Moving money into the UK: what is capital and what is income?

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If you are a foreigner living in the UK, as of 2008, you do not have to pay tax on income that is earned outside the UK so long as it remains *outside* the UK. (This is assuming you are domiciled[1] outside the UK.) But, you may have to pay tax on income brought into the UK.

So, if you bring money into the UK, how much is income?

The official definition seems to be that the money is either income or "capital." Capital is money that you had on the day when you became a resident of the UK; everything else is income. So, the cleanest, simplest way to bring money in is to have two accounts. Start with all your capital in account A on the day before you move to the UK. Arrange with your bank/brokerage/whatever so that the interest from A goes to account B. The interest from B stays in B. Then, whatever is in A counts as capital and you can move that money into the UK without any tax consequences. Anything in B counts as income – if you move that into the UK, you need to file a tax return and pay some tax.

Note that you *cannot* move any money into A without making things complicated.

In that scenario, you need to have everything set up in advance. But, what if you didn't? Not all of us were briefed on the oddities of the British tax code by accountants before we came here. In that case, what you need to do is disentangle your income from your capital. I'll lay out the math below.

[1] Being domiciled is different from being resident. You can be domiciled in the UK while physically living elsewhere or vice versa. I won't give the legal definition here because it is complex and messy, but your domicile is where you plan to be in the long term, while your residence is where you are this year.

This makes one assumption: that if you pull money out of an account that contains a mix of capital and income, you pull out the same fraction of both. This is based on the recognition that when they are in an account, dollars are not identifiable; there is no way to tell the income dollars from the capital dollars. When you withdraw the money, you do not get labelled dollar bills, some with a little "C" for capital and others with "I" for income.

There are other theories that you could apply: you could assume that when you withdraw money, you always withdraw the capital first and only withdraw income when you run out of capital. Or, vice versa. However, it would seem hard to claim either of these cases if you made no arrangements in advance or left no documentation at the time of the withdrawl. So we will ignore them and assume a proportional mix.

Now, to do the math, we will keep track of how many capital dollars it contains and also how many income dollars. So, the status of account A is represented by a pair of numbers: $[A^c, A^i]$. Every account will be represented the same way. Now, we can start to work out rules for moving money.

1 Moving Money

Suppose you withdraw x dollars from account A and deposit it in account B. Then, you are removing a the same fraction of the capital and the income. Basic math says that the fraction is

$$f = x/(A^c + A^i), \tag{1}$$

and so you are withdrawing $f \cdot A^c$ dollars of capital and $f \cdot A^i$ dollars of income. As a result, the overall effect is to change your account status from $[A^c, A^i]$ and $[B^c, B^i]$ to $[(1-f) \cdot A^c, (1-f) \cdot A^i]$ and $[f \cdot A^c + B^c, f \cdot A^i + B^i]$. (I always assume that x is greater than zero.)

We can represent the overall $A \to B$ transaction as

$$[A^c, A^i, B^c, B^i] \to [(1-f) \cdot A^c, (1-f) \cdot A^i, f \cdot A^c + B^c, f \cdot A^i + B^i], \tag{2}$$

where $f = x/(A^c + A^i)$.

If there is a transaction cost (like a wire fee), then it follows the same pattern but you simply get less money ending up in B than departed from A. You compute this as two transactions in a row: one that deletes money from account A to pay the wire service fee (which you do with Rule 5, below, using a negative value for g), and then another transaction to do the actual transfer of money from A to B. This second transaction uses Rule 2.

In any case, use the rule for a general $B \to A$ transaction is

$$[A^c, A^i, B^c, B^i] \to [f \cdot B^c + A^c, f \cdot B^i + A^i, (1-f) * B^c, (1-f) * B^i], \quad (3)$$

where $f = x/(B^c + B^i)$. You can see this is really the same idea as the $A \to B$ transaction.

