

# The Trustee toolkit downloadable

## Investment in a DB scheme

### Tutorial six: Reviewing the investment strategy

By the end of this tutorial you will better understand:

- ▶ what the key tasks are in reviewing an investment strategy and how they fit together

This tutorial is part of **Scenario three**.

#### Glossary

A detailed glossary of technical terms can be downloaded from the Resources tab when you log in at [www.trusteetoolkit.com](http://www.trusteetoolkit.com)

The Pensions  
Regulator

## Introduction

In the previous tutorials, you learned about the tools and approaches that can be used to examine the riskiness and potential reward of different investment strategies, including stress testing, scenario analysis and stochastic modelling.

You also learned about the ways in which the riskiness and potential reward of an investment strategy can be altered, such as:

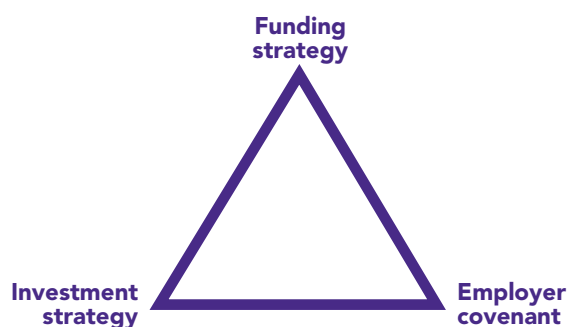
- ▶ changing the balance between growth assets and matching assets
- ▶ diversifying the growth assets
- ▶ making the matching assets a better match for the scheme liabilities
- ▶ introducing tail risk hedging strategies

We have also explained that investment strategy should be considered together with the employer covenant and the scheme's funding strategy, as part of an integrated risk management approach. Changes to any one of the covenant, investment or funding will likely have impacts on the others, which is why a joined-up approach should be taken. Seeking an appropriate balance between them is not always straightforward, and it is typically an iterative process.

In this tutorial, we will draw these various strands together. We will show how the tools and approaches described earlier can be used to assess a pension scheme's current investment strategy and to support proposals to change strategy.

## Integrated risk management

A pension scheme's investment strategy should be set so that it is consistent with the employer covenant and the scheme's funding strategy. Ideally, the employer and the trustees will work together collaboratively, to arrive at funding outcomes that reflect a reasonable balance between the need to pay promised benefits and minimising adverse impacts on the employer's sustainable growth.



## When are investment strategy reviews carried out?

Investment strategy reviews are typically done at the same time as the scheme's actuarial funding valuation, which is usually every three years. If there are material changes to the employer covenant, the scheme's funding level, and/or investment market conditions, then the trustees should consider doing an 'out-of-cycle' review.

As we have said before this is very much an iterative process but the key thing is that trustees should avoid setting their funding strategy before having reviewed their investment strategy as this would essentially tie their hands as to the level of investment return the strategy must deliver.

## **Collaboration with the employer**

Pension scheme investment and funding reviews are ideally done in collaboration with the employer. For example, at the start of the review, it is normally helpful for the trustees to talk with the employer about their business plans and investment requirements for these and their tolerance for risk-taking in the pension scheme that might lead to higher contribution requirements. Early input from the employer on these topics may help focus the review, making it a more efficient process.

## **Seeking a balanced outcome**

The investment strategy review is part of the process of integrated risk management, taking into account the funding, investment and employer covenant risks.

Because the three strands are interlinked, any material change in one is likely to impact on the other two and require adjustments to be considered. It is therefore not always easy to maintain the balance between all three areas and a certain degree of iteration (sometimes quite a lot of iteration) will usually be necessary to redress the balance.

Ideally, this outcome will be an investment strategy that has the right level of risk in the context of the employer covenant and the scheme's funding position, and that together with the agreed recovery plan leads to full funding within an appropriate period.

## **Carrying out an investment strategy review**

An investment strategy review will be an iterative process but typically involves:

1. Reviewing the employer covenant
2. Reviewing the current investment strategy
3. Considering potential changes to the investment strategy
4. Making contingency plans and risk monitoring arrangements
5. Documenting the review

We will look at each stage in turn.

## 1. Review the employer covenant

The first stage in an investment and funding review is to understand the employer covenant, which is the employer's legal obligation and financial ability (ie the ability to generate cash) to support the scheme.

### Contributions and investment risk

This involves understanding the contributions that the employer could afford to make to the scheme if required (taking account of the employer's plans for sustainable growth), because this places a limit on the level of investment risk that can be supported. (Recall that an adverse investment outcome will lead to a reduced funding level and to an increased requirement for deficit repair contributions).

### Approach to covenant review

The approach taken to understanding the employer covenant should be proportionate to the scheme's and employer's circumstances. Trustees will also have to decide whether to commission an external review (ie if they do not have the necessary expertise or objectivity or if the covenant is complex).

