

# KPMG's Pensions Accounting Survey 2017

An analysis of market trends  
in pension assumptions

April 2017

---

Select the right professional services firm  
– one with the industry depth, knowledge,  
and insight to help clients address their  
most pressing issues.

[kpmg.com/uk](http://kpmg.com/uk)

Turn over



# Introduction

**KPMG's Pensions Accounting Survey 2017 looks at trends in best-estimate assumptions based on 247 of KPMG's clients with UK Defined Benefit (DB) pension schemes reporting under IFRS, UK or US GAAP at 31 December 2016. The survey covers clients advised by leading consultancies and provides a detailed insight into market-wide practice helping discussions that go beyond accounting.**

A series of momentous political events shaped 2016, resulting in significant volatility across the economy. The no vote at the UK-EU referendum triggered a dive in corporate bond yields. By August, yields were at new lows with the Bank of England cutting interest rates from 0.5% to 0.25% and reviving quantitative easing. This included a commitment to purchasing investment-grade corporate bonds worth over £10 billion, further driving down corporate bond yields used to measure accounting liabilities. Despite some increases towards the end of the year, these low yields, compounded by increased inflation expectations, will have once again left companies with a large increase in their pension scheme liabilities at the end of 2016.

2016 saw strong returns for pension scheme assets, with UK equities performing particularly well and returning in excess of 15% over the year, partly due to the effect of dollar earnings within the FTSE group of companies. In addition, and perhaps slightly unexpectedly, the result of the US presidential election was largely positive for markets.

The overall level of return experienced by an individual pension scheme will have depended on the asset mix held and the level of interest rate and currency hedging in place. Even with strong asset returns, schemes with low levels of interest rate hedging are likely to have seen significant increases to balance sheet deficits at the year-end. This, together with the Financial Reporting Council's thematic review of pensions disclosures, means a continued focus on pension assumptions and disclosures.

## Financial headlines

Median net discount rates (measured as the difference between the discount rate and RPI inflation assumption) are negative for the first time since our survey began in 2004.

Our analysis also shows that the range of assumptions adopted has become increasingly narrow, with the market being more tightly packed around the median, compared to last year.

- Around 85% of companies surveyed had a discount rate assumption within 0.1% of the median, compared to 75% last year. This will partly be a function of lower nominal rates.
- The median discount rate assumption fell from 3.8% last year to 2.7% at 31 December 2016.
- The range of RPI inflation assumptions adopted has decreased from 1.1% in 2015 to 0.8% this year.



1  
**A look back to 2016**

2  
**A look ahead to 2017 and beyond**

3  
**Key headlines**

4  
**Discount rate**

5  
**Inflation**

6  
**Mortality**

### Demographic headlines

- Life expectancy assumptions have reduced for the second consecutive year, with continuing research and new approaches to scheme-specific mortality studies allowing companies to more accurately quantify their longevity risk.
- The median life expectancy assumption for both current and future pensions has fallen by 0.1 years to 22.3 and 24.1 respectively.
- The proportion of companies adopting scheme-specific scaling factors has increased from 40% last year to 50% this year.
- The recent release of the 2016 CMI projections shows this new direction of travel for life expectancies is set to continue as companies will look to update their mortality assumptions for future reporting. The latest data shows mortality is still improving but the rate of improvement being observed is less rapid than over recent years.

### Looking ahead

Proposed changes to IFRIC 14 introduce more uncertainty around the recognition of pensions on corporate balance sheets. We explore this further on page 8.

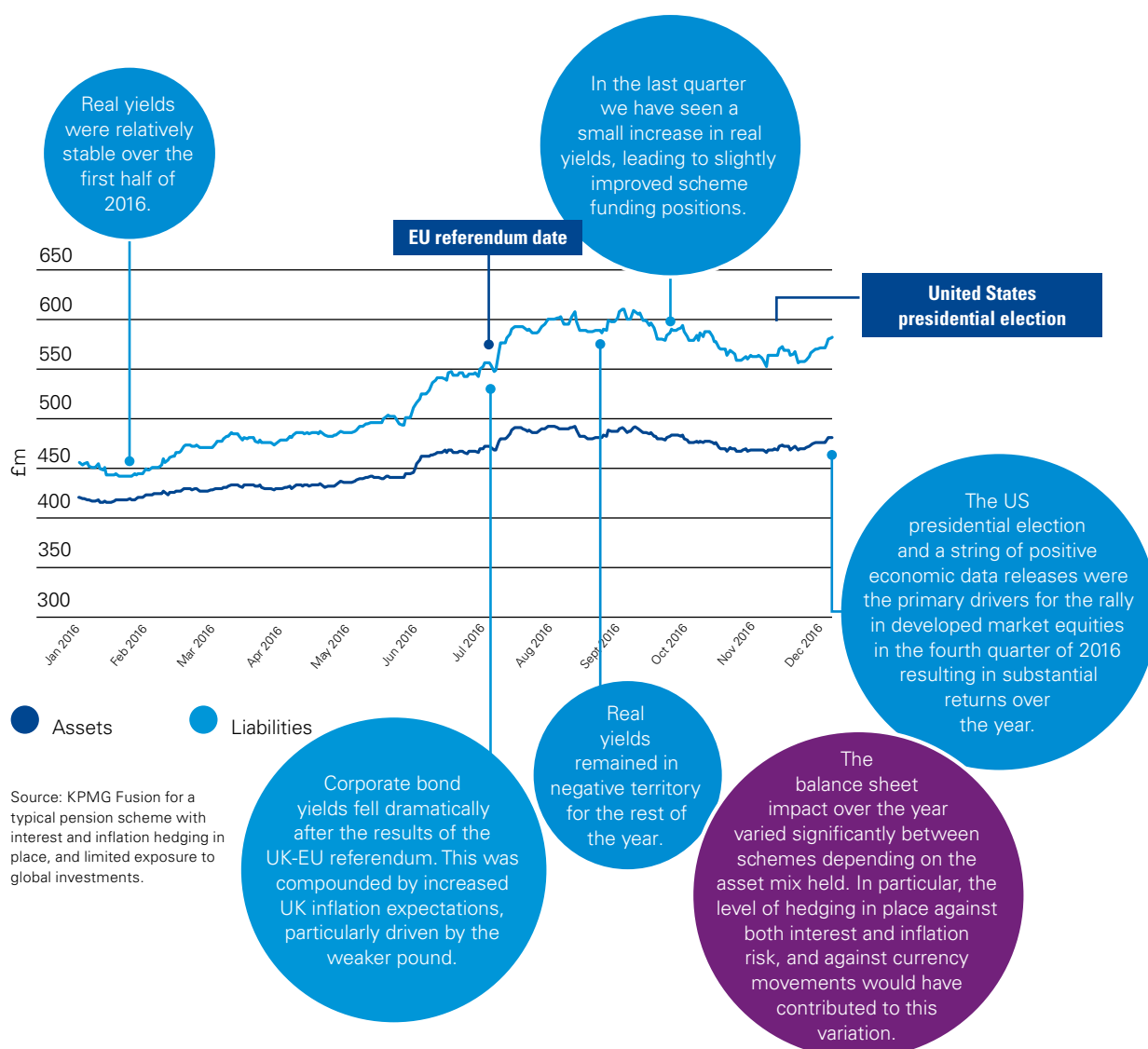
Presentation changes for US GAAP reporters could have a transformative impact on the earnings companies report in the future. What this could mean for pensions strategy is raised on page 11.

