

Accounting reporting as at 31 March 2018

Employer briefing note pre-accounting date

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Accounting reporting as at 31 March 2018

Many LGPS employers, in particular local authorities and other public sector employers, prepare accounting disclosures as at 31 March each year and these may be in accordance with the IAS19 or FRS102 standard, depending on the employer.

This note is intended for use by LGPS England & Wales and LGPS Scotland employers who require a report under either standard at 31 March 2018.

This note outlines some of the changes to the key financial assumptions that are used in preparing the IAS19 and FRS102 accounting numbers since the last reporting date as well as information on asset performance over the period.

This note complies with Technical Actuarial Standard 100: Principles for Technical Actuarial Work (TAS 100).

As 2017 was a valuation year for Scottish Funds, employers' results will be updated to incorporate the results of the valuation. If the experience over the last three years (e.g. mortality or salary increases) has been better/worse than the assumptions used at the last valuation, there will be a gain/loss on the balance sheet.

How has the accounting position changed?

As we will not know the assumptions that will be adopted for accounting disclosures until after 31 March 2018, we have utilised the latest market statistics available. The following analysis uses market statistics as at 16 January 2018. **It is very likely that market conditions at 31 March 2018 will be different.**

As LGPS Funds are usually invested in a range of asset classes, the performance of the assets may be quite different from that of the accounting liabilities (which are linked to corporate bonds, as set out below) and so the results can be very volatile from year to year.

This note discusses our recommended assumptions for the exercise, however the responsibility for setting assumptions ultimately belongs to the employer and therefore if an employer was to request alternative assumptions then we would be happy to use these in producing our report. The assumptions in this report are therefore the standards that we intend to use unless instructed otherwise. We believe that these assumptions are likely to be appropriate for most employers but we have not consulted with each employer in setting these.

The change in the balance sheet position over the year is mainly dependent on the answers to three key questions and this report is split into these three sections:

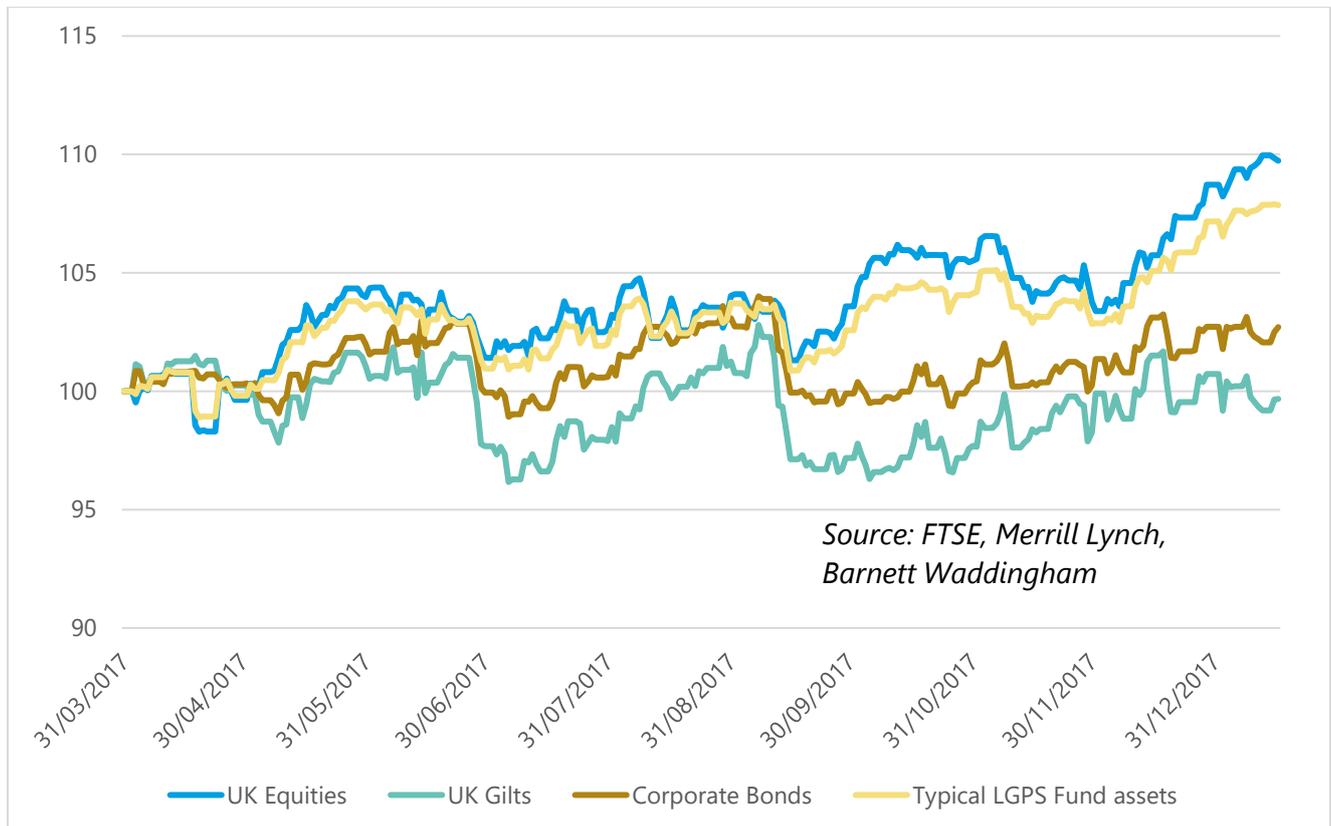
- What were asset returns for the twelve months to 31 March 2018?
- What were corporate bond yields as at 31 March 2018?
- What were market expectations of inflation as at 31 March 2018?