If you look at the balance, you find that no money was created and none destroyed, and that we moved a chunk of money that had the same mix of capital and income as account A. A mathematically inclined reader can show that if account B starts empty, then we can reverse the transaction and we get exactly back to our original state. This also works if account B starts with the same mix of capital and income as account A.

Now, what are the UK tax consequences? None, if both A and B are outside the UK. Tax consequences only happen if you move money into the UK, and all we can calculate is the change to your income. You'll have to fill out the Inland Revenue forms to see how much that might affect your taxes. If account A is in the US and B is in the UK, then Rule 2 applies, and the overall result is that your UK taxable income increases by $f \cdot A^i$ dollars, which equals

$$\frac{x \cdot A^i}{A^c + A^i}. \quad (4)$$

Bear in mind that if you transfer money out of the UK, your taxable income will *not* go down, so if you transfer money from the US→UK→US, you will lose in the overall transaction because it will trigger some taxes. So, if A is in the US and B is in the UK, and you use Rule 3, the net effect on UK taxes is zero.

2 Interest and Capital Gains

If you earn interest or capital gains on your money, then that adds to the "income" part of your account, not the "capital" part. So, if account A earns g dollars of interest, the rule is very simple:

$$[A^c, A^i, B^c, B^i] \to [A^c, g + A^i, B^c, B^i], \quad (5)$$

and you can ignore account B because nothing happens to it. Capital losses are presumably handled by having a negative value of g, but there are probably rules that limit when you can use losses to cancel gains or when you can use losses to reduce your taxable income. Also, I suspect that Inland Revenue won't believe you if you ever end up with A^i becoming negative.

3 Stocks & Shares

Stocks and shares behave analogously to bank accounts except that you track the number of shares rather than the value. So, a stock is represented as

$$\{S^c, S^i\}, \tag{6}$$

where S^c is the number of shares of capital and S^i is the number of shares that represent income. I use curly brackets instead of square to emphasize that these numbers are shares rather than dollars.

3.1 Dividends and Splits

If a stock pays you a dividend of N shares, directly in the form of shares, this is really a split (see below). More likely, the divident is money which counts as income. If we get a dividend of M dollars that is re-invested in the same stock, the rule is

$$\{S^c, S^i\} \to \{S^c, M/P + S^i\}, \tag{7}$$

where P is the stock price.

If the dividend is not re-invested, but goes to your bank account, it works like this:

$$[A^c, A^i], \{S^c, S^i\} \to [A^c, A^i + M], \{S^c, S^i\}. \tag{8}$$

Dividends simply count as income, and get added into the "income" part of your bank account.

Splits are different. In that case, the new shares are not income, but rather duplicates of your original shares. If your stock has a X for Y split, the rule is

$$\{S^c, S^i\} \to \{(\frac{X}{Y} \cdot S^c, \frac{X}{Y} \cdot S^i\}. \tag{9}$$

So, for instance, a 2:1 split would double both the number of shares counted as capital and the number of shares counted as income. Note that splits change the average purchase price per share:

$$\hat{P} \to \hat{P} * \frac{Y}{X}. \tag{10}$$

If the split is a dividend that's paid as N shares, then you can compute it as a $S^c + S^i + N$ for $S^c + S^i$ split.

3.2 Buying shares

If you buy N shares of stock, with money taken from account A, it works like this:

$$[A^c, A^i], \{S^c, S^i\} \to [A^c - r \cdot C, A^i - (1-r) \cdot C], \{r \cdot N + S^c, (1-r) \cdot N + S^i\}. \tag{11}$$

Again, P is the stock price, and C is the total cost of the transaction (including the purchase price of the shares and any brokerage fees). You would compute

$$C = P \cdot N + F, \tag{12}$$

where F are brokerage fees. Finally, r is the fraction of money in account A that is capital. Specifically,

$$r = A^c/(A^c + A^i). \tag{13}$$

Note that S^c and S^i are how many shares you started with, and they will be zero if you are buying your first shares of that stock. There are no UK tax consequences here, assuming that both accounts A and stock S are in the US.

