



# Longevity analyses for defined benefit pension schemes

How long will your scheme members live? As a trustee or sponsor of a defined benefit (DB) pension scheme, it is important to understand the longevity risks that your scheme faces.



# Having an understanding of the risks faced by your pension scheme is a key part of being a responsible trustee.

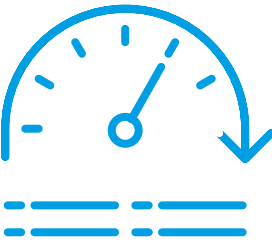
One such example is “longevity risk” – the risk that members of your pension scheme live longer, on average, than you expect. If this happens, the cost of paying pensions could be a lot more than expected, leading to future deficits and the need for increased contributions. On the other hand, overestimating how long members will live for may lead to additional prudence that could have been used to, say, de-risk the scheme’s assets.

⋮ All schemes are affected by this longevity risk, although it is a particularly important issue for schemes that are considering risk reduction exercises, self-sufficiency or buyout.

The coronavirus pandemic shows how important mortality assumptions can be for a scheme, with events in a relatively short period leading to a fundamental change in our understanding of how mortality is expected to develop in the future.

It is important for trustees to invest time in choosing the most appropriate longevity assumptions to use, for the following reasons:

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## TO BUDGET FOR THE RIGHT COST

The better the estimate you make of longevity, the less chance there is that additional costs will gradually emerge over time.



## TO UNDERSTAND THE SIZE OF THE RISK

If trends in infectious diseases or healthcare changed, or if some of your members just happened to live longer than expected, would this cause your scheme serious issues, or could you ride it out?