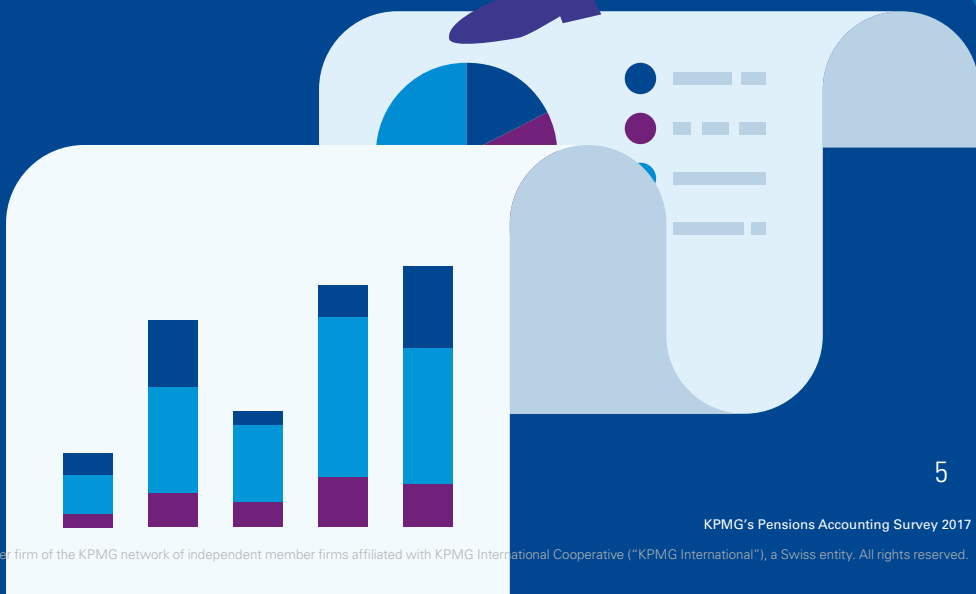
# A look back to 2016

Following a relatively stable 2015 and start to 2016, there was increased volatility in the market in the aftermath of the results of the UK-EU Referendum and the US presidential election. Long-dated interest rates hit a record low in August 2016, which had a detrimental effect on the deficits of pension schemes which were not sufficiently hedged.

## Fusion snapshot

The chart below, based on KPMG's Fusion tool, shows how assets and liabilities may have moved for a typical scheme over the year.



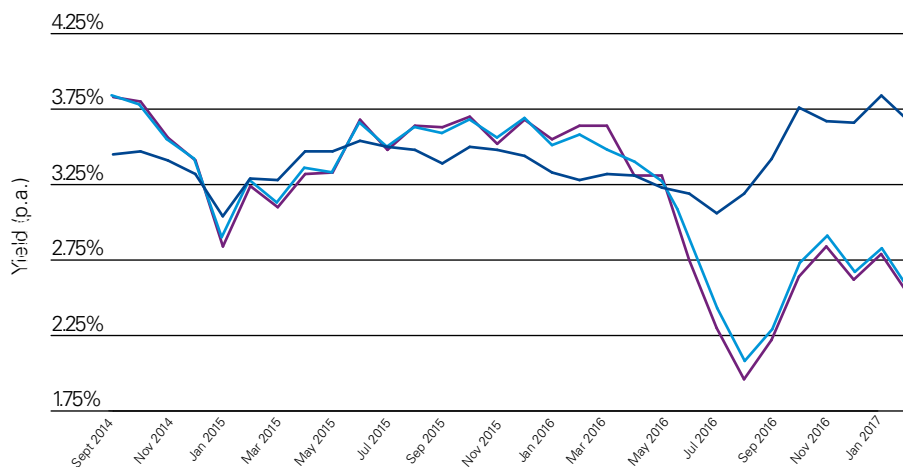


## Liabilities

**Both nominal and real discount rates (based on the difference between AA corporate bond yields and assumed RPI inflation) decreased over the year to hit historically low rates in August 2016 (illustrated in the chart below).**

Real yields finished around 1% lower than at the start of the year. For a typical scheme with a duration of around 20 years, we estimate this will have meant an increase to defined benefit obligations of around 20% over the year.

Yield trends over 2016



Source: KPMG analysis

● iBoxx over 15 years corporate index

● Merrill Lynch over 15 years corporate index

● Bank of England spot inflation (20 years)

## Assets

**Overall, assets performed well over the year. The Fusion Snapshot shows assets were relatively stable for the first half of the year, with growth in the second half leading to better than expected asset returns. For 2016, actual returns achieved will diverge significantly across schemes depending on the hedging they hold.**

For schemes that didn't hedge currency risk, the falling pound could have created additional returns on global investments over the year.

For many, even with this exceptional asset performance, asset growth will not have been able to match the movement in liabilities, resulting in higher deficits compared to the beginning of the year.

Typical asset class returns over the year are set out below:

- Falling corporate bond yields resulted in a high annual return of 12%, compared to under 1% in 2015 (IBOXX corporate AA index for all maturities)
- Gilt yields performed even better:
  - Conventional gilts returned 19%, compared to less than 1% in 2015 (FTSE fixed interest government bonds, over 15 years index)
  - Index-linked gilts returned 33%, compared to -1% in 2015 (FTSE index linked government bonds, over 15 years index )
- The stock market also performed better compared to last year:
  - UK equity returned 17%, compared to 1% in 2015 (FTSE ALL SHARE index)
  - Global equity returned 30%, compared to 4% in 2015 (FTSE AW ALLWORLD EX UK index)
- The UK property market performed poorly and only generated total returns of around 3% over the year, compared to 14% in 2015. (UK IPD index)

# A look ahead to 2017 and beyond

## IFRIC 14

**There is now greater uncertainty surrounding how IFRIC 14 could impact the Company balance sheet, compared to last year, with many more companies now potentially becoming affected.**

### Proposed amendments

IFRIC 14 determines the level of a pension scheme's surplus that can be recognised on the Company balance sheet. This depends on whether the entity is able to gain economic benefit from the surplus in the long-run.

In June 2015, the IASB published an Exposure Draft that would amend IFRIC 14. The proposed changes limit the circumstances under which a company can recognise a surplus in full on the balance sheet. The amendments gave more clarity on how different trustee powers should be treated and whether they will cause additional surplus restrictions where they haven't previously.

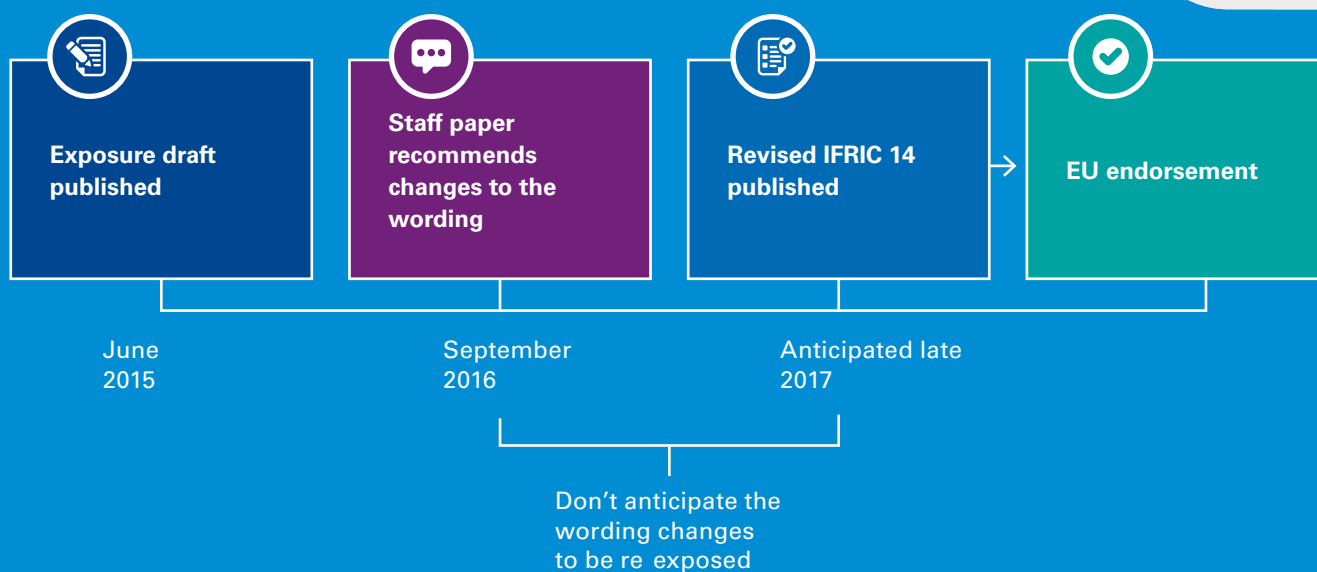
In particular, the proposed changes made clear that an employer does not have an unconditional right to a refund in two situations where trustees have the power to use a surplus without consulting the Company. The two situations are:

- (i) A unilateral trustee wind-up power; and
- (ii) A unilateral trustee benefit improvement power

In September 2016, an IASB staff paper recommended a change to the wording around the unilateral trustee wind-up power "to refer to other parties' powers to use a surplus to settle in full the plan's liabilities, rather than referring to their powers to wind-up a plan". This revised wording would be likely to catch any employer whose plan allows the trustees to purchase annuities in an ongoing situation, i.e. not just in wind-up. The rationale is that the employer would no longer be able to run the plan down and access the surplus at the end of the plan's life. At some point before then, the surplus would be sufficient to settle the remaining benefits in full through purchasing annuities, and prevent any surplus reverting to the employer.

