the *relevant IP income* are calculated on a reasoned basis and multiplied by the fixed 10% to arrive at the *qualifying residual profit.)*

If in Step 4 the *qualifying residual profit* is a negative number this is a *Patent Box loss* and Step 5 is not performed.

From the *qualifying residual profit* it is necessary to make a *marketing deduction* to account for profits generated by established brands. This is done in Step 5. A small claims *marketing deduction* may be calculated under pre- 1 July 2016 Patent Box rules if the *qualifying residual profit* is less than GBP 1 million. The small claims calculation involves multiplying the *qualifying residual profit* by 75% (i.e. assuming 25% marketing). This leads to the *relevant IP profits* which are used directly to calculate the *Patent Box Deduction* under pre- 1 July 2016 Patent Box rules. Step 5 may also be performed in a streamed way under pre- 1 July 2016 Patent Box rules (or that may be insisted on by HMRC for example if the *qualifying residual profit* is in excess of GBP 3 million).

For Patent Box claims under the post- 1 July 2016 Patent Box rules (which may not need to be applied for Patent Box claims made on the basis of IP filed before 1 July 2016), the relevant IP profits are multiplied by the nexus fraction prior to the calculation of the *Patent Box reduction*.

Careful consideration should be given to whether or not the calculation under pre- 1 July 2016 Patent Box rules is performed in the standard (formulaic) way or in the streamed way as it will have an impact in subsequent accounting periods. Switching between the streamed and the non-streamed basis of calculation cannot be done freely from one accounting period to the next.

Calculating the *Patent Box Deduction*

The effect of the Patent Box legislation is to reduce the profit on which UK Corporation Tax is payable. The calculated *relevant IP profits* (RP) from Step 5 are multiplied by the relevant main rate of Corporation Tax (MR) minus the special IP rate of Corporation Tax (IPR, ultimately 10%) divided by the main rate of Corporation Tax. i.e.:

$$RP \times \left(\frac{MR - IPR}{MR}\right)$$

This leads to a *Patent Box deduction* which is subtracted from the taxable profits before the amount of UK Corporation Tax is calculated at the relevant main rate.

During the first six years of the legislation the special IP rate of Corporation Tax will be phased in gradually. Only a percentage of relevant IP profits will be included when calculating the Patent Box deduction. In the 2015 financial year, 80% of the relevant IP profits can be included in the calculation, increasing by 10% each year until 2017.

Example Calculation

Below is a simplified example calculation using the fully streamed approach.

Company A has trading turnover of GBP 1,000, of which GBP 700 (70%) is from the sale of items covered by a *qualifying IP right*. It has tax deductible expenses of GBP 750 including GBP 50 for R&D, all of which qualify for R&D tax credits.

Without the Patent Box, the Corporation Tax computation would be as follows:

- Trading income **GBP 1,000**
- Tax deductible trading expenses: **GBP 750**
  - R&D (GBP 50)
  - R&D tax credit additional deduction (GBP 50)
  - Other costs (GBP 650)
- Taxable trading profit **GBP 250**
- Corporation Tax payable (assuming 20%) without the Patent Box is (GBP 250 x 20%) = **GBP 50**.

The Patent Box calculation is as follows:

Step 1 - Calculate the total gross income of the trade: **GBP 1,000**.

Step 2 - Establish the percentage of total gross income that is *relevant IP income*: (*relevant IP income* GBP 700 / Total Income GBP 1000) = **70%**.

Step 3 – Determine the total profits of trade and multiply by the ratio derived from Step 2: (take the taxable trading profit GBP 250 and add back the R&D additional deduction of GBP 50 to get total profit GBP 300, and adjust that profit of GBP 300 on a pro rata basis (GBP 300 × 70%)) = **GBP 210**.

Step 4 - Remove a *routine return* to determine a *qualifying residual profit*. First, the total routine deductions of GBP 650 (GBP 750 minus GBP 50 x 2 R&D) are multiplied by the legislated mark-up rate of 10% (=GBP 65). Then the *routine return* figure is calculated as total routine deductions (GBP 65) multiplied by ratio of Step 2: (GBP 65 x 70%) = GBP 46. Then the *qualifying residual profit* is calculated as the amount of Step 3 minus the *routine return*: (GBP 210 – GBP 46) = **GBP 164**.

