

CashCalc Specification Sheets (Client Facing)

Month One (Emergency Tax) Calculator

Overview

The Month One Calculator is used to show the client how much tax that they will be charged on their pension withdrawal and the subsequent total net withdrawals from these charges on a first month basis. This calculator takes the amount withdrawn from pension, whether the withdrawal is crystallised or not and the client's anticipated earnings for the current tax year. This data is used to display two tables containing the breakdown for the tax charged and total net withdrawal on a Month One Basis and an Estimated Correct Tax Payable on Withdrawal.

Assumptions

Below is a list of all assumptions made in order to perform the calculation:

- Figures are rounded up to the nearest penny
- All earnings are taxed prior to the withdrawal
- Tax rates are those set by the current government
- Personal Allowance for the Month One Calculation is at the full value of £11,850 (as of current Tax Year)
- Client claims the full 25% tax-free lump sum if funds are crystallised

Calculations Breakdown

The calculations require three parameters in order to calculate the given output, these being:

- Amount Withdrawn from Pension
- Tax year
- Withdrawal Crystallised?
- Anticipated Earnings
- Do Scottish Tax Rates apply?

The Month One Calculator estimates how much tax that a client is charged when withdrawing from their pension. If the withdrawal is from an uncrystallised fund, then the value is taken down to 75% of the original, otherwise the withdrawal value is unaltered.

$$\text{Withdrawal from an Uncrystallised Fund} = \text{Withdrawal} \times 0.75$$

There are two outputs produced with separate methods, following is the calculations performed for each output with the heading being the title displayed on the webpage.

Tax Charged on Month 1 Basis

The tax charged is calculated using three tax bands and a personal allowance, all divided by 12 months:

Figures for 2016 - 2017 tax year:

- Personal Allowance: Up to £11,850 is taxed at 0%
- Band 1: The next £34,500 above the Personal Allowance
- Band 2: Between the upper limit of Band 1 and £150,000
- Band 3: Any value over £150,000

Figures for 2017 - 2018 tax year:

- Personal Allowance: Up to £11,850 is taxed at 0%
- Band 1: The next £34,500 above the Personal Allowance
- Band 2: Between the upper limit of Band 1 and £150,000
- Band 3: Any value over £150,000

If Scottish bands apply:

- Personal Allowance: Up to £11,850 is taxed at 0%
- Starter Band: The next £2,000 above the Personal Allowance
- Basic Band: Between the upper limit of the Starter Band and £12,150
- Intermediate Band: Between the upper limit of the Basic Band and £31,580
- Higher Band: Between the upper limit of the Intermediate Band and £150,000
- Top Band: Any value over £150,000

The calculator then passes in the sum of the withdrawal and the anticipated earnings for the current tax year and subtracts the above band thresholds and then calculates the tax charge for each amount for one month.

The tax deducted using an emergency tax code does not indicate the tax that might be owed as the actual tax deducted from any payment will depend on the tax code specified by HMRC. It is assumed that the full personal allowance is available regardless of the size of the withdrawal or the earnings for the current tax year. This means that the anticipated earnings of that year do not cause tapering of the personal allowance and they do not affect any of the calculations for this section. The remaining withdrawal is then calculated by subtracting the personal allowance from the total withdrawal. To calculate how much is taxed at 20% and 40% (as set by the current government) are calculated by subtracting that band's threshold from the remaining withdrawal and divide that total by 12 to convert it into one month. Following is a run through of the calculations performed; values are subject to change as the calculation progresses:

Using British Tax Bands

Personal Allowance (PA): *Note: The Personal Allowance cannot be less than 0*

Full Personal Allowance for the current year

$$\text{Amount Taxed at 0\%} = \frac{PA}{12} + PCLS$$

$$\text{Remaining Withdrawal} = \text{Withdrawal} - PA$$

Band 1:

$$\text{Amount Taxed at 20\%} = \frac{\text{Lesser Of (Remaining Withdrawal, Band 1)}}{12}$$

$$\text{Tax Payable} = \text{Amount Taxed at 20\%} \times 0.2$$

$$\text{Remaining Withdrawal After Band 1} = \text{Remaining Withdrawal} - \text{Band 1 Tax Rate}$$

Band 2:

$$\text{Amount Taxed at 40\%} = \frac{\text{Lesser Of (Remaining Withdrawal After Band 1, Band 2)}}{12}$$

$$\text{Tax Payable} = \text{Amount Taxed at 40\%} \times 0.4$$

$$\text{Remaining Withdrawal After Band 2} = \text{Remaining Withdrawal After Band 1} - (\text{Band 2 Tax Rate} - \text{Band 1 Tax Rate})$$

Band 3:

$$\text{Amount Taxed at 45\%} = \frac{\text{Remaining Withdrawal After Band 2}}{12}$$

$$\text{Tax Payable} = \text{Amount Taxed at 45\%} \times 0.45$$

These values are then displayed in a table noting the values of what was taxed and at which rate with totals for both the Amount Taxed and the Tax Payable.

