



The Importance of Asset Model Integrity

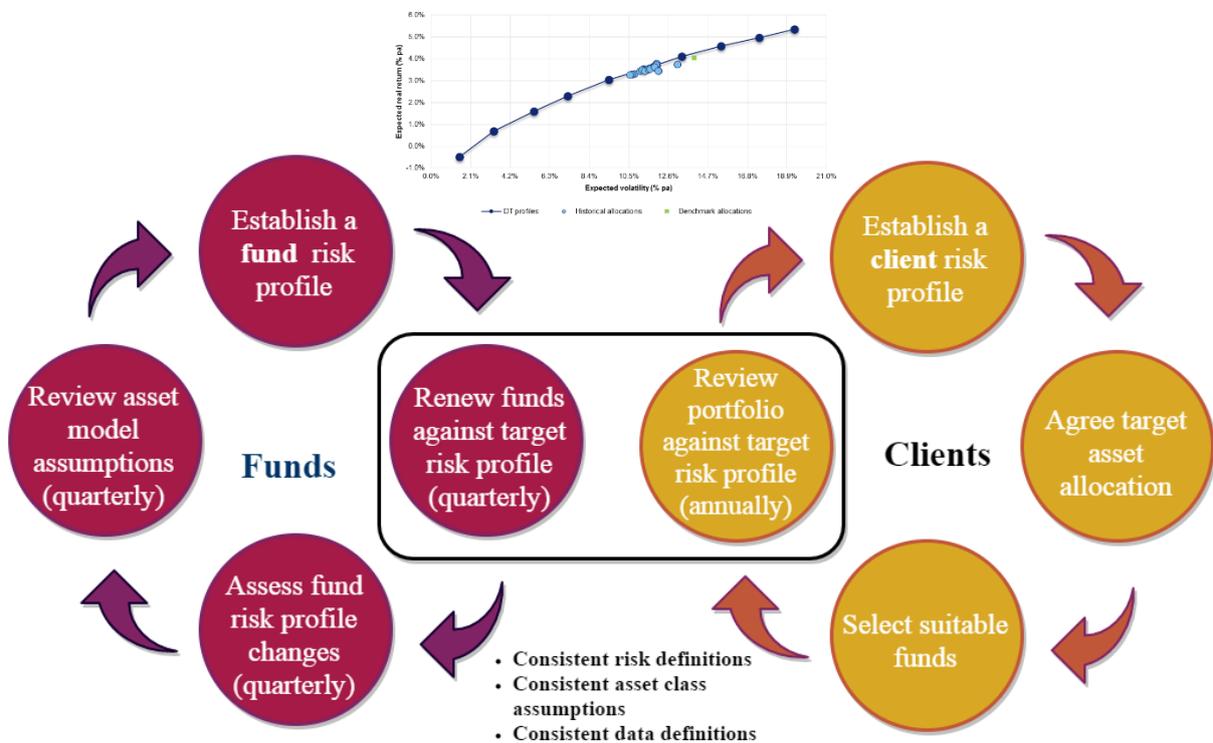
DT Asset and Risk Modelling Team
2015

The Importance of Asset Model Integrity

The Dynamic Planner® asset allocation models were created ten years ago in 2005, and are supported by a dedicated and expert Asset & Risk Modelling team. The team are responsible for ensuring that the models are robustly process driven and deliver consistent and coherent results. This is powered by the use of both forward-looking and past-performance analysis to more accurately assess what is most likely to happen in future.

The models are reviewed each quarter and although no model can predict the precise direction of the stock market with complete precision 100% of the time, they focus on delivering results that can be relied on delivering higher returns for higher risk over the medium to long term.

Added to this if the model can offer a common calibration of risk definitions, asset classes and risk boundaries, then you have what can be described as asset model integrity.



The model inputs

Although each investor is unique; it is possible to categorise someone’s attitude to risk using proven psychometric profiling techniques. These can identify characteristics such as: tolerance for ambiguity, desire for profit and investment experience which are all general predictors of an individual’s likely tolerance for risk.

The 10 and 20 question questionnaires used with Dynamic Planner were developed in conjunction with Oxford Risk (a company led by academics from the University of Oxford, who have considerable expertise in this sector). The questionnaires have been shown to have reliability in predicting attitude to investment risk of 84% (10 question version) and 92% (20 question version).

The answers make a good starting point for discussion between client and adviser around the additional implications of capacity to accept financial losses and how these may impact standard of living. Once agreed, Dynamic Planner defines 10 investor risk profiles to match the agreed investment mandate.