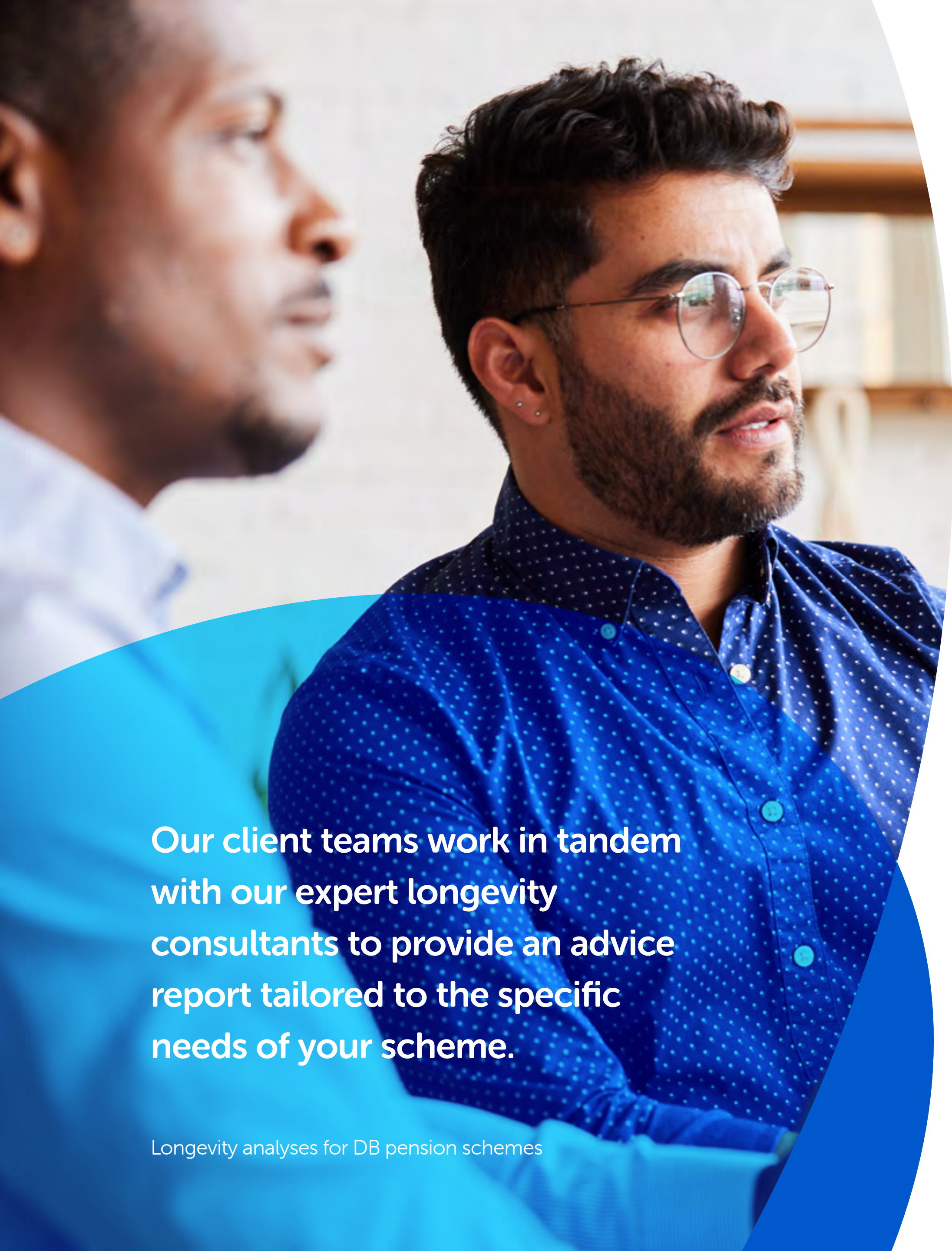


## TO ENSURE YOU ARE FULFILLING YOUR TRUSTEE DUTIES

The Pensions Regulator’s guidance is that trustees should set evidence-based mortality assumptions, taking account of relevant data and the specific characteristics of their scheme.

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Undertaking a longevity analysis is a crucial step for pension schemes hoping to have a good grasp of the scheme membership’s longevity characteristics.



**Our client teams work in tandem with our expert longevity consultants to provide an advice report tailored to the specific needs of your scheme.**

Longevity analyses for DB pension schemes

We understand that all schemes are different, and so one approach may not work for all. We offer a flexible longevity analysis service, which draws on our data analysis and consulting expertise, at an appropriate and affordable cost.

Our client teams work in tandem with our expert longevity consultants to provide an advice report tailored to the specific needs of your scheme. This report will inform your understanding of the mortality assumptions being considered (i.e. the choice of base table, any adjustments needed to it, and an allowance for future improvements in longevity) for an actuarial valuation project requiring mortality assumptions. This could include forthcoming a Scheme Funding valuation, as well as a buy-in/out transaction or longevity swap transaction.

The report also provides trustees with an understanding of the level of prudence contained in the mortality assumptions, to give confidence that the assumptions are reasonable for the scheme's members.

# An outline longevity report

We set out below a range of topics that we typically include in a report.

## Experience analysis

“Does the number of deaths in our scheme look higher or lower than the average pension scheme?”

Analysis of the scheme’s emerging mortality experience is essential for all but the smallest schemes (whose experience will be too volatile to draw meaningful conclusions), to compare the recent experience of the scheme with the particular mortality tables being considered.

⋮ This analysis can help inform the choice of mortality table and  
⋮ the adjustments to apply.

Our analysis would also assess the reliability of past experience for setting mortality assumptions. This reliability depends on the size of the scheme (in particular the number of members who have died) and on the distribution of liabilities between members. For larger schemes, with more data, we can delve more deeply into past experience and use this information to inform our advice (for example, investigating the impact of the coronavirus on actual numbers of deaths in the scheme).

## Mortality by socio-economic group

“How does data on where our members live and their pension amount help us predict their likely life expectancy?”

Analysis of a scheme’s own past experience can be very informative, particularly for large schemes. We recommend complementing the experience analysis with an alternative, independent estimate of the likely mortality experience using the socio-economic status of members.

Our approach estimates mortality by analysing the mix of members by socio-economic group. A member’s postcode and pension can be used as indicators of socio-economic status and our postcode and pension amounts model, developed by our specialist longevity team, uses these factors to build up a socio-economic profile for the scheme. This profile can be used to set the likely level of future mortality that members will experience.

Our model can either be used as a standalone tool for smaller pension schemes, or in combination with an experience analysis for larger pension schemes. Combining the output of the postcode and pension amounts model with past mortality experience for the scheme is more reliable than using either of these methods in isolation.