We appreciate that some of the terminology in this report may not be familiar and therefore we would recommend also reading our Glossary and FAQs document for a more detailed explanation on some of the jargon used here. This document has been circulated with this briefing note but please get in touch with the Fund if you would like a copy.

Please let your usual contact know if you have any queries.

Asset returns

The following chart plots returns from the major asset classes since 31 March 2017 alongside the return that would have been achieved by a Fund invested 75% in equities, 20% in corporate bonds and 5% in gilts.



Equities have returned well over the period with bond values being higher and gilts valued slightly lower at 16 January 2018 than they were at 31 March 2017.

Based on the performance to 16 January 2017 and the allocation outlined above, a typical LGPS Fund might have achieved a positive return of around 8% for the period but this could vary considerably depending on each Fund's investment strategy.

If Fund returns have been around this level, the assets will have outperformed the discount rate used last year and this will have led to an actuarial gain on the assets, improving the accounting position.

However, the overall position is also affected by the effect of market movements on the assumptions used to place a value on the defined benefit obligation. This is discussed in the next section.

Changes to accounting assumptions

The key financial assumptions required for determining the defined benefit obligation under either accounting standard are the discount rate, linked to corporate bond yields, and the rate of future inflation. These assumptions are discussed below.

Discount rate

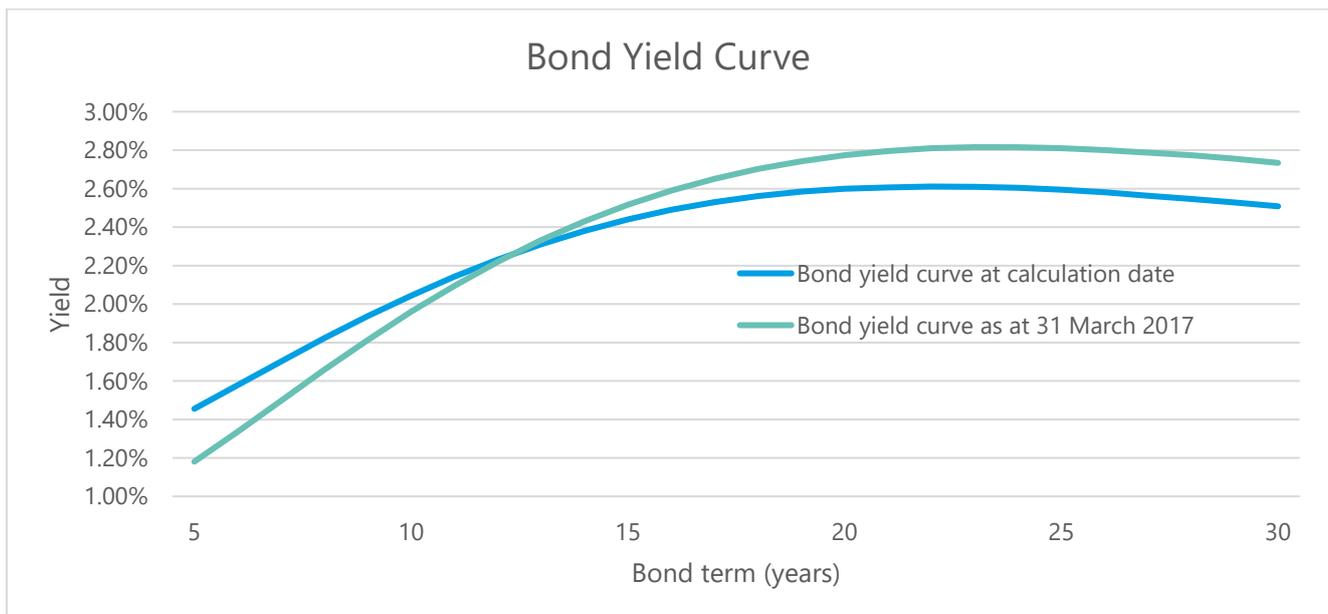
Under both the FRS102 and IAS19 standards the discount rate should be determined by reference to market yields at the end of the reporting period on high quality corporate bonds. There are several different approaches to setting an appropriate discount rate to use and we outline two of these methods below.

The spot rate approach is the method used for the previous accounting report and the SEDR (Single Equivalent Discount Rate) approach is our proposed method to be used this year. This change has taken place following an internal review of our methodology. We continue to believe that either approach satisfies the requirements of the relevant accounting standard but are aware that a number of the larger audit firms favour the SEDR approach. Whilst the different approaches may produce ever so slightly different assumptions, they do tend to produce very similar liability valuations. Accordingly we do not believe the change in methodology will produce materially different valuations.

Spot rate approach

In previous years our standard approach to deriving the assumed discount rate was to adopt a spot rate methodology, where the assumptions would be based on a point on the relevant yield curve which corresponded to the particular employer's liability duration.

The below graph shows the bond yield curve at the last accounting date along with the yield curve at 16 January 2018:



You will see that the bond yield at the calculation date is slightly higher at earlier durations and lower at later durations than the curve at the last accounting date. As a result, for employers with higher durations, under the spot rate approach the discount rate assumed would be lower at the calculation date than at 31 March 2017. All else equal this would result in a higher value being placed on the defined benefit obligation.

SEDR approach

Following consultation with a number of auditors as well as an internal review, we intend to adopt an alternative approach known as the Single Equivalent Discount Rate (SEDR) methodology in setting assumptions at 31 March 2018. In doing so we expect to reduce the number of auditor queries employers receive in relation to the assumptions adopted.

We will use sample cashflows for employers who have past service liability durations of 10, 15, 20 and 25 years and derive the single discount rate which results in the same liability value as that which would be determined using a full yield curve valuation (essentially each year's cashflows has a different discount rate). This discount rate is known as the SEDR. In carrying out this derivation we use the annualised Merrill Lynch AA rated corporate bond yield curve and assume the curve is flat beyond the 30 year point.