We produce efficient asset allocation targets that are selected from a range of 15 asset classes to match the 10 client risk profiles defined in Dynamic Planner. Our Capital Market Assumptions (volatility, covariance and expected returns) are forward looking mid-to-long expectations for these asset classes and are reviewed quarterly. They drive the optimisation process for setting the asset allocations, which are employed within the model forecasts and also form the basis for the width of the 10 risk profile boundaries. The volatility and covariance matrix are determined by reviewing the time series per asset class over the past 15 years.

The allocations and boundaries are reviewed quarterly and although we can change them at this frequency, we tend to make adjustments on an annual basis. This process provides a robust and repeatable framework for assessing how asset classes behave relative to each other over the mid-to long term.

There are also over 200,000 fund data feeds coming into Dynamic Planner each day and this provides us with the ability to map the asset allocation constituents of an investors existing portfolio to our 15 asset classes. This is an essential part of the integrity process, since risk definitions are calibrated consistently to model inputs as well as outputs.

The model outputs

DT's forecasting model uses these assumptions to produce stochastic forecasts across differing time periods (1, 3, 10 and 20 years) using a log-normal model. This allows an advisor to view the possible range of outcomes a client may experience per risk profile over time and creates a basis for a relative discussion. For example the range of expected outcomes is tighter for RP1 when compared to RP10 – it gives a feel for expected risk.

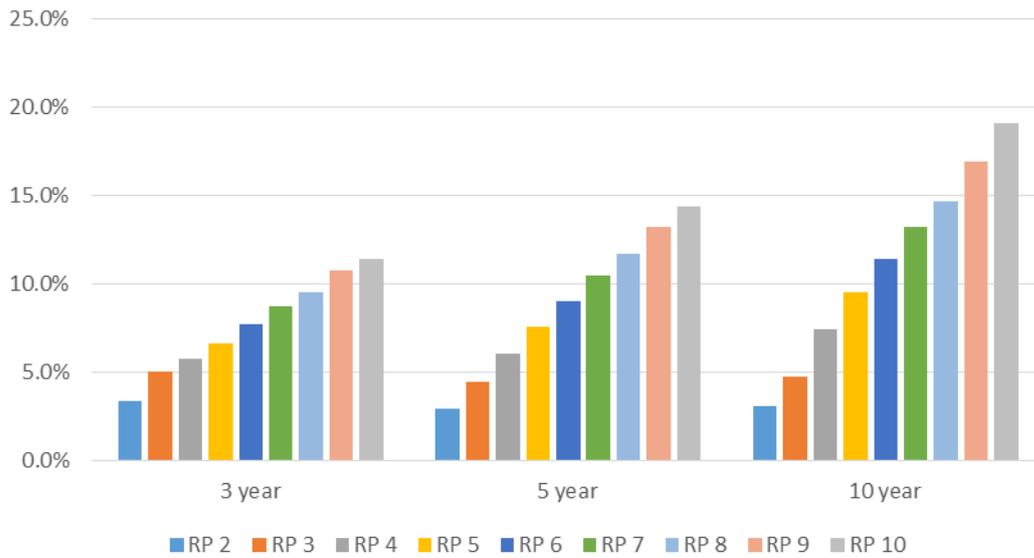
Fund Risk Profiling Service (FRP)

When DT risk profiles funds it applies these model assumptions to the funds' allocations and can therefore place them into the 1-10 scale, in keeping with how our software describes risk. As a final sense check DT reviews ex-post fund performance data and performs tracking error analysis on a quarterly basis to ensure that the product's volatility journey most closely fits that of the appropriate DT asset allocation. There are multiple ways to gain exposure to the market and therefore the FRP process needs to consider how the manager is successfully implementing its portfolios – the ex-post analysis enables this. The most important step in this process is that DT provides the risk profile score on a consistent measurement basis across the market, so the advisor can understand and compare funds on a like-for-like basis.

The model results – how have they fared?

One of the key features when setting any risk targeting asset allocation framework is that the allocations remain coherent relative to each other. What this means is that risk profile 5 remains riskier than risk profile 4 than risk profile 3 etc. The following chart shows that over the past discrete 3, 5, 10 year periods this remains consistently true across the risk profiles.

Annualised Volatility



Source: Distribution Technology. Past performance is not necessarily a guide to future performance and the value of investments can fall as well as rise. 10 years to 30 June 2015.

Such a tried & tested model that has come through the Great Financial Crash of 2007/8 with such results we believe goes a long way to meeting the challenge of suitability for advisers and their clients.

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