There is a real risk that this revised wording may end up being included within the financial amendment without any further consultation or clarification.

### Anticipated timeline



After publication of the amended IFRIC 14, it would then need EU endorsement before becoming part of the EU IFRS framework. In our view, disclosure on the revised position will not be required until endorsement is given. Based on the anticipated timescales above, the

expected effective date will be for financial periods beginning on or after 1 January 2019.

Our interpretation is that reporting until then can focus on the current IFRIC 14 position given the uncertainty that exists around the final outcome.

## GMP equalisation

**At the end of 2016, the government consulted on a proposed methodology for GMP equalisation. Industry responses to the consultation appear to have been predominantly supportive of this approach, but a number of detailed points will be taken away for further consideration.**

The proposed approach will not be compulsory, but it will be for the trustees to decide what action is needed for their scheme to provide equal benefits, based on legal advice.

In general, we do not expect to see an allowance made for GMP equalisation in accounting liabilities until the trustees make a formal decision to equalise the benefits.

Accounting standards require the liabilities to be based on the benefits that the sponsoring employer has a legal or constructive obligation to provide.

The absence of a legal mechanism for an employee to insist on the benefit of an equalised GMP, if the trustees have determined not to equalise, suggests that there is no such existing legal obligation. If members have not been told that they will benefit from an equalised GMP, then there is no constructive obligation either. The lack of compulsion to equalise GMPs in the latest consultation reinforces the view that no immediate action is needed for financial reporting.

A trustee decision to equalise GMPs appears likely to be treated as a change in legal obligation, and so emerge as a past service cost.



**Guaranteed Minimum Pension 'GMP' that built up for contracted out service from April 1978 to April 1997 is inherently unequal for men and women in respect of areas such as payment age and accrual rate etc.**

**The government have received legal advice that schemes must adjust these benefits to be equal. This is 'GMP equalisation'.**



## US GAAP

### Change to the presentation of the net periodic pension cost

Presently under US GAAP, all elements of the net periodic pension cost are reported in the same line of the income statement, within operating income. This has made the expected return on assets attractive from an earnings perspective.

In March 2017, FASB amended US GAAP so that US GAAP reporters will separately present current service cost from all other components of the net periodic pension cost.

Current service cost would be the only element presented within operating income, with all other elements (interest cost, expected return on assets, amortisations, curtailments, settlements and termination benefits) presented separately from the service cost component and outside a subtotal of income from operations, if one is presented.

This amendment is effective for public entities for years beginning after 15 December 2017, and from 15 December 2018 for non-public entities. Early adoption is permitted.

### What the change means to earnings and pension strategy

Whilst there would be no immediate impact for 2016 reporting, this would be something that could significantly influence behaviour in the future. For companies benefitting from an expected return on assets in excess of interest cost, we would expect that early adoption would not be an attractive option. Leading up to implementation from 2018, earnings forecasts will need to be carefully considered to rebase expectations.

Companies will need to consider whether there are other items currently included within operating income that will no longer be presented here. For example, there may be prior service gains currently being amortised through profit and loss from previous scheme benefit changes. After implementation, it is possible that the expected return on assets assumption may not be deemed as critical by management.

Certain pension projects that may have been considered previously, but put off due to unattractive accounting implications, could now be feasible. With proposed implementation from 2018, this gives a good opportunity for planning and trustee engagement in 2017.

# Key headlines

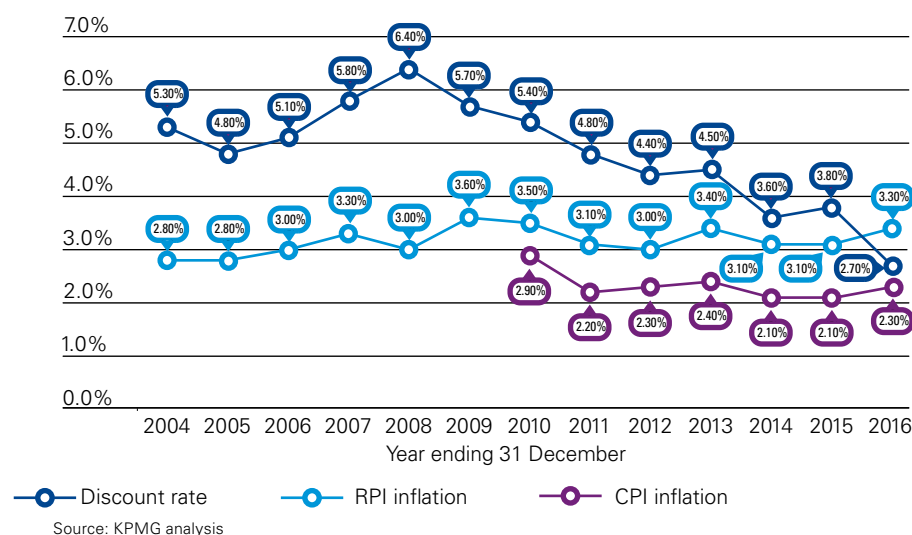
## Financial assumptions

**Real AA discount rates have fallen substantially since last year reaching new record lows of -0.70% for December reporters (compared to 0.70% a year earlier).**

The median discount rate was 2.70%. This reflects a decrease of 1.10% compared to the median last year.

The effect of this has been compounded by an increase in inflation expectations. The median RPI inflation rate was 3.30% at 31 December 2016 (compared to a median rate of 3.10% last year).

Movement in median financial assumptions

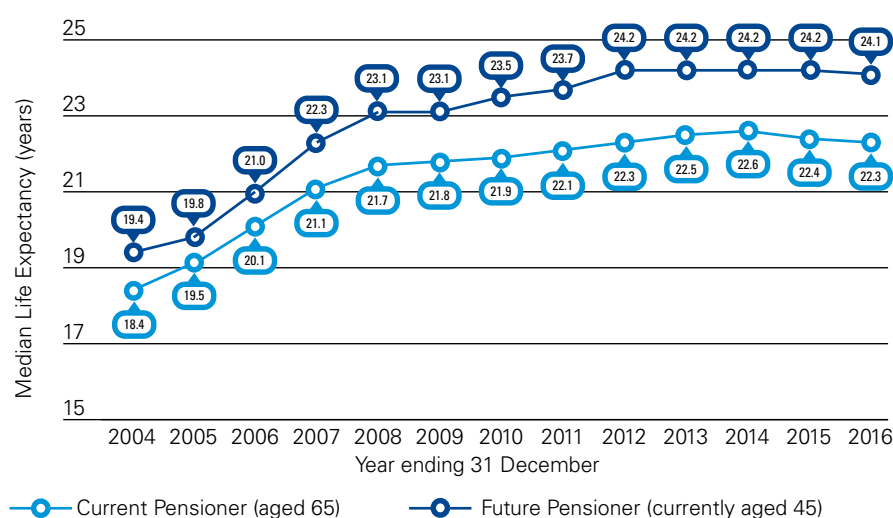


## Demographic assumptions

**Median assumed life expectancies have decreased by 0.1 years for both current and future pensioners.**

Last year, we saw median assumed life expectancies for current pensioners decrease for the first time in recent years. This trend has continued this year, with both current and future pensioner life expectancies falling.

