MABEL INSIGHTS

CASHFLOW MODELLING METHODOLOGY

This document is intended for financial advisers who wish to learn more about the Mabel Cashflow Modelling methodology.

Abstract

This paper outlines the purpose and methodology of the Mabel Cashflow Modelling tool.

Gaurav Gupta, CFA
Director

Contents

Purpose

Mabel's cashflow modelling tool has been developed in response to the FCA recent guidance for advisers to utilise cashflow tools to support the advice process for UK retail investment clients. The cashflow modelling tool is designed to support clients in accumulation and decumulation and sustainability of regular withdrawals.

FCA guidance: https://www.fca.org.uk/firms/undertaking-cashflow-modelling-demonstrate-suitability-retirement-related-advice

Many firms use cashflow modelling in retirement income planning. It can be a key step in providing suitable advice. It is used to project the income flows that different assets could generate and compare these with the client's estimated retirement needs.

Cashflow modelling can project a variety of outcomes, depending on the inputs and assumptions used. When used effectively, these outcomes can help clients understand how different economic circumstances could impact on their financial goals.

Cashflow modelling can give clients information to help them understand the recommended product or service and the potential drawbacks and risks of the recommended approach. This helps clients make effective decisions and take appropriate action.

Who this will be of interest to

Below are examples of parties cashflow modelling will be of interest to:

- Firms giving retirement income advice
- Firms giving advice on investments more generally

Concerns raised by FCA

- Finding 1: Firms relying on information without considering accuracy
- Finding 2: Using justifiable rates of return
- Finding 3: Planning for uncertainty
- Finding 4: Consumer understanding
- Finding 5: Consider the output

In this methodology paper we demonstrate how Mabel's cashflow modelling tool helps advisers with the concerns raised by the FCA.

FCA concerns answered

Finding 1: Firms relying on information without considering accuracy

FCA examples:

- Not challenging clients on figures provided: for example, where income and expenditure indicate savings are available, but the client has no savings
- Not thinking about future lump sum needs: for example, to replace cars or carry out home maintenance

Mabel's tool provides an adviser the ability to quickly and easily add a client's saving and investment amounts. In addition, we encourage the adviser and client to add their information correctly for the purposes of tax calculations.

For expenditures we provide the functionality to split expenses into essential, lifestyle, discretionary, and lump sum withdrawals. Future lump sum expenditures can be added with inflation adjustments.

Whilst a system cannot solve the issue of missing information or misinformation, we believe by making the process straightforward and providing meaningful outputs, the adviser and client have more to gain by adding relevant information.

Finding 2: Using justifiable rates of return

FCA examples:

- High returns assumed for cautious assets, without explanation

Mabel has risk rated over 1,300 portfolios from 80+ DFMs and is now one of the largest risk rating providers in the UK. When an adviser selects an investment, we prepopulate the expected return risk and total fees for each investment based on the Mabel Risk Rating methodology.

- Projections based entirely on past performance, without considering if this provides an appropriate expectation of the future potential

For projections we provide advisers with the ability to run simulations in three different ways:

1) Monte Carlo simulation using the input expected returns and risks
2) Monte Carlo simulation using lower than expected returns (as specified by the user)
3) Monte Carlo simulation with a market crash event with a specified value and year.

We believe by providing variations of the simulation, the adviser and clients can see the impact of different return and risk expectations and the probability of achieving their goals.

- Not taking tax into account in any withdrawals

Mabel considers tax for all money in and money out. In addition, we provide the functionality to optimise account liquidations to minimise the effective tax rate over the simulation period. The full tax breakdown is also provided.

Mabel has worked with tax consultants to match the outputs from their tax calculations to Mabel's calculations. Examples are provided **here**.

- Not considering how charges will affect the future potential returns, or failing to account for all product and adviser charges

For account charges we prepopulate the accounts with the total fees (where possible) if an investment is selected. The adviser can add additional fees if required.