It is useful to compute the average stock price, for use when you eventually sell the stock. This is the per-share cost of acquiring the stock. If the average stock price before this purchase was $\hat{P}$, then the effect of the purchase will be to change it to

$$\hat{P} \to \frac{(S^c + S^i) \cdot \hat{P} + N \cdot P + F}{S^c + S^i + N}. \tag{14}$$

Notes: (A) that if we start with zero shares (i.e. $S^c + S^i = 0$), then the initial per-share cost doesn't matter. You may as well set $\hat{P} = 0$ before your initial purchase. (B) F in this equation is the brokerage fees for the purchase. (C) $\hat{P}$ doesn't change when you sell stock.

3.3 Selling Shares

Selling stock is *not* the reverse of buying it, because you can realize capital gain and losses when you make the sale, and they will be treated as income. Let's assume you sold N shares at a price of P, and (for the sale) paid a fee of F for the sale. You are selling a fraction of your shares, called f; this fraction is

$$f = N/(S^c + S^i), \tag{15}$$

We assume that both the bank account and the stock is outside the UK. Then, you make a capital gain of

$$G = N \cdot (P - \hat{P}) - F. \tag{16}$$

This gain counts as income, but be aware that if G is negative, you will have to look up the rules for when losses can be used to cancel gains or reduce your income. So, we think of G as being split into G^c and G^i, the parts that apply to your income and capital. Normally, if G is positive, it all counts as income, so $G^i = G$ and $G^c = 0$, otherwise you need an accountant or a close reading of the rules and tax forms. The rest of the money you get for the transaction is simply your original investment being returned, and that counts partially as capital and partially as income, in proportion to how many shares count each way:

$$R^c = S^c \cdot f \cdot \hat{P}, \tag{17}$$

and

$$R^i = S^i \cdot f \cdot \hat{P} - F, \tag{18}$$

(F is in the equation because the transaction fees are negative income).

Once you have figured out G and R, the rule for the transaction is not especially complicated. The overall rule, where we are selling S and putting the proceeds into account A is:

$$[A^c, A^i], \{S^c, S^i\} \to [A^c + G^c + R^c, A^i + G^i + R^i], \{S^c \cdot (1-f), S^i \cdot (1-f)\}. \tag{19}$$

4 Using the Rules

If you have these rules, you can apply them one transaction at a time, starting on the day you moved to the UK. Each year, you accumulate the amount of income you move into the UK, and put that in your UK tax return. Gradually, the capital part of your investments disappears, because there is no way to produce new capital once you've moved to the UK.[2]

In our example, we start with 100 shares of a stock S, and \$10000 in account A. So, initially, we have

$$[A^c = 10000, A^i = 0], \{S^c = 100, S^i = 0\}. \tag{20}$$

Once you get to the UK, we create account B, and our situation is this:

$$[A^c = 10000, A^i = 0, B^c = 0, B^I = 0], \{S^c = 100, S^i = 0\}. \tag{21}$$

Then, we get \$100 interest on our bank account in the US, which operates Rule 5 and changes the situation to:

$$[A^c = 10000, A^i = 100, B^c = 0, B^I = 0], \{S^c = 100, S^i = 0\}. \tag{22}$$

Next, we buy another 100 shares of stock S for \$50 per share, and a transaction cost of \$10. So, $P = 50$, $F = 10$, $N = 100$, and we'll assume that the average price we purchased the existing shares was \$40, so $\hat{P} = 40$.

To do this, we compute the cost of the transaction, $C = 5010$ from Rule 12. Next, compute the fraction of the money that we use that counts as capital (Rule 13), which is $r = 0.99099$ from $r = 10000/(10000 + 100)$. Now we can finish off the transaction with Rule 14 and compute the new state which is

$$[A^c = 5039.60, A^i = 50.40, B^c = 0, B^i = 0], \{S^c = 149.505, S^i = 0.495\}. \tag{23}$$

The average purchase price of the stock S is now $\hat{P} = \$43.40$ from Rule 14.

