HEALTH WEALTH CAREER

MERCER GLOBAL PENSION BUYOUT INDEX

DECEMBER 2017

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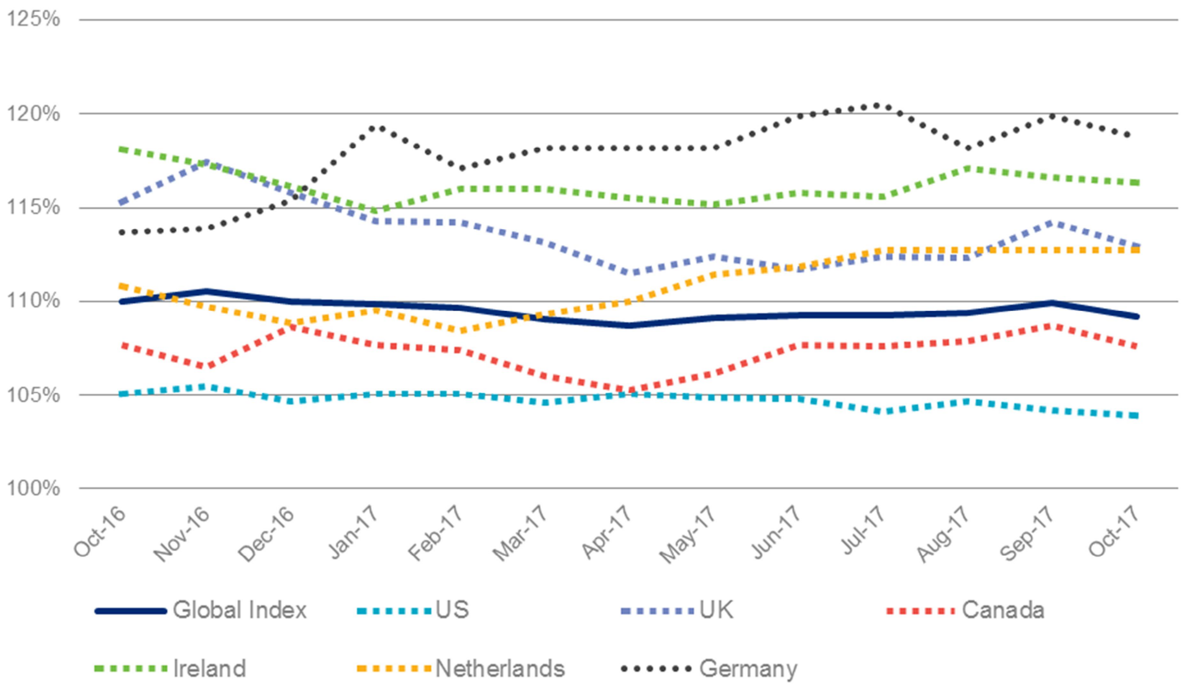
MERCER

EXECUTIVE SUMMARY

Mercer Global Pension Buyout Index monitors the general trend in the pricing of bulk pension annuity transactions in the US, UK, Canada, Ireland, the Netherlands and Germany.

Pension risk transfer transactions increasingly involve an international element – for example, the sponsoring employer might be seeking to externalise pension risk in multiple countries. Pricing is subject to movements in global financial markets and domestic requirements for insurer reserving. However, country-specific pricing often trends in different directions due to domestic influences, leading to windows of opportunity in one country relative to another.

The chart shows estimated annuity prices from insurers as a percentage of accounting liability in the six countries monitored, for existing retirees in a sample defined benefit pension plan. This is based on up-to-date pricing information provided regularly by insurers in each country.



For example, where a line is at the 110% level, Mercer estimates the average price of a pension annuity transaction for current retirees to be broadly 10% higher than the equivalent accounting liabilities. The Global Index is represented by the solid line, showing the average price of pension annuity transactions as a percentage of accounting liability across the six countries and draws upon information such as country market size.

The Global Index has fallen during October, with the decrease resulting from downwards movements in all countries except Netherlands (where there was no update provided this month).

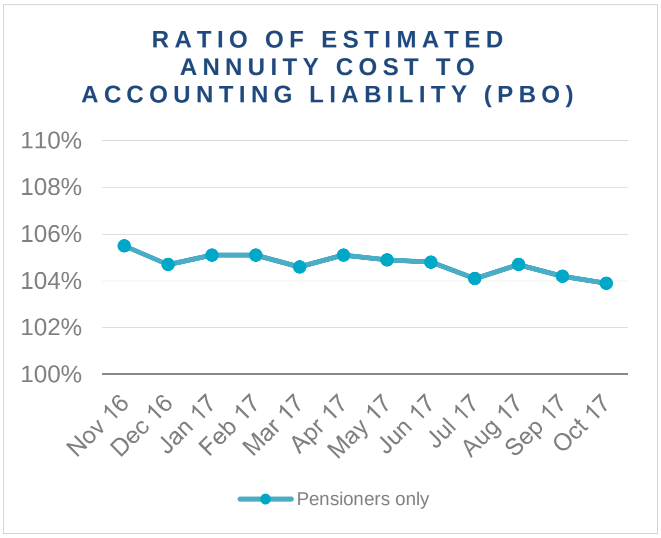
Pension liability has been measured according to local standards. As an example, the cost of insuring pension liabilities in the UK is higher than in the US (relative to accounting liabilities) partly because UK pension liabilities are commonly indexed for inflation and partly due to generous attaching spouses pensions, both of which increase the liability duration. Insurers also charge an additional premium to take on inflation risk.