Finding 3: Planning for uncertainty

FCA examples:

- Mixing real and nominal terms in their cashflow modelling

Mabel's cashflow tool allows the adviser to toggle between real or nominal simulations. This means reports can be produced to show the value of money including the impact of inflation or in today's money terms by adjusting assumptions for expected inflation.

- Only planning for average life expectancy, when 50% of people will live longer than this

For average life expectancy, advisers can set the end simulation age manually. This is prepopulated with 99 unless the adviser overrides it.

- Failing to properly stress test outcomes in line with the potential investments

With each simulation we provide the probability of achieving a client's financial objectives and the probability of capital loss table. This allows advisers to see the results and have meaningful conversations about the different scenarios and the impact they may have on the ability to achieve goals.

Finding 4: Consumer understanding

FCA examples:

- Risk profiling tools often refer to the potential returns of the selected risk profile or the percentage fall a client may be willing to accept

Mabel's risk profiling tool is linked to over 1,300 portfolios, and an adviser has the ability to select a client's actual investment in the drop-down list or by creating a custom portfolio.

- Key features illustrations will show projections where the pension provider has selected a rate of return which is aligned with the underlying assets

We provide the flexibility for an adviser so that they can override the expected return, risk and inflation assumptions to match another source.

- Cashflow models will have their own assumed growth rates, which could be different from the above

We provide the flexibility for an adviser so that they can override the expected return, risk and inflation assumptions to match another source.

Finding 5: Consider the output

FCA examples:

- Realise that the model relies on pensions being accessed before the minimum pension age

Advisers set the minimum pension age, and the system does not allow for any pension liquidation before this age.

- Identify where the cashflow model relies on illiquid assets, such as the client's main residence or non-rental property, for lifestyle expenditure

Non-liquid assets such as buy to let property cannot be liquidated by the model unless the adviser has input this as "money out".

- Consider the impact of tax on the client's proposed withdrawals, with the consequence the client needs to take more from the fund than is projected and could run out of money sooner

Mabel considers the expected tax payments when liquidating money to meet expenses. We also provide a full tax breakdown.

Methodology

In this section we dive deeper into the account types, money in types, taxes, liquidations, and simulations.

Account Types

Cash

Cash is a default account in the savings and investments section. This account reflects the amount in your client cash accounts. We provide the ability for advisers to add the expected interest rate by adding a yield value.

GIA

A General Savings Account (GIA) is an account which allows you to hold investments outside of tax wrappers, such as ISAs or pensions. For tax calculations purposes advisers can enter the base value (the amount originally invested into the GIA), and split between dividend and interest income producing assets.

ISA

An Individual Savings Account (ISA) allows you to save or invest money in a tax-efficient way. An ISA is a tax-free savings or investment account.

Onshore Bond

UK Investment Bonds are non-income producing investments and so have a different tax treatment from other UK based investments. This can provide valuable tax planning opportunities for individuals. Tax calculations include top splicing if available.

Offshore Bond

An offshore investment bond is a wrapper set up by a life insurance company and domiciled in a jurisdiction with a favourable tax regime. Tax calculations include top splicing if available.

Pension

A pension scheme is simply a type of savings plan to help you save money for later life. And there are tax advantages compared with other types of savings. Mabel also takes into account PAYE pension contributions and personal pension contributions.

Property

A property is an investment property that may generate income and potentially grows in value over time.

Interest Only Mortgage

An interest only mortgage is an interest only debt that is charged a set annual amount.

Other

This is a user defined field where you can input the tax rate manually on the account.

Money In Types

All money in amounts should be entered as gross values unless otherwise stated. Mabel calculates the net of tax amounts.

Employment
Income that a person receives from employment.

State Pension
The State Pension is a regular payment from the government most people can claim when they reach State Pension age.

Defined Benefit Pension
A defined benefit pension payment is a payment that depends on an employee's earnings history, tenure of service and age, rather than depending directly on individual investment returns.