### Movement in life expectancies



Source: KPMG analysis

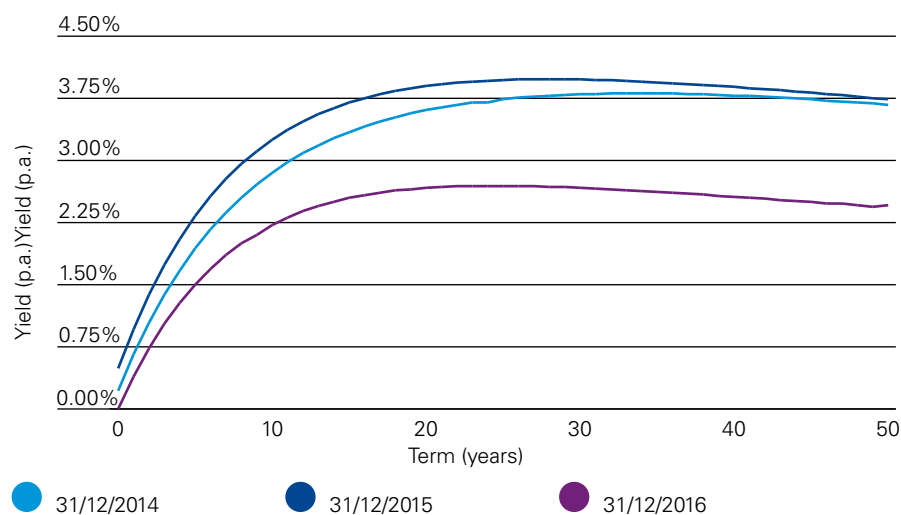
# Discount rate

The discount rate is used to calculate the present value of future liabilities in a scheme.

**The yield on the iBoxx Sterling Corporate Over 15 year index, which has a duration of 15 years, decreased by 1.06% over the year.**

The yield on the iBoxx Sterling AA Corporate Over 15 Year index, which has a duration of around 15 years, decreased by around 1.06% over the year. The graph below illustrates how the yield curve has changed since last year. AA corporate bond yields (and hence discount rates) have decreased at all durations over the year, with slightly larger reductions at higher durations. The general shape of the curve has remained broadly the same compared to last year, albeit flatter.

## AA corporate bond yield curves



Source: Merrill Lynch and KPMG analysis

## Changes to discount rate approaches

We are continuing to see flexibility in how companies derive their discount rate assumption, particularly given the record low nominal interest rates in 2016. Companies are also increasingly changing their approach to calculations involving these assumptions. We describe some of these methods below.

Companies should discuss any accounting treatments and methodologies with their auditor in the usual way.

### Yield curve modelling – flexibility of different approaches

The most common approach to setting the discount rate assumption is to use an AA rated corporate bond yield curve. Companies are becoming more

selective in how they derive the underlying discount rate curve.

Flexibility in the underlying curve may be justified by considering

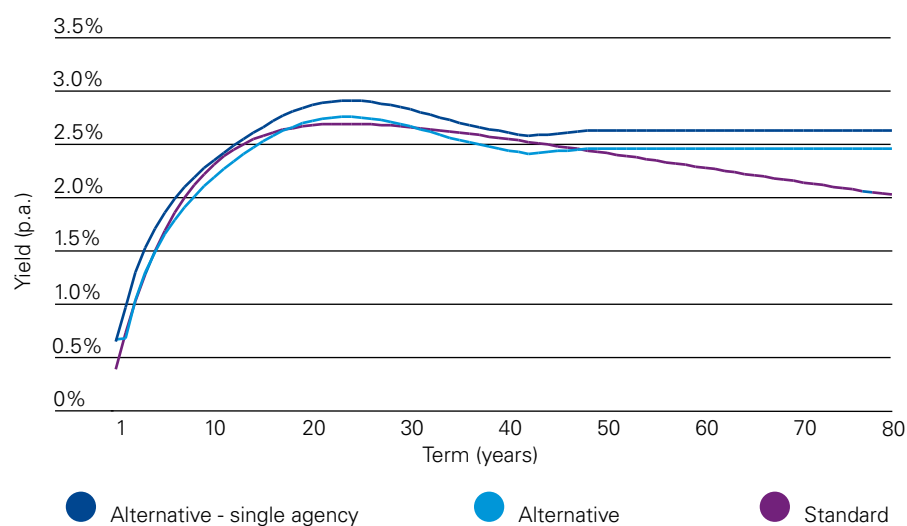
The AA bond universe used

How the curve is fitted to the underlying data

The approach for extrapolating the market yield curves beyond the last available data point

Different approaches can lead to a range of assumptions, particularly for less mature schemes. We have illustrated various curves below, which may have led to assumptions differing by around 0.1% - 0.15% at the end of December 2016.

Different approaches to deriving the yield curve



The standard AA universe consists of bonds that have been classified as AA by the majority of the rating agencies, whereas the single agency universe has been extended to allow for any bonds that receive an AA rating from at least one of the main rating agencies.



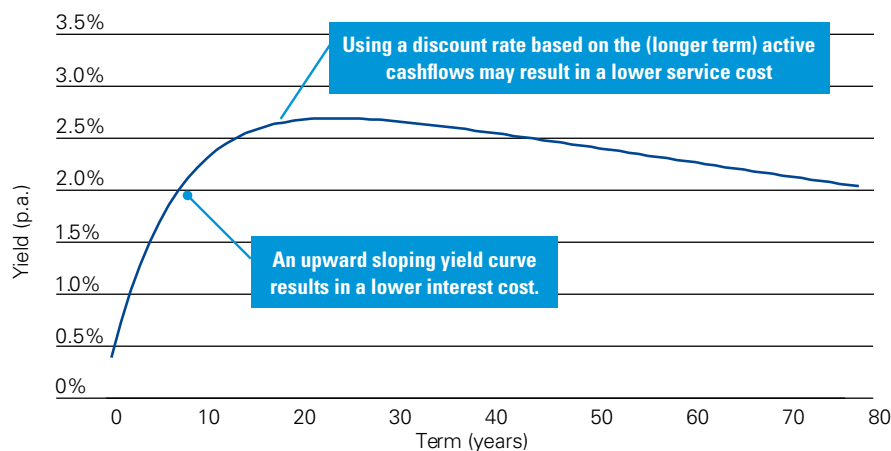
The alternative version of the curve adopts a different approach to extrapolating the curve at the longer end, resulting in a higher curve.

### Discount rate approaches – Refining your approach

We are starting to see changes to the way companies are calculating the interest cost and service cost included within the P&L. This is under particular focus for US GAAP reporters following announcements permitting this approach from the Securities and Exchange Commission (“SEC”) at the end of 2014.

Calculating the service cost and interest cost using the full yield curve (rather than the single equivalent rate used to calculate the liabilities) may lower the P&L charge in current market conditions.

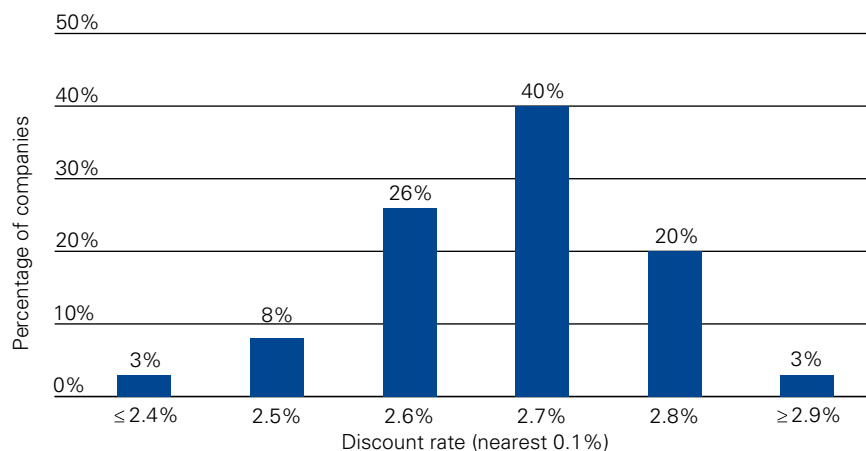
#### AA corporate bond yield curve



Source: Merrill Lynch and KPMG analysis

Using different discount rates derived from the same curve for different categories of members is also becoming more prevalent. Using different discount rates for insured and non-insured pensioners may improve the balance sheet position.