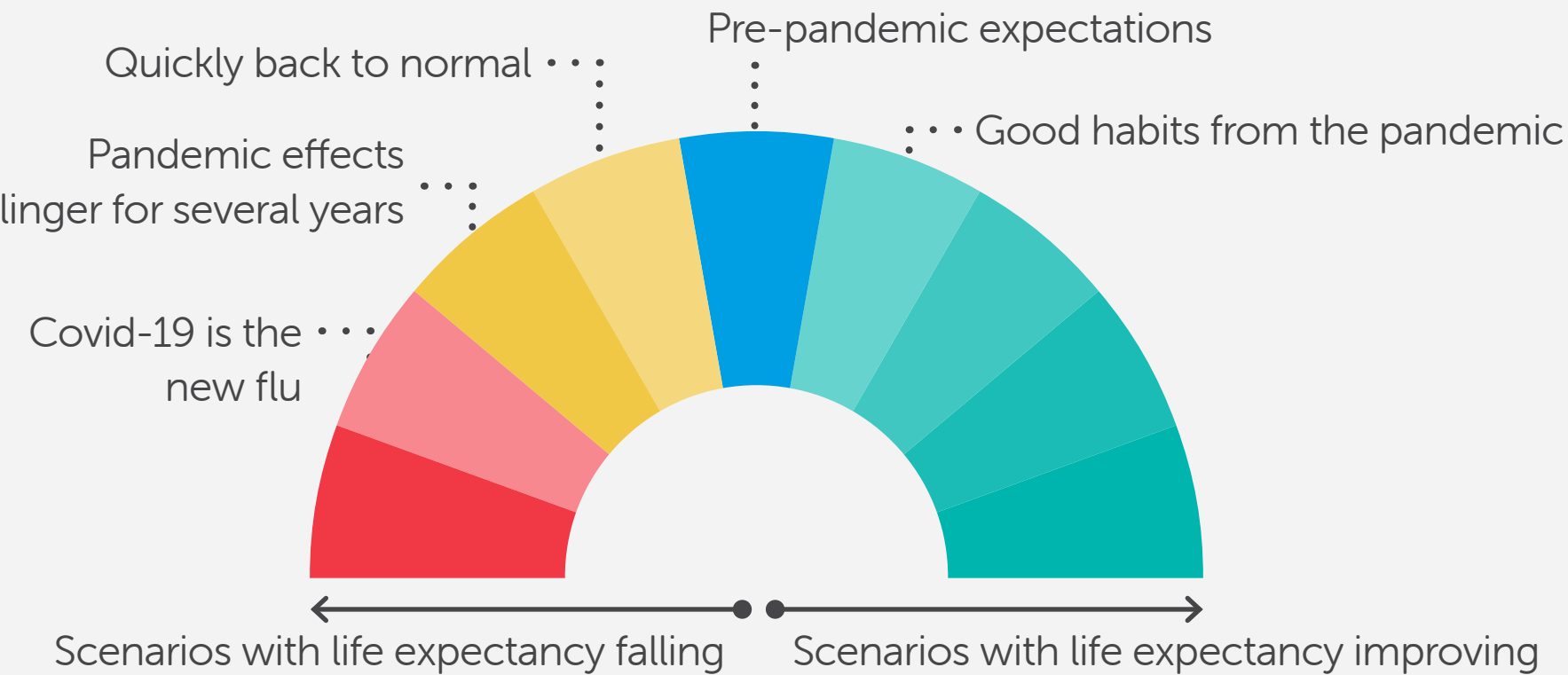
### Recent trends and future mortality improvements

“What do the latest trends in health and mortality data tell us about future changes in life expectancy?”

Setting assumptions around how long members are expected to live in 5, 10 and 50 years as pensions are paid from the scheme is difficult in “normal” times, and the coronavirus pandemic has led to even more uncertainty around the setting of life expectancy assumptions.

There are a range of ways that the pandemic may affect life expectancy, some resulting in improvements and others resulting in deteriorations.

Our report includes up-to-date scenario modelling providing views on the impact and likelihood of these factors. This includes information on recent longevity experience within the general population and pension schemes.



Impact of different scenarios on life expectancy and liability values, relative to pre-pandemic expectations, for a male aged 65.

This information helps to ensure that trustees’ discussions are underpinned by a common understanding, and provides a coherent starting-point for discussion of changes from the previous valuation and how mortality may change in future.

# When to do a longevity analysis

The type of analysis and frequency with which an analysis should be performed depends on the size of the scheme, as illustrated in the table below:

Scheme assets	Frequency of analysis (for a typical mix of non-pensioners and pensioners)
<£50m	Socio-economic analysis following a significant change in mortality data e.g. the release of a new SAPS table
£50m to £500m	Either every valuation or every second valuation, ideally with both an experience and socio-economic analysis. If every two valuations, then typically the valuation after the publication of the latest SAPS mortality table, with a light touch review of mortality assumptions when a full analysis isn't undertaken.
£500m+	Every valuation (both an experience and socio-economic analyses, alongside bespoke analyses as required)

# What should you do now?

Barnett Waddingham has helped clients of all size, from the very smallest to the very largest, to set mortality assumptions using our specialist tools and expertise (contact details for our experts overleaf).





Please contact your Barnett Waddingham consultant or one of our longevity experts if you would like to discuss any of the above topics in more detail. Alternatively get in touch via the following:

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☎ 0333 11 11 222

[www.barnett-waddingham.co.uk](http://www.barnett-waddingham.co.uk)

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