Dividend
A dividend is a distribution of earnings, often quarterly, by a company to its shareholders in the form of cash.

Pension Annuity
A pension annuity is an insurance contract issued and distributed by financial institutions and bought by individuals. An annuity requires the issuer to pay out a fixed or variable income stream to the purchaser, beginning either at once or at some time in the future. The cashflow tool does not currently support purchase life annuity (PLA).

Self-employed
Income that a person receives by working for oneself rather than an employer.

Discretionary Trust
Income from a discretionary trust.

Possession Trust – Non-Savings Income
Non-Savings income as per the figures provided in the R185 form.

Possession Trust – Savings Income

Savings income as per the figures provided in the R185 form.

Possession Trust – Dividend Income

Dividend income as per the figures provided in the R185 form.

Net Inheritance

After tax inheritance amount.

Custom

User defined source of income. No tax is applied.

Taxes

Full breakdown of taxes and their calculations for different examples can be found **here**.

- Tax rates will be updated as and when new tax rates are made official and as advised by tax consultants. They do not adjust by inflation as this is not certain.
- Tax allowances can be adjusted by the user in the general tab if needed.

Limitations

Whilst we have made every effort to add all tax scenarios, there are some that we cannot account for. Examples (not limited to) are shown below:

1) Carried forward losses
2) Government repayment schemes
3) Benefits in kind (e.g. company benefits)

Liquidations

Liquidations can bet set using two methods:

1) manually select the liquidation order of each account
2) optimise the liquidation order of each account to minimise taxes over the simulation period

A liquidation breakdown is also provided in the tool suggesting by how much a client should disinvest each year.

Please note that liquidations are taken at the end of the year.

- We calculate the impact of tax on money in, money out and withdrawals at the end of the year after investment returns

The below explains the positives and negatives associated when liquidations are taken at the end of the year.

Positives:

- We are able to take into account tax implications on money in, money out and withdrawals
- Any taxable gains and income are included
- Reflects a clients requirements if they liquidate their accounts at the end of the year or beginning of the following year

Negatives:

- A client may liquidate their income at the beginning of the year. However, we find that most client accounts liquidate to meet income requirements throughout the year
- The accounts benefit from the year's expected return

The negatives can be mostly overcome by taking the suggested liquidation for year 1 at the start of the next year for example.

Simulations

Monte Carlo Simulations

Below details how we conduct the Monte Carlo simulation:

- For the simulations we assume normally distributed returns. In the normal distribution, the mean return is the expected total return and the standard deviation is the expected volatility
- Each account in the Monte Carlo simulation is taken independently
- To produce the range of percentile outcomes we conduct 1000 simulations

We currently offer three simulations:

1) Monte Carlo simulation using the input expected returns and risks
2) Monte Carlo simulation using lower than expected returns (as specified by the user)
3) Monte Carlo simulation with a market crash event with a specified value and year.

Capacity for loss

It is important to note that capacity for loss can mean different things. Mabel helps advisers assess their client's capacity for loss by calculating the probability of capital loss table. A client's capacity for loss varies on a client-by-client basis as they may have different tolerances for the likelihood of their account falling below different values at the end of the simulation period.

Mabel calculates the probability of capital loss table using the Monte Carlo simulation. More details are shown below:

- The probability of capital loss is calculated by taking the number of simulations that have fallen below the specified value, divided by the total number of simulations
- We work out the probability of the plan meeting all expenses by subtracting 1 from the probability of falling below £0 in the final year shown in the probability of capital loss table.
- A plan with a probability of more than 90% is green, more than 80% is orange and less than 80% is red.

To help with the capacity for loss conversation we provide the full probability of loss table for advisers and clients to review.

Legal Disclaimers

The information contained in the cashflow report is not guaranteed to be accurate, complete, or timely. Mabel Insights and its software shall not be liable for any damages or losses related to your use of the information contained in it.

Risk Committee

The risk committee oversee the continued development of the cashflow modelling tool. The risk committee meets on a quarterly basis.