#### Distribution of discount rate assumptions



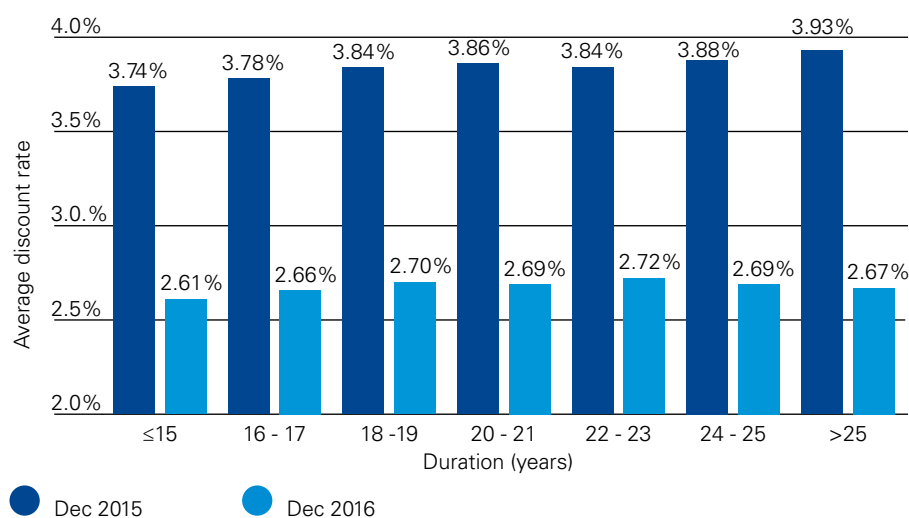
Source: KPMG analysis

The graph above shows the overall distribution of discount rates adopted by companies at 31 December 2016. The median discount rate has decreased by 1.10% over the year to 2.70% at 31 December 2016.



**Around 85% of companies are adopting an assumption within 0.10% of the median discount rate compared to 75% last year.**

### Distribution of discount rate assumptions by duration

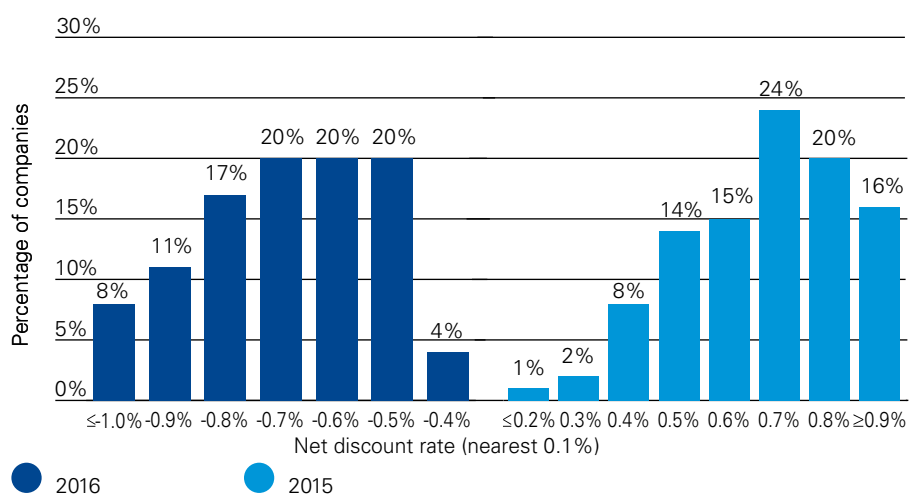


Source: KPMG analysis

The graph above shows the discount rates used by schemes grouped by the duration of their liabilities. This uses our survey sample in 2015 and 2016. Discount rates for schemes have fallen over the year by similar amounts for both mature schemes (shorter duration) and immature schemes (longer durations).

There is a tight range of average assumptions for schemes with a duration of around 18 to 25 years, which reflects the flatter yield curve at 31 December 2016.

### Distribution of net discount rate assumptions



Source: KPMG analysis

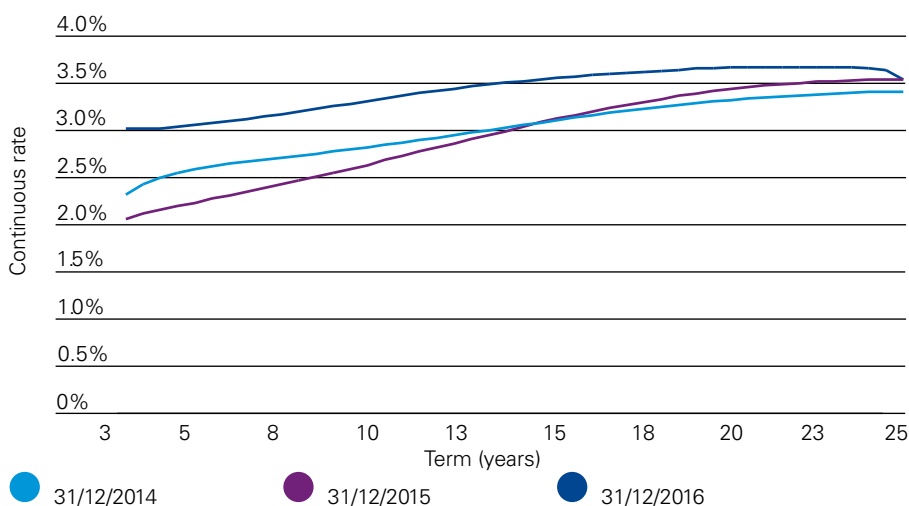
Net discount rate assumptions are now negative for the first time since our survey began, over 12 years ago.

The significant decrease in discount rates together with increased inflation expectations has resulted in a downward shift in net discount rates compared with last year, with the median decreasing from 0.70% last year to -0.70% at 31 December 2016.

The inflation assumption is typically used as a basis to set other assumptions used for pensions accounting such as pension increases in payment, deferred revaluation and long-term salary growth. The median RPI inflation assumption of 3.30% at 31 December 2016, has increased by 0.20% since last year.

## RPI inflation

### Movement in inflation spot curve

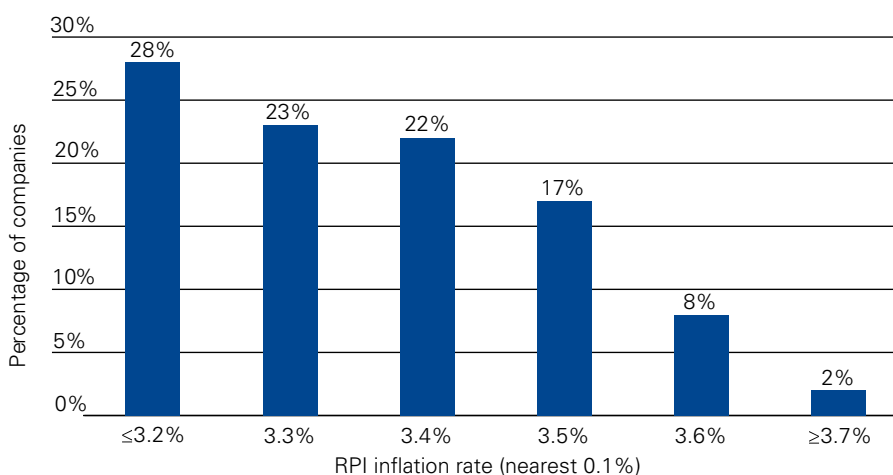


Source: Bank of England

The graph above shows that long term RPI inflation expectations have increased slightly at longer durations (greater than 15 years), but more substantially at shorter durations, compared to 31 December 2015.

The graph below shows the distribution of RPI inflation rates adopted by companies at 31 December 2016. The median RPI inflation is 3.30% which is 0.20% higher than the median last year.