So far, some of our bank account counts as income, because of the interest we earned and some of the stock does also, because it was purchased with money from the bank account. No tax consequences yet for the UK, but there will be if we move any of this money into the UK.

Next, let's assume the stock pays a dividend of \$1000 and you put that into the bank. This needs Rule 8, which changes the state of your finances to:

$$[A^c = 5039.60, A^i = 1050.40, B^c = 0, B^i = 0], \{S^c = 149.505, S^i = 0.495\}. \tag{24}$$

[2] Although, if you move away from the UK for long enough so that you were no longer resident and/or "ordinarily resident", then whatever money you had outside the UK should be treated as capital again.

then another dividend, but this one is granted as 10 shares gives you

$$[A^c = 5039.60, A^i = 1050.40, B^c = 0, B^i = 0], \{S^c = 149.505, S^i = 10.495\}. \tag{25}$$

Now, we sell some stock at \$55 per share. Let's sell 100 shares. So, $N = 100$, $P = 55$, and we paid a \$10 fee so that $F = 10$ again. We begin to figure out our state by computing the capital gain via Rule 16. We get $G = 1150$, and since this is a gain, it all counts as income. Thus, $G^c = 0$ and $G^i = 1150$.

Most of the proceeds of the sale are simply a return of our investment, which is mostly capital, but before we can compute how much, we need to use use Rule 15 to figure out what fraction of the shares are sold. This tells us that $f = 0.625$, or we sold 62.5% of the shares, proportionally split between the "capital" shares and the "income" shares. Then, using Rules 17 and 18, we get the returned capital and income to be $R^c = 4055.3231$ and $R^i = 284.6769$. Finally, we can plug all that into Rule 19 to get the our financial situation after the sale:

$$[5039.60+0+4055.321, 1050.40+1150+284.6769, 0, 0], \{149.505\cdot(1-0.625), 10.495\cdot(1-0.625)\}, \tag{26}$$

or, if we compute the sums:

$$[A^c = 9094.92, A^i = 2485.08, B^c = 0, B^i = 0], \{S^c = 56.0644, S^i = 3.9356\}, \tag{27}$$

So, at the end of this process we have about \$13000 dollars in the bank and about 60 shares of stock S.

Now, we bring some to the UK. Let's move \$5000 to the UK, and assume a wire service fee of \$25. So, first we pay the fee. That uses Rule 5 with $g = -25$; we compute $f = -0.0021406$, and the state after paying the fee (but before the transfer) is

$$[A^c = 9075.45, A^i = 2479.76, B^c = 0, B^i = 0], \{S^c = 56.0644, S^i = 3.9356\}, \tag{28}$$

Almost immediately, then, the money moves into account B, using Rule 2 and with f computed via Rule 1. We get $f = 0.432705$, which means we're moving 43% of our US money to the UK, and our financial state after the money moves is

$$[A^c = 5148.46, A^i = 1406.75, B^c = 3926.99, B^i = 1073.01], \{S^c = 56.0644, S^i = 3.9356\}, \tag{29}$$

This move crosses into the UK, so the income we moved (i.e. the change in B^i) adds to our UK taxable income. So, our UK income will be \$1073.01 higher this year than our salary, and UK taxes will go up by 22% or 40% of that difference. (Ouch!)

5 Caveats

This information is based on my reading of the regulations and informal conversations with several accountants. I believe it to be correct, but you use it at your own risk. No warranty is supplied and I am not a tax accountant.

This document can normally be found at `http://kochanski.org/gpk/misc/2008/UKTax/HowToCalculate.pdf` and the LaTeX source can be found at `http://kochanski.org/gpk/misc/2008/UKTax/HowToCalculate.TEX`.