

# Pensions: Feng shui for pension investments

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*“Bust company pension fund shortfalls soar” screams the headline in the Telegraph business section. The article goes on to explain why managing a pension scheme is something like squeezing the air out of a lilo, something that we are all doing post holiday season. Pension schemes succeed in one direction, only to see the deficit widen in another. In many ways the issue arises from trying to manage long term uncertainties on short term valuations.*

## Current pension scheme issues

UK occupational pension scheme deficits increased during August from £179bn to £195bn. The increase in deficits has occurred as equity markets have risen by 7.1%, which means that the value of the liabilities must have increased by a greater amount.

## Inter-relationships

Pension fund assets and liabilities are exposed to many inter-related driving factors. In this case, a fall in interest rates is partly responsible for the rise in equity prices. All else being equal, falling interest rates raise equity prices because it increases the value of the anticipated dividend stream from the stock. However, for exactly the same reason, falling interest rates increase the liabilities of a pension scheme. In this case the liabilities have increased more than the asset values. In short, whilst equities have increased, they have underperformed relative to the long dated, “fixed” cash flows of the liabilities. Fixed is in quotes here because pension liabilities are far from fixed: another great misnomer in pension fund analysis.

## All about the liabilities

Pension funds are all about the liabilities. Ultimately the assets are there to meet the liabilities. Under classic ALM (asset liability matching), then the assets will be chosen to match the liabilities. In a conventional view of pension ALM, the pension payments form a long dated series of cashflows that look like a bond.

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## Mr. Bond we have been expecting you

BRAVE partner, Christopher Cloke-Browne used to visit a friend in Tokyo quite regularly whilst passing through Asia. At reception he was always told: “Ahhh, Mr. Cloke-Browne we have been expecting you. Please take the lift to the nineteenth floor”. Almost a classic scene from a Bond movie. In the lift Chris, in James Bond style, would eye up his means of escape for when the lift floor opened up and he was deposited in the shark pool. The “bond like” cashflows of a pension plan are about as elusive as the eponymous spy. Just as James Bond typically escapes from the shark tank, the predicted cashflows of a pension fund are unlikely to occur due to a range of factors including:

- UK occupational pension liabilities are linked to inflation
- The cashflows are based on an actuarial best guess of mortality rates. The actual mortality rates will differ and can differ substantially
- Pensions have a large amount of optionality, such as:
  - Lump sum withdrawal at retirement
  - Actual age of retirement
  - Transferring to a different scheme at a pre-set transfer value

All of these factors alter the cashflows in unpredictable ways.

## Feng Shui for pension assets

Just as Feng Shui sets out a process for laying out furniture within a living space, pension funds need to set out their asset portfolio within the space defined by the liabilities.

## Feng shui does not use mathematical simulation

Feng Shui is based on core principles of tranquility and harmony. A feng shui consultant does not turn up with a super-computer and measure the precise size and shape of the house. In contrast, a feng shui consultant arrives with a small book of principles and a serene expression of calm.

A lot of pension fund analysis has been done by mathematical simulations. BRAVE Partners does not wish to say that such studies are useless, but perhaps that they are more useful once the broad level concepts have been mapped out.

The interest rate sensitivity of equities is not something of which many equity investors would immediately think. In a classic, asset class view then equity risk would be separate from interest rate risk, which would again be separate from credit risk. In reality the interest rate component of equity risk is well known and well understood. Bank risk models must account for it and any equity derivatives desk that does not only include the current interest rates, but the price of

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the future variability (or volatility) in those rates will be mis-pricing relative to the rest of the market.

### Risk factors first

Just as feng shui is done; perhaps pension plans should start their investment selection from a small book of principles. The book should be created by identifying all of the risk factors in the liabilities. The list would start something like: inflation, longevity, interest rates, changes in interest rates (which will affect the transfer valuations), etc... The scheme actuary is well placed to advise on this list. Asset classes should then be selected that offset, or counterbalance, the liability risk factors. This should be done by writing the full list of available asset classes and then analysing their sensitivity to the risk drivers for the pension scheme.

Starting from the principles of the risk drivers, the pension scheme can find harmony between its assets and liabilities and the trustees and advisors can find tranquility at night.

### BRAVE Partners Services

BRAVE Partners LLP can assist pension funds to understand the detailed nature of the price drivers for a range of asset classes and how these match to the risk factors in the scheme liabilities.

- *Detailed modeling for pension plan ALM can mask some high level risk factors.*
- *BRAVE Partners suggests that pension plans commence their asset allocation from a high level review of the sensitivity of all asset classes to the risk factors that are identified in the liabilities.*
- *BRAVE Partners LLP can assist pension schemes and their advisors to identify the risk drivers of a wide range of asset classes.*

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