

CashCalc Specification Sheets (Client Facing)

Lifetime Cash Flow Modeller (Basic)

Overview

The Lifetime Cash Flow Modeller is used for showing the client their expected cash flow for the specified term. This calculator takes the value of the savings pot at the start of the term, the assumed inflation and net return rates, details specifying incomes and expenditures and uses this information to give a year by year breakdown of the client's cash flow in both tabulated and graphical form.

Assumptions

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

- Figures are rounded to the nearest pound
- Growth is applied annually
- Cash flow starts on the day that the forecast is created
- No growth is applied to the Surplus/Deficit in the year that it gets added
- All incomes and expenses are added on the final day of each year
- All calculations are done for one year after the date that the forecast is created
- All money is shown in today's terms
- Assumed Inflation Rate has a range between 0.00% and 10.00% (Default: 2.00%)
- Assumed Net Investment Return Rate has a range between 0.00% and 10.00% (Default: 0.50%)
- Inflation Rate and Net Investment Return Rate are fixed throughout the term
- Incomes/Expenses might have inflation rates separate to the Assumed Inflation Rate
- Cash Flow calculated until client is 100 years old at maximum

Calculations Breakdown

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

- Savings Pot at Start
- Assumed Inflation Rate
- Assumed Net Investment Return Rate
- Income or Expenditure Type
- Income Amount
- Income Start Age
- Income End Age
- Adjust Income for Inflation?
- Income Frequency
- Income Inflation Rate
- Expense Frequency
- Expense Amount
- Expense Start Age
- Expense End Age
- Adjust Expense for Inflation?

The Lifetime Cash Flow Modeller uses these values to calculate the Annual Total Income, Annual Total Expenditure, Annual Surplus/Deficit, and Savings at Year End.

If the 'Adjust Income for Inflation?' or 'Adjust Expense for Inflation?' options are selected at the time of their creation, the income/expense will have the assigned value from creation, in other words it keeps pace with inflation until it starts. If this option is not selected, the value will be eroded by inflation each year until it is active.

The Annual Total Income is a total of every income active in that year and the Annual Total Expenditure is a total of every expense active in that year. The Annual Surplus/Deficit is then calculated by taking the total expenditure from the total income.

$$\text{Surplus/Deficit} = \text{Total Income} - \text{Total Expenditure}$$

The Savings at Year End is calculated by finding the growth of the client's savings at the year's start and then adding that to the product of adding the savings at the years start and the surplus/deficit together. Following are the calculations used in this process:

$$\text{Value after Surplus/Deficit} = \text{Value at Start} + \text{Surplus/Deficit}$$

$$\text{Value at End} = \text{Value after Surplus/Deficit} + (\text{Value at Start} * \text{Inflation})$$

These values are then used to produce three graphs; the first showing Incomes and Expenditures, the second showing Savings over Time and the third showing a combination of the two. These graphs are created by the pChart plugin.

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.