### Distribution of RPI inflation assumptions



Source: KPMG analysis

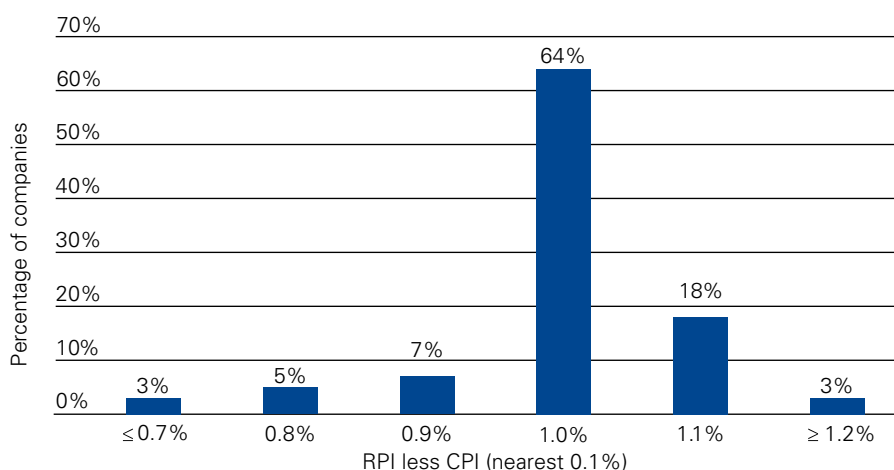


The range in RPI inflation assumptions adopted has decreased from 1.1% last year to 0.8% this year.

## CPI inflation

CPI inflation is typically used for deferred revaluation and some pension increases. As there are no market indicators for CPI inflation, it is usually set using an offset to the RPI inflation assumption. The graph below shows the spread of the RPI-CPI 'wedge' used by companies as at 31 December 2016. There is a clear trend with the majority of companies adopting the median of 1.00%, which is unchanged from last year.

Distribution of RPI – CPI wedge assumptions



Source: KPMG analysis



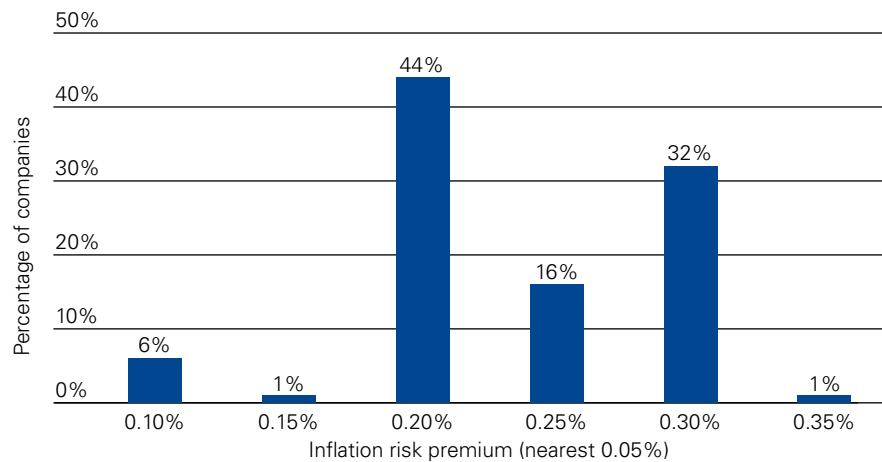
Around 90% of companies are adopting a RPI-CPI wedge of within 0.10% of the median, the same proportion as last year.

## Inflation risk premium

An inflation risk premium (IRP) is often applied to reflect certain supply and demand effects on the gilts market. These are argued to keep break-even inflation rates artificially high.

At 31 December 2016, around 75% of companies used an IRP adjustment.

### Distribution of inflation risk premium assumptions



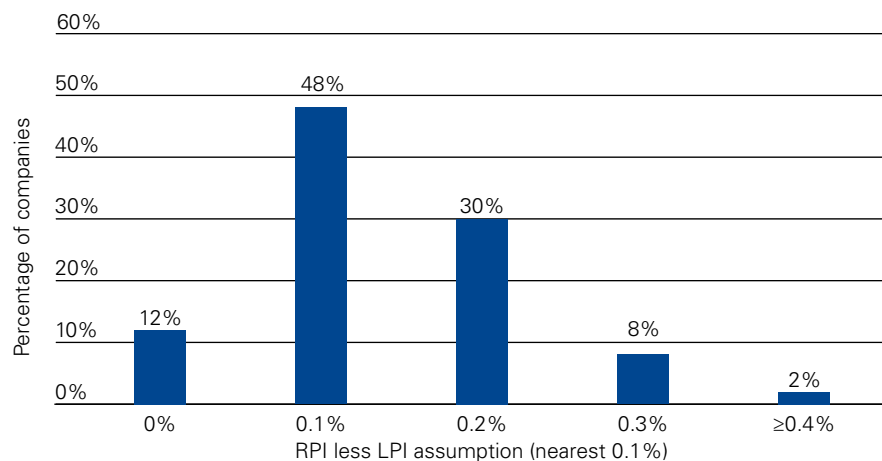
Source: KPMG analysis

## Pension increase

The most common pension increase is inflation capped at 5.00% each year which is known as Limited Price Inflation (LPI). This assumption is usually set with reference to the RPI inflation assumption by applying an adjustment based on the expected future volatility of inflation. As inflation rates have increased over the year, we have seen larger offsets being applied to RPI inflation in order to derive the LPI assumption.

Just under half of the companies surveyed are using the median assumption, and there remains a small range of pension increase assumptions, with 90% of companies adopting an adjustment within 0.10% of the median.

### Distribution of RPI-LPI offset assumptions



Source: KPMG analysis



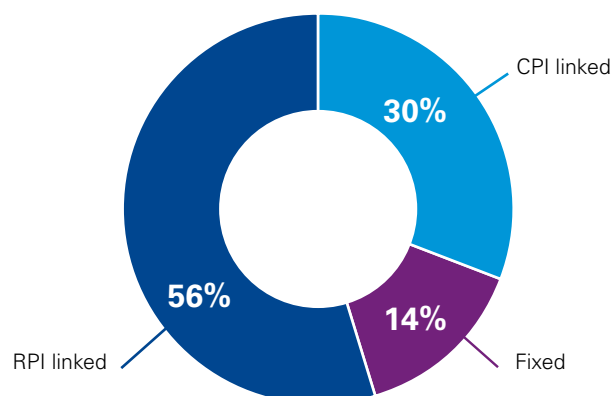
The median adjustment used by companies is 0.1% which remains unchanged since 2010.

## Salary increases

Salary increases are generally linked to economic growth and inflation levels.

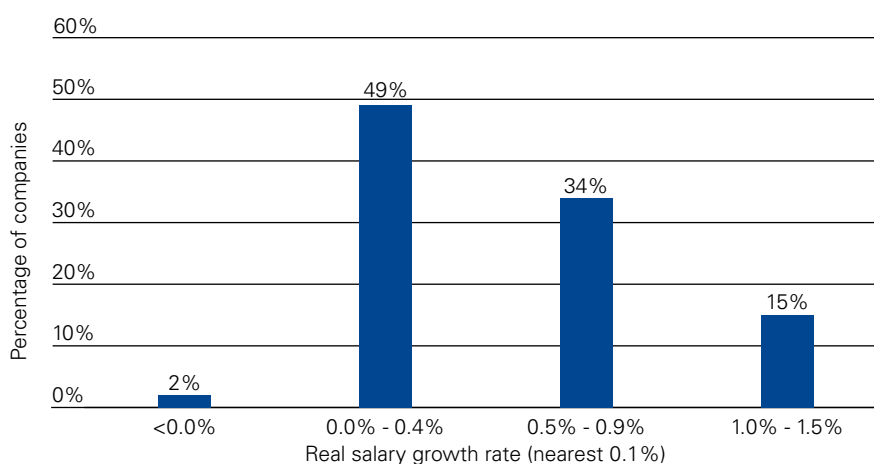
We are starting to see a trend of more companies adopting a salary increase assumption linked to CPI inflation, as opposed to RPI inflation. At 31 December 2016, 30% of companies set their salary increase assumption relative to CPI inflation, compared to 24% last year. The majority of companies are still referencing RPI inflation, however, there has also been an increase to the number of companies adopting a fixed salary increase assumption (14% compared to 8% last year).