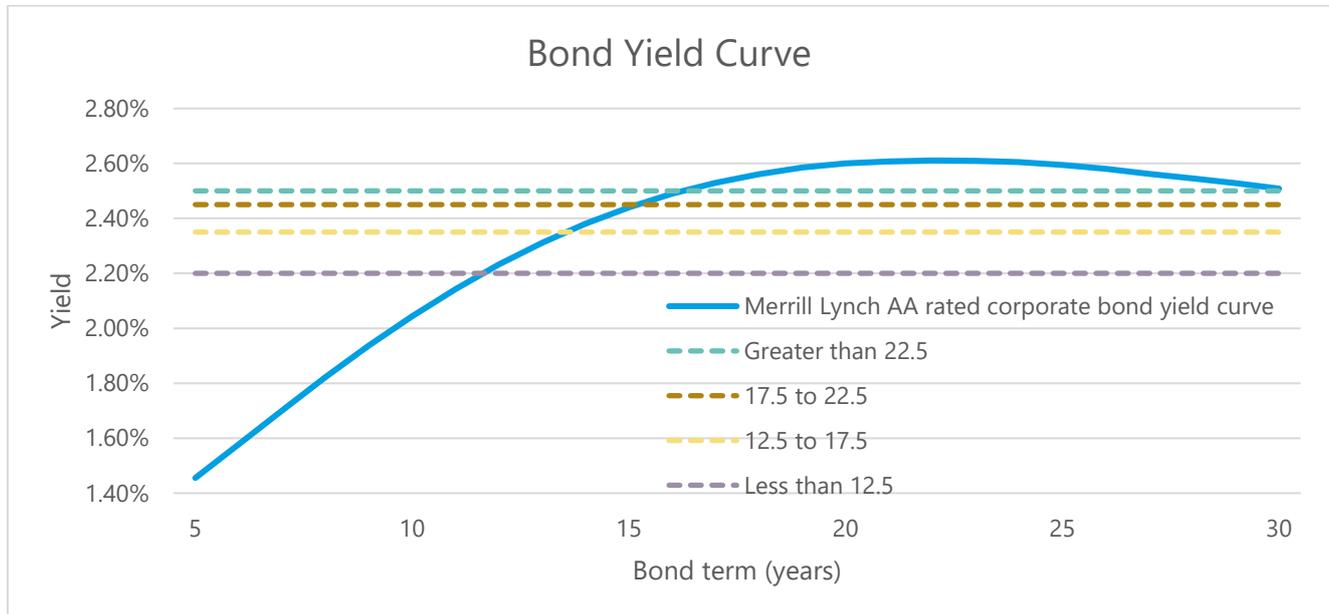
Employers will be grouped into four bandings based on their past service liability duration, calculated as part of the most recent triennial valuation or when they entered the Scheme if later. The bands are set such that the set of sample cashflows which best represent each employer's membership profile, based on their individual duration, is used to derive the assumptions for the employer. For example, an employer with an estimated liability duration of 13 years will adopt assumptions consistent with those derived using the 15 year cashflows as they fall into the 12.5 to 17.5 year range.

The SEDR derived for each of these four bandings is set out in the table below based on market conditions at 16 January 2018:

Duration (years)	16 January 2018
Less than 12.5	2.20%
12.5 to 17.5	2.35%
17.5 to 22.5	2.45%
Greater than 22.5	2.50%

Note that employers whose liability durations fall within the above bandings will share common assumptions and that assumptions are rounded to the nearest 0.05%. This differs from the approach adopted in previous years where employers' assumptions were based on the liability duration of each particular employer to the nearest year.

The discount rate assumed for each group is illustrated in the below graph:



The effect of adopting this alternative approach will vary for employers of different maturity. Due to the shape of the above bond yield curve, the discount rate derived will be lower for employers with higher liability durations than under the spot rate approach and vice versa.

The effect of the change in assumptions will also depend on the discount rate assumed in the previous year which was based on the yield on bonds at 31 March 2017. As discussed in the section above, the yield curve at later terms is lower than at the previous accounting date, further compounding the decrease in discount rate derived from the SEDR approach – resulting in a higher value being placed on liabilities. The converse is also true.