Step 5 Pre- 1 July 2016 Patent Box rules - Make a *marketing deduction* associated with other intangibles from the *qualifying residual profit* to arrive at the *residual profit* (RP): (using the small claims treatment: assume marketing assets royalty of 25% to calculate *relevant IP profits* from the *qualifying residual profit* (GBP 164 × 75%)) = **GBP 123**.

Finally the *patent box deduction* can be calculated. In this case, assuming 10% patent box rate and Corporation Tax rate 20%: (GBP 123((20-10/20)) = **GBP 62.**

So the full rate of Corporation Tax is payable on the taxable trading profit (GBP 250) minus the *patent box deduction* (GBP 62) = **GBP 188.**

At a Corporation Tax rate of 20%, Corporation Tax of **GBP 37** (GBP 188 x 20%) would be payable with the Patent Box, compared to **GBP 50** without Patent Box.

Step 5 Post- 1 July 2016 Patent Box rules - Make a *marketing deduction* associated with other intangibles from the *qualifying residual profit* to arrive at the *residual profit* (RP): (using the small claims treatment: assume marketing assets royalty of 25% to calculate *relevant IP profits* from the *qualifying residual profit* (GBP 164 × 75%)) = **GBP 123**.

Assuming half of the relevant R&D expenditure of **GBP 200** incurred in the relevant period (up to 20 years) is for sub-contractor costs (20% 3rd party, 80% connected party) and **GBP 30** was spent on relevant IP acquisitions, the nexus fraction can be calculated as

$$\frac{(GBP\ 100 + (0.65\ \times\ GBP\ 20))\ \times\ 1.3}{GBP\ 100 + (0.65\ \times\ GBP\ 20) + (0.65\ \times\ GBP\ 80) + GBP\ 30} = \frac{146.9}{195} = 0.75$$

Finally the *patent box deduction* can be calculated. In this case, assuming 10% patent box rate and Corporation Tax rate 20%: (0.75 x GBP 123((20-10)/20)) = **GBP 47**.

So the full rate of Corporation Tax is payable on the taxable trading profit (GBP 250) minus the *patent box deduction* (GBP 47) = **GBP 203**.

At a Corporation Tax rate of 20%, Corporation Tax of **GBP 41** (GBP 203 x 20%) would be payable with the Patent Box, compared to **GBP 50** without Patent Box.

If all relevant R&D expenditure is on in-house R&D and/or on 3rd party sub-contracted R&D, or only a small fraction of the R&D expenditure is on connected party sub-contracted R&D, and there are no or low acquisition costs on qualifying IP rights, the nexus fraction will be at or near 1 so that the Corporation Tax saving would be the same under the pre- and post- 1 July 2016 Patent Box rules.

To Stream or Not to Stream

Under the pre- 1 July 2016 Patent Box rules, a company may either elect for the streamed basis of calculation of their own volition or be required to do so by HMRC. Typically such a requirement will arise where the formulaic approach is deemed to allow the company to claim a disproportionately large amount of *relevant IP profits*. A company which sells products which are not in the Patent Box but which licenses *qualifying IP rights* may benefit by selecting the streamed calculation. For companies with *relevant IP profits* greater than GBP 2 million or greater than 20% of gross income, a streaming calculation will be necessary.

For smaller companies it may be attractive to use the standard formulaic calculation as it is thought that the accountancy burden will be lower. However, it may be advantageous to perform a streamed calculation on some of the Steps, particularly Step 5 in which the marketing deduction is performed. Some companies may be able to claim that that all that is required is a very small *marketing deduction*, or none at all.

The Calculation - Considerations

The calculation to arrive at the *patent box deduction*, whether formulaic or streamed, requires the input of figures which some companies' existing accounting procedures may not readily provide. In particular, this is likely to be the case where companies have multiple sources of income, some of which will be *relevant IP income* and some of which will be non-relevant IP income. Companies may therefore wish to begin addressing this information deficit sooner rather than later. For example, companies may wish to audit their income streams to determine which ones can be classified as *relevant IP income* and undertake preliminary work to determine the *routine deduction* (costs) relevant to the calculation of the *routine return*. If a streaming calculation is to be made, a detailed understanding of income and costs and how they are attributable between various income streams will be required.

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