### Types of salary increase assumption adopted



Source: KPMG analysis

### Distribution of RPI linked salary growth assumptions

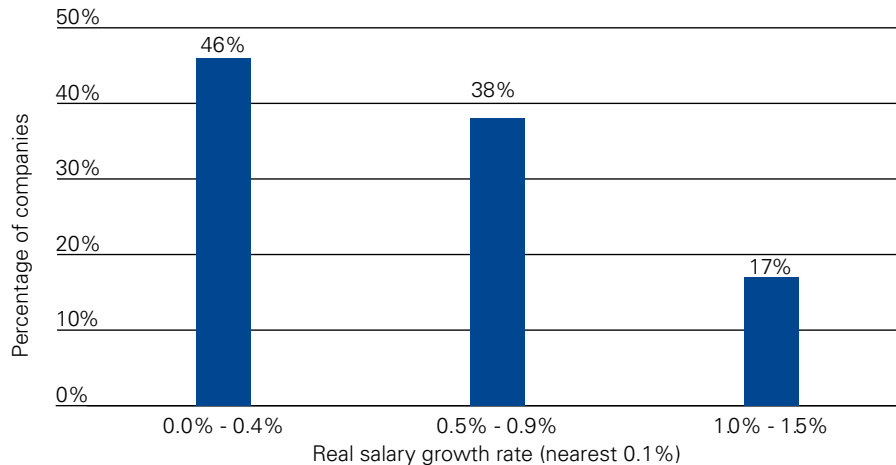


Source: KPMG analysis



The median RPI linked salary increase has reduced to 0% above RPI inflation at 31 December 2016, compared to 0.3% above RPI inflation last year.

### Distribution of CPI linked salary growth assumptions



Source: KPMG analysis

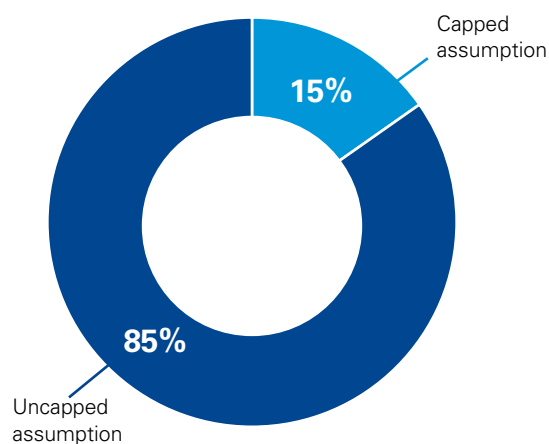
The median CPI linked inflation assumption adopted was 0.50% above CPI inflation at 31 December 2016, in line with last year.

As more companies close their pension schemes to future accrual and active member populations reduce in general, the salary increase assumption becomes less important. Almost 60% of the companies in our sample are closed to future accrual, compared to just over half last year, with more already closed to new entrants. This trend is only expected to continue as companies try to reduce uncertainty in relation to their future pension liabilities. Intermediate measures such as capping pensionable salary increases are also increasingly common and 15% of companies adopting a salary increase assumption had introduced a salary cap.



**15% of companies adopting salary increase assumptions have capped pensionable salary increases.**

### Split of salary increase assumptions



Source: KPMG analysis



01 / A look back to 2016

02 / A look ahead to 2017  
and beyond

03 / Key headlines

04 / Discount rate

05 / Inflation

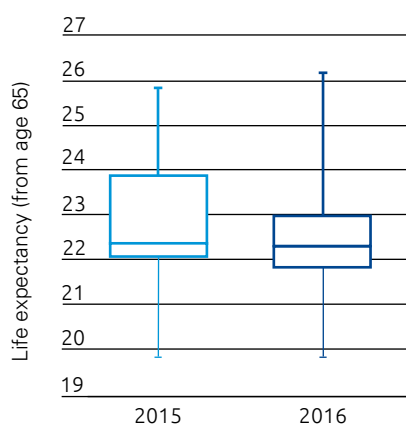
06 / Mortality

Mortality assumptions remain key for pension schemes, with continuing research and new approaches to scheme-specific mortality studies allowing companies to more accurately quantify their longevity risk. Median assumed life expectancies for both current and future pensioners have reduced by 0.1 years compared to last year, marking the second reduction in recent years for current pensioners, and the first for future pensioners.

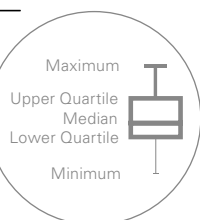
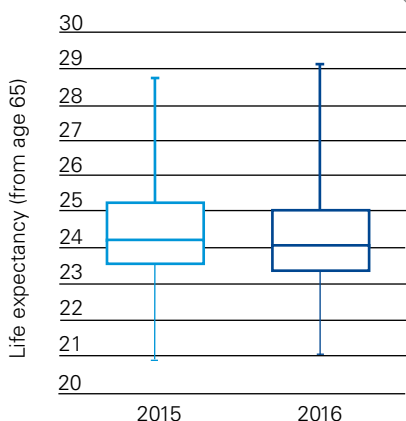
## Life expectancies

The graphs below show the spread of life expectancy assumptions used by companies for their current and future pensioners. A current pensioner aged 65 is expected to survive a further 22.3 years on average, whereas a future pensioner currently aged 45 would be expected to live a further 24.1 years from the age of 65.

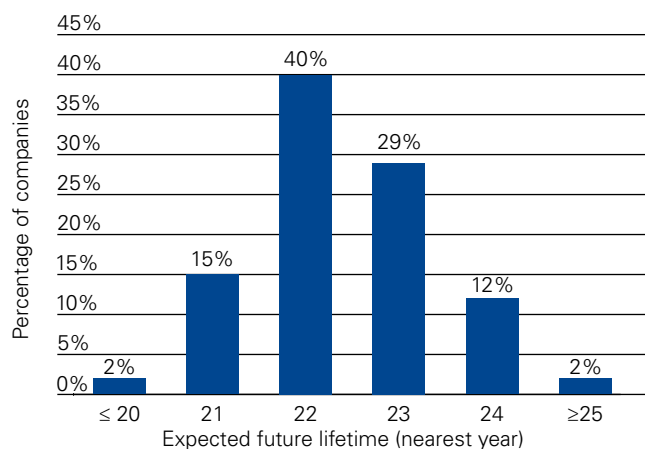
**Distribution of current pensioner life expectancies**



**Distribution of future pensioner life expectancies**

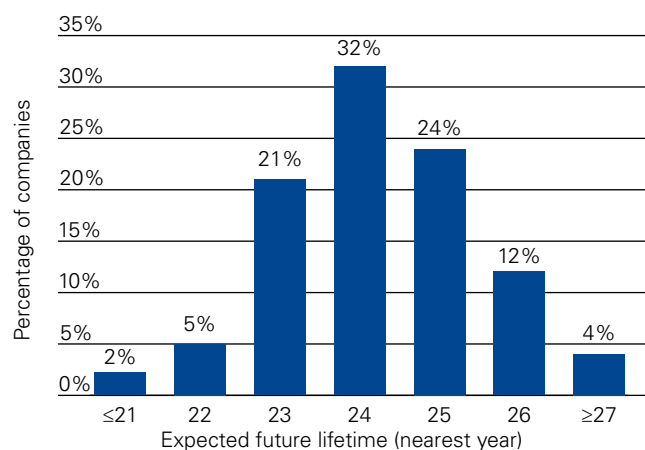


**Current pensioner life expectancy (male currently aged 65)**



Source: KPMG analysis

**Future pensioner life expectancy (male currently aged 45, at age 65)**



Source: KPMG analysis

In 2015 the median life expectancy for current pensioners decreased for the first time in recent years. This year we see a similar trend in both current and future pensioner life expectancies. This is largely due to an increase in the number of companies adopting the CMI 2015 series of projections, which reflect a decrease in the expected rates of future improvements in mortality.