The below table sets out the range in effect of the change in discount rate assumed:

Duration (years)	Estimated effect of change in discount rate on employer's liabilities
Less than 12.5	Decrease of up to 5%
12.5 to 17.5	Between a decrease of 1% and an increase of 6%
17.5 to 22.5	Increase between 4% and 8%
Greater than 22.5	Increase between 7% and 8%

Inflation expectations

Whilst the change in corporate bond yields is an important factor affecting the valuation of the liabilities, so too is the assumed level of future inflation as this determines the rate at which benefits increase in deferment and in payment.

IAS19 suggests that in assessing future levels of long-term inflation we should use assumptions that would result in a best estimate of the ultimate cost of providing benefits whilst also giving consideration to the gilt market (in line with general price levels) to give us an indication of market expectation. FRS102 simply refers to a best estimate of the financial variables used in the liability calculation.

Retail Price Index (RPI) assumption

Our approach to deriving the assumed level of future inflation has also been reviewed. At the previous accounting date we used the market implied inflation curve published by the Bank of England (BoE) to derive our RPI assumption. For each employer we based our assumption on the point of the curve which corresponded to the duration of their liabilities.

It is appropriate to derive assumptions in a consistent manner, as such we intend to adopt a Single Equivalent Inflation Rate (SEIR) approach in deriving an appropriate RPI assumption.

Similar to the SEDR approach, the SEIR adopted is such that the single assumed rate of inflation results in the same liability value (when discounted using the yield curve valuation described above) as that resulting from applying the BoE implied inflation curve. As above, the Merrill Lynch AA rated corporate bond yield curve is assumed to be flat beyond the 30 year point and the BoE implied inflation curve is assumed to be flat beyond the 40 year point.

Consistent with the SEDR approach, assumptions are rounded to the nearest 0.05% and we intend to use sample cashflows for employers who have past service liability durations of around 10, 15, 20 and 25 years in deriving the assumptions for employers.

As with the assumed discount rate, employers will be grouped into four bandings based on their past service liability duration, calculated as part of the most recent triennial valuation or when they entered the Scheme if later. The RPI assumption derived for each of these four bandings is set out in the table below based on market conditions at 16 January 2018:

Duration (years)	16 January 2018
Less than 12.5	3.40%
12.5 to 17.5	3.45%
17.5 to 22.5	3.40%
Greater than 22.5	3.35%