You can find out more in the Module: 'How a DB scheme works' in the Tutorial: 'Employer covenant'.

### Assessing covenant strength

Assessing the strength of the covenant should be done in the context of the scheme's specific circumstances, such as its funding position and level of investment risk as it is a measure of the ability of the employer to meet its obligations to the scheme.

### Working with advisers

It is important that the person undertaking the covenant review has sight of the investment and actuarial advice and vice versa. It is also important for the investment consultant and scheme actuary to work closely together.

The benefits of doing this include ensuring that all parties work with consistent modelling assumptions and that efficient use is made of each party's capabilities and is important because changes in the investment strategy are likely to imply changes in the funding assumptions, and vice versa.

## 2. Reviewing the current investment strategy

Once you have an appropriate understanding of the employer covenant, the next step is to review the scheme's investment strategy.

The review should start with the current investment strategy. In the context of integrated risk management, it should consider the risks of the current strategy so that they can be compared with the employer covenant.

We will now look at two areas within this stage:

- ▶ Input from the scheme actuary.
- ▶ Analysis of the current investment strategy.

### Input from the scheme actuary

Some input will be needed from the scheme actuary before the investment review can take place. This includes an estimate of the value of the scheme's liabilities, for comparison with the value of the scheme's assets so that the surplus or deficit in the scheme can be estimated.

The actuary may also provide an update on the profile of the estimated cash outflows from the scheme, ie the amount expected to be payable in each future year. This would most likely happen if the profile has changed significantly since the last investment review, for example because of significant membership transfers out of or in to the scheme, or because the mortality assumption (regarding how long members will live) has changed.

You may recall from the Tutorial: 'Changing asset and liability values' that the sensitivity of the scheme's estimated liabilities to changes in the valuation discount rate depends on their profile. In that tutorial, you also learned that the 'duration' and 'inflation duration' of the liability cash flows give a rule of thumb for estimating this.

### Analysis of the current investment strategy

The investment strategy review should consider the riskiness of the current investment strategy. Means of doing this include stress tests, scenario analysis and stochastic modelling.

#### Stress test

A stress test would consider what would happen if market conditions changed overnight, unfavourably.

Reminder: You may recall that, in the Tutorial: 'Future projections and scenario analysis', we showed the effect of a stress test on our example scheme. Initially, it was fully funded with £300m of assets and £300m of estimated liabilities. Following a fall of 0.5% pa in interest rates, the assets became £309m and the estimated liabilities became £327.9m. This meant that there was now a deficit in the scheme of £18.9m.

This deficit would be tested against the employer covenant, to see whether the employer could afford to make good the shortfall within an appropriate timeframe by payment of deficit repair contributions. If the covenant analysis suggested that this would likely be difficult for the employer, then the trustees should consider reviewing the investment strategy so as to reduce the reliance on the covenant. This would have implications for the funding strategy.

### Carrying out stress testing

As well as projecting the impact on the scheme's finances, the impact of a recession on the employer covenant should be considered. Ideally, this would involve liaison between the investment consultant and the covenant specialist, so that the assumptions each makes about the nature of the recession being modelled are consistent. This kind of consistency in approach should lie at the heart of integrated risk management.

### Scenario analysis

Scenario analysis would consider a range of economic scenarios and use these to project forward the scheme's assets and liabilities, using a model of the scheme prepared for this purpose (usually by the investment consultant with input from the scheme actuary on the modelling assumptions).

Reminder: In the Tutorial: 'Future projections and scenario analysis', we gave the example of a recovery scenario leading to higher levels of growth in equity markets, higher interest rates and moderate inflation rates. When examining the risks in the current investment strategy, for comparison with the strength of the employer covenant, emphasis would be placed on downside scenarios such as a recession.

### Carrying out scenario analysis

As well as projecting the impact on the scheme's finances, the impact of a recession on the employer covenant should be considered. Ideally, this would involve liaison between the investment consultant and the covenant specialist, so that the assumptions each makes about the nature of the recession being modelled are consistent. This kind of consistency in approach should lie at the heart of integrated risk management.

### Stochastic modelling

Stochastic modelling would show the range of likely future outcomes from the scheme's current investment strategy.

Reminder: As we explained in the Tutorial: 'Stochastic modelling', a stochastic model involves projecting the scheme's finances a large number of times using different scenarios produced by an 'economic scenario generator' and building up a database of the output. Interpreted carefully, this database can be used to indicate the likelihood of particular future outcomes.

For example, in the stress test example we looked at earlier, a deficit repair contribution requirement of £18 million arose in our example scheme under the stress considered.