Using Scottish Tax Bands

Personal Allowance (PA): *Note: The Personal Allowance cannot be less than 0*

$$\text{Full Personal Allowance for the current year}$$

$$\text{Amount Taxed at 0\%} = \frac{PA}{12} + PCLS$$

$$\text{Remaining Withdrawal} = \text{Withdrawal} - PA$$

Starter Band:

$$\text{Amount Taxed at 19\%} = \frac{\text{Lesser Of (Remaining Withdrawal, Starter Band)}}{12}$$

$$\text{Tax Payable} = \text{Amount Taxed at 19\%} \times 0.19$$

$$\text{Remaining Withdrawal After Starter Band} = \text{Remaining Withdrawal} - \text{Starter Band Tax Rate}$$

Basic Band:

$$\text{Amount Taxed at 20\%} = \frac{\text{Lesser Of (Remaining Withdrawal, Basic Band)}}{12}$$

$$\text{Tax Payable} = \text{Amount Taxed at 20\%} \times 0.2$$

$$\text{Remaining Withdrawal After Basic Band} = \text{Remaining Withdrawal} - \text{Basic Band Tax Rate}$$

Intermediate Band:

$$\text{Amount Taxed at 21\%} = \frac{\text{Lesser Of (Remaining Withdrawal, Intermediate Band)}}{12}$$

$$\text{Tax Payable} = \text{Amount Taxed at 21\%} \times 0.21$$

$$\text{Remaining Withdrawal After Intermediate Band} = \text{Remaining Withdrawal} - \text{Intermediate Band Tax Rate}$$

Higher Band:

$$\text{Amount Taxed at 41\%} = \frac{\text{Lesser Of (Remaining Withdrawal, Higher Band)}}{12}$$

$$\text{Tax Payable} = \text{Amount Taxed at 41\%} \times 0.41$$

$$\text{Remaining Withdrawal After Higher Band} = \text{Remaining Withdrawal} - \text{Higher Band Tax Rate}$$

Top Band:

$$\text{Amount Taxed at 46\%} = \frac{\text{Remaining Withdrawal After Higher Band}}{12}$$

$$\text{Tax Payable} = \text{Amount Taxed at 46\%} \times 0.46$$

Estimated Correct Tax Payable on Withdrawal

Before the calculator proceeds, it checks to see how much (if any) of the client's Personal Allowance is remaining as the Personal Allowance is subject to reduction as the total value increases over £100,000. This is calculated using the formula:

$$\text{Remaining PA} = \pounds 11,850 - \frac{((\text{Withdrawal} + \text{Income}) - \pounds 100,000)}{2}$$

This calculation provides an upper limit for the Withdrawal + Income of £123,700 before the entire Personal Allowance is gone. If the value is less than £123,700 then there is still a Personal Allowance, otherwise it is £0.

As all earnings are taxed prior to the withdrawal, the tax band thresholds for the withdrawal have to be altered to produce the correct output. Following is a run through of the calculations performed:

Using British Tax Bands

$$\begin{aligned} \text{Remaining Amount in 20\% Tax Bracket} &= \text{Band 1 Tax Rate} - (\text{Income} - \text{PA}) \\ \text{Remaining Amount in 40\% Tax Bracket} &= (\text{Band 2 Tax Rate} - \text{Band 1 Tax Rate}) - \\ &\quad (\text{Band 1 Tax Rate} - (\text{Income} - \text{PA})) \end{aligned}$$

Using Scottish Tax Bands

$$\begin{aligned} \text{Taxed at Starter Rate} &= \text{Lesser of}(\text{Remaining Income}, \text{Starter Band}) \\ \text{Taxed at Basic Rate} &= \text{Lesser of}(\text{Remaining Income}, \text{Basic Band}) \\ \text{Taxed at Intermediate Rate} &= \text{Lesser of}(\text{Remaining Income}, \text{Intermediate Band}) \\ \text{Taxed at Higher Rate} &= \text{Lesser of}(\text{Remaining Income}, \text{Higher Band}) \\ \text{Taxed at Top Rate} &= \text{Remaining Income} \end{aligned}$$

Once these have been calculated, the withdrawal value is then entered and calculated in these new tax brackets.

These values are then displayed in a table noting the values of what was taxed and at which rate with totals for both the Amount Taxed, the Tax Payable and the remaining Personal Allowance (PA).

A PDF report can be created from this calculator which contains detailed information about the relevant client's details and the outputs of the calculations performed.