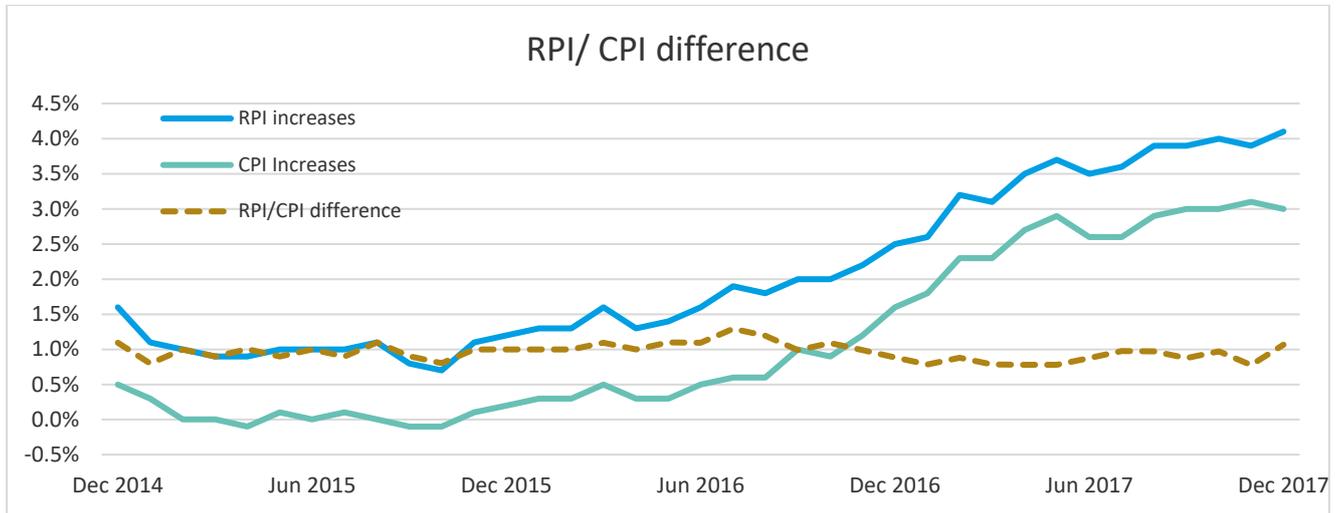
Difference between RPI and CPI

Pension increases in the LGPS are expected to be based on the Consumer Prices Index (CPI) rather than RPI. As there is limited market information on CPI-linked assets, we take the implied RPI assumption outlined above and make an adjustment.

The difference between RPI and CPI can be split between the 'formula effect' and differences between the compositions of the two indices. The formula effect results from technical differences in the way the two indices are calculated so it is reasonable to assume it will be persistent, although the calculation methods will occasionally be updated. The formula effect means that RPI increases are usually expected to be higher than CPI.