**61% of companies have adopted the CMI 2015 series of future improvement projections, compared to 33% last year.**



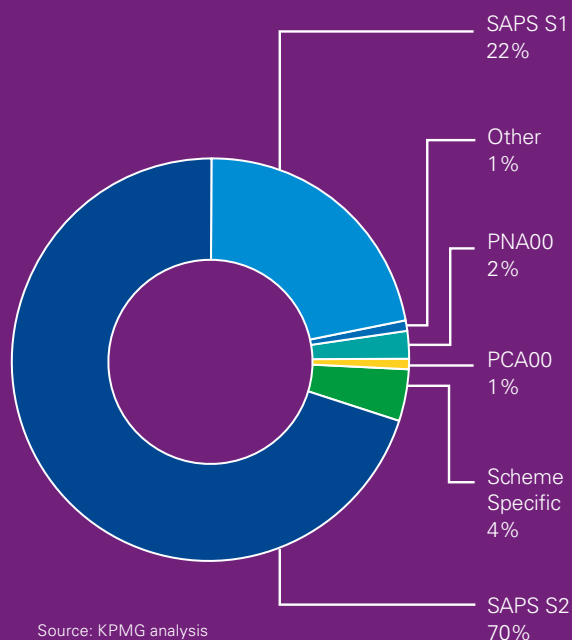
**Around 80% of companies are using life expectancies within a 3 year range**

## Base tables

The vast majority of companies have adopted the SAPS tables (92% at 31 December 2016). These mortality tables are based on actual pension scheme experience rather than life insurance tables such as PA92 and PA00.

The proportion of companies adopting the S2 series of tables which was published in February 2014 has increased to 70% at 31 December 2016 compared to 50% last year.

It is becoming increasingly common for schemes to apply scheme-specific loading factors to the mortality base tables. Around 50% of the companies adopted a scheme-specific scaling factor, compared to 40% last year. With mortality a key assumption, mortality studies including postcode analysis and medically underwritten studies can help schemes to more accurately allow for the longevity risk in their population.

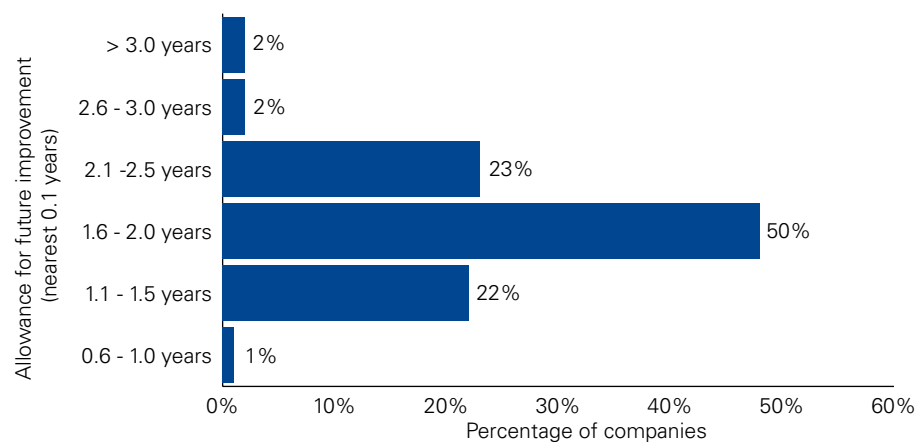


Source: KPMG analysis

## Future improvements

The median gap between current pensioner and future pensioner life expectancies has remained broadly stable over the last few years. The median gap at 31 December 2016 is the same as last year at 1.7 years for a 20 year projection.

Difference between current and future pensioner life expectancy



Source: KPMG analysis

Previous cohort projections have now been phased out, with all of companies surveyed adopting projections published by the Continuous Mortality Investigation Bureau (CMIB) for future improvements.

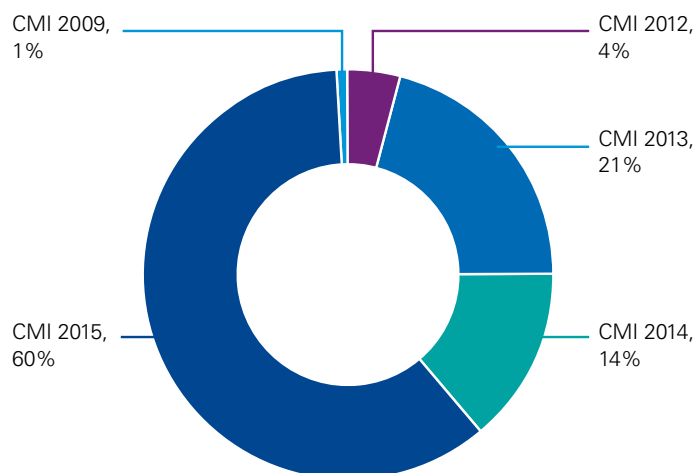
The CMIB is continually updating its research and produces annual updates of the CMI projection model. Companies are tending to use the most recent projections available. Around 60% of companies are using the CMI 2015 model year for their 31 December 2016 accounting results, compared to around 35% last year.

The CMI 2016 projection model has recently been released, and we expect many companies to be using this model by December 2017. Compared to the 2015 model, mortality improvements are materially lower in CMI 2016 with life expectancies at age 65 being around

0.2 years lower for males, and around 0.4 years lower for females. Moving from the 2015 model to the 2016 model is likely to result in a reduction in liabilities of around 2%, with a slightly greater impact for schemes with a younger membership. A reduction of around 1% in liability was seen when moving from the 2014 model to the 2015 model.

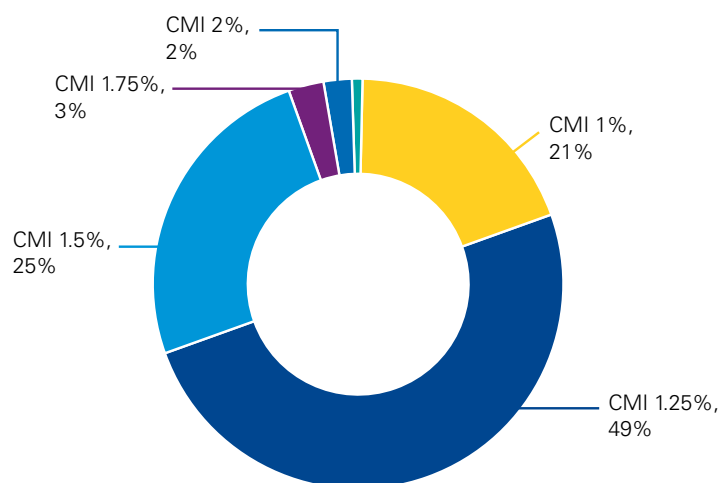


### Distribution of CMI projection models



Source: KPMG analysis

### Distribution of long term future improvements



Source: KPMG analysis

**49% of schemes used the median long term future improvement of 1.25%, with the range from 1.00% to 2.00%.**

# KPMG regional contacts



## London

### **Naz Peralta**

P: +44 207 3112403

E: [narayan.peralta@kpmg.co.uk](mailto:narayan.peralta@kpmg.co.uk)



## Midlands

### **Alan Pentland**

P: +44 121 6096002

E: [alan.pentland@kpmg.co.uk](mailto:alan.pentland@kpmg.co.uk)



## North

### **Ian Warman**

P: +44 113 2313408

E: [ian.warman@kpmg.co.uk](mailto:ian.warman@kpmg.co.uk)



## Scotland

### **Donald Fleming**

P: +44 141 3005784

E: [donald.fleming@kpmg.co.uk](mailto:donald.fleming@kpmg.co.uk)



## South

### **Andrew Coles**

Head of Pensions

P: +44 118 3731390

E: [andrew.coles@kpmg.co.uk](mailto:andrew.coles@kpmg.co.uk)

---

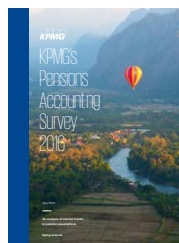
**Author** Siduth Wijeweera

**Editors** Marlani Pather, Katy Edwards

**Data Analysis** Priyal Patel, Bhavanjeet Gill

---

## Last year's survey



 [Click here](#) to view the 2016 survey


## Visit Fusion



 [Click here](#) to visit the KPMG Fusion site

## Rethink Pensions



 [Click here](#) to visit the KPMG Rethink Pensions site

[kpmg.com/uk](http://kpmg.com/uk)

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2017 KPMG LLP, a UK limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. All rights reserved. Printed in the United Kingdom.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.

Produced by CREATE | CRT078255 | April 2017.