## Carrying out stochastic modelling

Let us suppose the covenant specialist advises that the employer can support up to £20 million of deficit repair contributions. Stochastic modelling could be used to assess the likelihood of this limit being breached.

For example, the database could be examined to answer the question: 'In what proportion of the scenarios does the next valuation show a deficit repair contribution requirement of more than £20 million?' If this proportion was greater than the trustees or employer are comfortable with, then the next stage of the review would be to consider ways of reducing investment risk in the scheme, and the implications of that for the funding strategy.

## VaR/risk factor analysis

VaR and risk factor analysis is another way of using stochastic modelling to assess the riskiness of the current investment strategy.

Reminder: You may recall from the Tutorial: 'Stochastic modelling' that if, for example, the 3-year VaR95 figure for the scheme is £19 million, this means that in 5% (or 1 in 20) of the scenarios, the deficit in 3 years time is more than £19 million worse than expected (ie than it is in the median or middle scenario).

## Carrying out a VaR analysis

When doing VaR analysis for your scheme, it is important to use an appropriate timeframe and probability level. The VaR is an indication of how much additional deficit repair contributions, over and above any already built in to the modelling, could arise (with the given probability) over the stated timescale. The VaR can therefore be carefully compared with the employer's covenant to assess whether the riskiness of the current investment strategy is acceptable.

## Risk components

You may also recall from the Tutorial: 'Stochastic modelling' that VaR analysis can be decomposed into its component risks, eg interest rates, inflation and investment returns. It can show which risks are most significant for the scheme, and thus suggest areas of focus for the investment strategy review.

# 3. Consider changes to the strategy

The analysis of the current investment strategy should indicate the overall riskiness of the strategy and relate this to the employer covenant.

## Current level of risk

It will show whether the current level of risk is supportable by the covenant (based on the covenant review) or needs to be reduced. The analysis will also show which risks are most significant for the scheme, and these should be the focus of any potential changes considered to the investment strategy.

## Opportunity to reduce risk

We have just described the situation when investment risk needs to be reduced on account of the covenant. Sometimes investment risk does not need to be reduced, but the possibility arises of doing so.

An example is if the funding level is strong enough for the scheme to take less investment risk and still meet its funding targets, even though the employer covenant can support higher levels of risk taking. In this situation too, the investment strategy review should include analysis of the amount and composition of the scheme's investment risks, which will influence any proposed changes to the investment strategy.

## Typical changes

In the Tutorial: 'Changing the asset allocation strategy', we gave some high-level examples of the types of change that might be considered to the investment strategy, such as:

- ▶ altering the mix between growth assets and matching assets
- ▶ making the matching assets a better match for the liabilities
- ▶ diversifying the growth assets
- ▶ putting in place, adjusting or removing downside protection strategies

The relevance of each of these will depend on the balance of risks brought out in the initial analysis, and on overall level of risk relative to the employer covenant.

## Possible outcomes

The possible outcomes of an investment strategy review depend on the employer covenant and the scheme's funding level, as the following examples illustrate. In each case, we assume that a balanced funding and investment strategy was in place following the last review, and consider what may have changed since then.

### Strong funding level

In this first example, we assume that the funding level has improved much faster than anticipated at the last review. It is now strong enough that the trustees could reduce investment risk and still meet the scheme's funding target. We assume that the employer covenant remains strong enough to support the current level of investment risk.

In this situation, an appropriate change could be to reduce the allocation to growth assets in favour of matching assets. As you learned earlier, this type of change reduces the expected return of the scheme's investments, but in this scenario there is scope to do so without needing to revisit the funding assumptions. The scheme actuary will be able to advise on an appropriate reduction in the allocation to growth assets, so that the lower expected return is still sufficiently likely to meet the funding target based on the scheme funding assumptions.



## Weakened covenant strength

The trustees' ongoing monitoring of the covenant has shown that 'triggers for action' have been breached regarding employer covenant, materially weakening and is no longer strong enough to support the current level of investment risk.

### What should the trustees do?

Although the funding level is in line with expectations, the trustees need to take action promptly to mitigate the risks that have materialised.

### Reduce allocation to growth assets?

One type of change to consider would be to reduce the allocation to growth assets, as in the first example, since this would likely reduce investment risk.

However, when consulted on the funding implications, the scheme actuary advises that there is no scope to reduce the allocation to growth assets without revisiting the funding assumptions. The revised funding assumptions would be based on a lower valuation discount rate, reflecting the lower expected return from the scheme's investments. This would lead to higher contribution requirements.

The trustees would need to discuss these with the employer, seeking agreement on a pattern of contributions that meets the trustees' needs whilst not unduly constraining the employer's ability to invest and grow.

### Make the assets a better match for liabilities?

Another approach to consider in this situation would be to see whether there are ways of reducing risk without materially impacting the expected investment return, so that the funding assumptions do not need to be changed.