The differences in composition of the two indices will mean that RPI and CPI are different for any given period but this is not necessarily biased one way or the other. For these reasons, we base our assumption for the difference between RPI and CPI on the formula effect only.

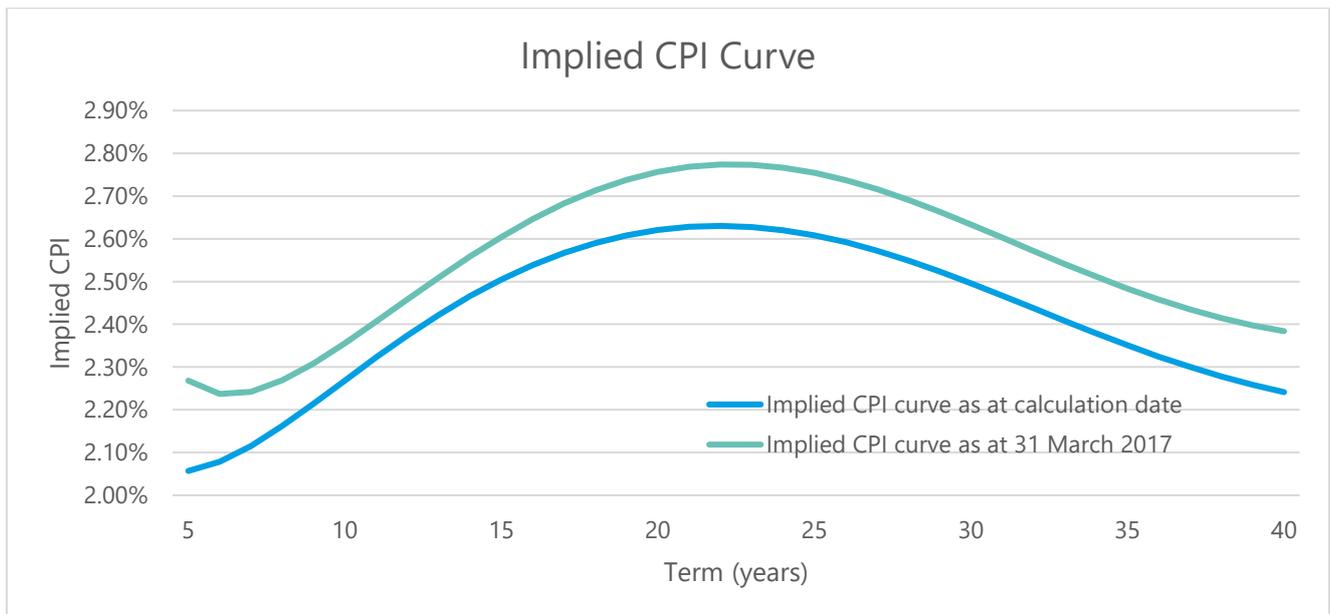
We have assumed that CPI inflation will, on average, be 1.0% lower than RPI. This is slightly higher than that assumed in the previous year where we assumed a difference of 0.9% which was the assumption used at the previous actuarial valuation. We have revised this as a result of recent trends. The below graph shows the difference in the published annual RPI and CPI increases at each month over the last three years:



The average difference between the two inflation measures over this period was 1.0% and we have therefore updated our assumptions to reflect this difference.

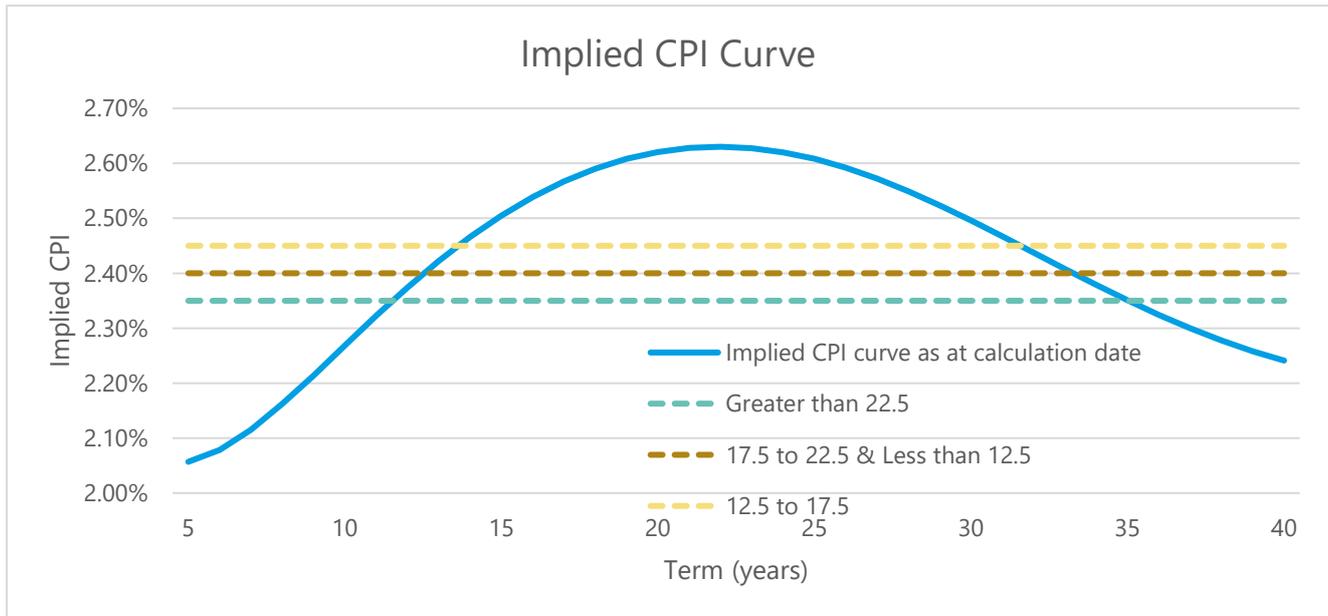
Consumer Price Index (CPI) assumption

The resulting implied CPI curve is shown below along with the implied curve at 31 March 2017 using the lower assumed RPI/CPI gap:



As shown above, the implied CPI curve at 16 January 2018 is lower than that at 31 March 2017 at all terms. As a result, if we were to adopt a spot rate approach, the assumed level of future CPI increase (pension increases) would be lower than the previous year, resulting in a decrease in the value of employers' liabilities.