An example we gave earlier is to make the matching assets a better match for the scheme liabilities, for example by introducing an LDI portfolio (or modifying the scheme's existing one, if it has one).

This would be designed to reduce the interest rate and/or inflation risks in the scheme. The impact of the LDI portfolio on the valuation discount rate would need to be discussed with the scheme actuary and would depend on the composition of the portfolio.

## 4. Making contingency plans and monitoring risks

As part of the integrated risk management framework, it is important to put in place contingency plans for what action to take if these risks materialise, and agree them as appropriate with the employer.

For example, the contingency plan for a fall in equity markets, leading to a reduced funding level and increased reliance on the employer, might be to set a trigger at which a fall in equity markets is deemed to be material and for the employer and trustee to meet to agree possible remedial action should that trigger be breached. This could include the employer taking steps to strengthen its covenant or paying additional contributions to the scheme.

It is important to monitor the scheme’s risks carefully, so that timely action can be taken if these contingencies arise. A ‘risk dashboard’ could be prepared which monitors key measures for the scheme that can act as triggers for action. Many of these will be linked to the scheme’s investments.

Your investment consultant and scheme actuary will be able to advise on suitable risk indicators for your scheme.

## 5. Documenting the review

Documentation is an important part of any risk management process, so that the parties involved can read it and get a clear understanding of the risks being monitored, their importance, and the contingency plans in place.

You may find it helpful to draw up short documents highlighting the key principles underlying your scheme’s risk management approach. These could form part of the scheme’s Statement of Funding Principles (SFP) and Statement of Investment Principles (SIP). The act of putting the short documents together can be very useful for clarifying the thinking behind it, and distilling these into core principles. This will enable you to explain the scheme’s approach to interested parties such as scheme members and The Pensions Regulator.

Most pension schemes are legally required to prepare a SIP. There are legal requirements regarding the content of a SIP, and these are described in the Module: ‘An introduction to investment’ in the Tutorial: ‘Investment in a pension scheme’.

## Case study: Example scheme

Let’s take a final look at our example scheme. The table shows the scheme’s current strategy, and one that might be proposed following an investment strategy review.

Assets	Class	Current strategy
Growth	Global equities	20
	Diversified growth strategy	20
	High yield bonds	0
Matching	Investment grade corporate bonds	30
	Index-linked gilts	30
	LDI portfolio	0
<b>Total</b>		<b>100</b>

## What has changed since the last review?

In this example, the current investment strategy is consistent with the current funding strategy. The funding level is on target, but the employer covenant has deteriorated since the last review. The trustees would therefore like to reduce investment risks in the scheme, ideally without reducing the expected return so much that the funding assumptions need to be revisited.

## What was the result of the risk analysis?

The risk analysis in the investment strategy review has shown that the scheme is running significant interest rate and inflation risks.

## What changes did they propose to make?

The trustees decide to address this by making changes to the matching assets. The investment consultant proposes, as a first step, that the 60% in matching assets be reallocated from 30% corporate bonds and 30% index linked gilts to 40% corporate bonds and 20% in an LDI portfolio. The bonds and LDI portfolio together would provide better matching to the scheme's liabilities. Further, the higher allocation to corporate bonds would increase the expected return, although it would also increase the scheme's exposure to credit risk.

## What was the result of the second risk analysis?

The investment consultant re-runs the risk analysis and this shows that the interest rate and inflation risks are reduced considerably, whilst confirming the increase in credit risk. The analysis also shows, however, that equity risks are now a notable element of the overall investment risk.

## What further changes did they propose to make?

In order to balance the risk profile up a little, the investment consultant proposes a second step. This is to reduce the equity allocation by 5%, and allocate 2.5% more to diversified growth, and 2.5% to high yield bonds. The consultant explains that this would lead to a lower expected return, but to lower risk from the growth assets. The investment runs the risk analysis again which shows the extent of these effects.

## What was the overall effect of the two changes?

Overall, the effect of both stages is to reduce the expected return slightly, but to make a material reduction in the investment risk. The scheme actuary is able to confirm that there is no need on this occasion to change the funding assumptions, although they will be marginally less prudent than before compared with the expected investment return.

## What monitoring did they put in place?

The trustees consider the reduced level of investment risk, compared with the employer covenant. They conclude that it is acceptable, but that there are still investment risks in the scheme that bear watching. These include residual interest rate and inflation risks. They put in place arrangements to monitor the level of long-dated bond yields and market-implied inflation.

## How did they document the review?

The investment consultant helps the trustees document the new investment strategy in a new draft SIP. The trustees consult with the employer regarding the SIP and, having considered the employer's views, the trustees adopt the revised SIP. The SFP does not need revision on this occasion.