As with the SEDR approach, the derived inflation assumption under the SEIR approach will be dependent on the shape of the curves. This results in those with a shorter duration having a higher assumed inflation assumption than under the spot rate method, offsetting the decreases in these employers' defined benefit obligation to an extent. Other employers will typically be assumed to have lower CPI assumptions than under the spot rate approach as greater allowance is made for the tail ends of the curves which is lower than their duration point. This is illustrated in the below graph:



The below tables set out the assumed pension increase assumptions, based on market conditions at 16 January 2018, for each of the four groupings as well as table range in effects due to the change in the inflation assumed as a result of the change over the year and the change in methodology:

Duration (years)	16 January 2018
Less than 12.5	2.40%
12.5 to 17.5	2.45%
17.5 to 22.5	2.40%
Greater than 22.5	2.35%

Duration (years)	Estimated effect of change in inflation on employer's liabilities
Less than 12.5	Between a decrease of 1% and an increase of 1%
12.5 to 17.5	Decrease between 1% and 4%
17.5 to 22.5	Decrease between 5% and 8%
Greater than 22.5	Decrease of 10%

Salary increases

Although future benefits are not linked to final salary, benefits accrued up to 31 March 2014 in England and to 31 March 2015 in Scotland will continue to be linked to the final salary of each individual member. Therefore we still need to set an appropriate long-term salary increase assumption.

For English Funds, we intend to use the salary increase assumption from the 2016 actuarial valuation. For all English Funds, this means assuming that salary increases are in line with CPI to 2020 then increases in line with CPI plus 1.5%. This is consistent with the approach adopted last year.

For Scottish Funds, we intend to use the salary increase assumption from the 2017 actuarial valuation. For all Scottish Funds, we expect to assume a single long-term salary increase assumption of CPI plus 1.0% with no short term adjustment. As the 2017 valuations have not yet been formalised, this could potentially change before the valuation reports are released. However, we do not anticipate any changes at this point.

This is the assumption that employers are most likely to request a specific assumption in line with their own expectations and we are happy to discuss this as required.

Overall expected results

What does this all mean when we bring it all together?

The first caveat is that no employer is average and so any prediction of what might apply to an average employer will not apply to every, or possibly any employer.

The effect of the changes in the financial assumptions on an employer's liabilities are dependent on the assumptions adopted as well as the specific duration of the employer's liabilities. Typically employers with greater liability durations are more sensitive to changes in financial assumptions as benefits will be paid over a longer term. The table below describes the likely range of effects for employers based on assumptions derived as at 16 January 2018:

Duration (years)	Estimated effect of change in financial assumptions rate on employer's liabilities
Less than 12.5	Decrease between 1% and 4%
12.5 to 17.5	Between a decrease of 1% and an increase of 2%
17.5 to 22.5	Decrease of 1%
Greater than 22.5	Decrease between 3% and 4%

As you can see, there is a range of estimated effects due to the change in financial assumptions. Based on market conditions at 16 January 2018, employers who receive reports at March would typically expect to see little change in the value of liabilities as a result of changes in assumptions, with some seeing small reductions.

Of course the impact on deficits will also depend on asset performance and overall funding position. Well funded employers with longer durations and reasonable returns should see their deficit reduce. Less well funded employers with average durations and where Fund returns have not been so good could see an increase in deficits.

Final comments

Please be aware that as noted earlier in this note, analysis uses market statistics as at 16 January 2018 and it is very likely that market conditions at 31 March 2018 will be different.

Additionally, due to the nature of SEDR and SEIR methodology, the assumptions derived are dependent on the sample cashflows used and as result different cashflows of similar liability durations may result in alternative assumptions. Therefore another actuary replicating the same approach set out above may derive different assumptions from those set out above. Reasonableness checks have been carried out on the cashflows used.

Finally, the results for each employer in Scottish Funds will incorporate the results of the 2017 valuation, which could have a positive or negative effect. This will vary by employer.

Appendix 1

Adjustments to fees

The Fund will communicate fees to employers however we would like to make you aware that there may be additional fees if there are particular features or events for an employer which need to be taken into account.

As examples of this:

- where an employer chooses their own assumptions;
- if there are additional calculations to be done if a surplus is revealed;
- when there are any staff transfers/movements to allow for;
- if additional disclosures are required;
- an employer asks to receive their report by a particular deadline; or
- if auditors ask a significant number of queries following receipt of the report.

Please get in touch with the Fund for further information on fees.