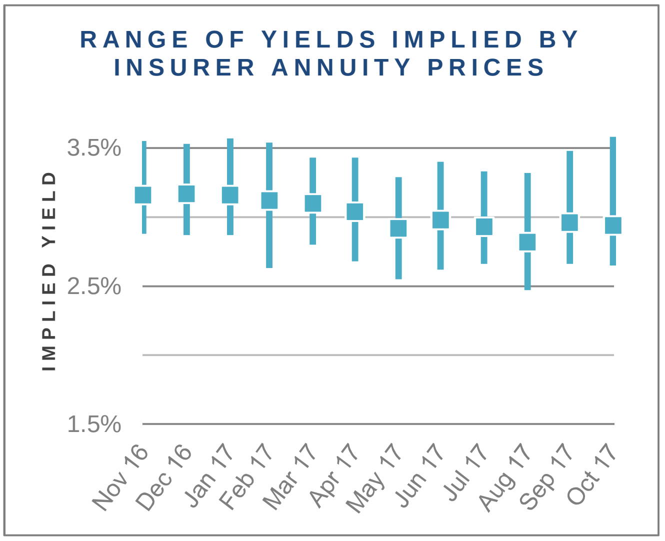
Mercer appreciates the assistance of more than 20 insurers, which provide pricing data every month to allow this report to provide a good indication of the trend in each country.

The information contained in this report is not based on information specific to your circumstances and approximations have been used. Past experience is no guarantee of future pricing and experience may vary for your plan.

UNITED STATES

The cost of a buyout has been decreasing in recent years relative to PBO accounting liabilities, although this relationship has remained relatively stable over the last 12 months. Price transparency allows for greater information from which a plan sponsor can act. The chart on the left shows the relative price to PBO using average pricing received from insurers, and the chart on the right shows the range of sample pricing received. At a single point in time pricing between insurers varies materially which may lead to a difference in cost of up to 10%.





At the end of October 2017, if the accounting liability in respect of plan pensioners only was US$100 million, the buyout cost would be broadly US $3.9 million higher, as compared to September where the cost would have been US$4.2 million higher.

When insurer pricing rates increase relative to discount rates used to calculate PBO, the premium for an annuity buyout decreases.

It should be noted that the above implied yield has decreased less than corporate bond yields over October, resulting in the decrease in the ratio shown in the chart above and to the left.

UNITED STATES MARKET NEWS

In mid-2015, Mercer launched Mercer Pension Risk Exchange®, a groundbreaking solution that both increases annuity price transparency by enabling plan sponsors to continuously monitor pricing and helps plan sponsors execute group annuity buyouts in a shorter timeframe and in a more competitive pricing environment. Given the current level of volatility, it is not surprising that we already have over 110 clients in the US, representing over US$15 billion of assets, signed up to Mercer Pension Risk Exchange to execute an annuity placement. Please see the infographic at the end of this report for more information.

With rates increasing and plan sponsors reaching PBGC caps, buyout activity has steadily increased in 2017. Through the first three quarters of the year, pension risk transfer premiums exceeded $13 billion according to statistics collected from insurers by Mercer. We expect that by the end of the year, premiums placed in 2017 will have reached $19-20 billion.

Mercer continues to take a market-leading role in advising plan sponsors on jumbo buyout deals, having been the lead advisor in two jumbo transactions announced in June 2017. Mercer has led four of the largest six deals over the past two years and led close to 40% of all deal volume transacted in 2016.

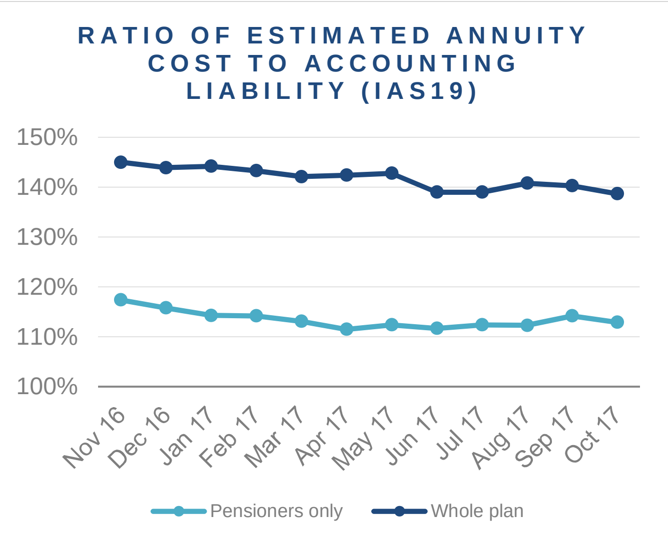
NOTES

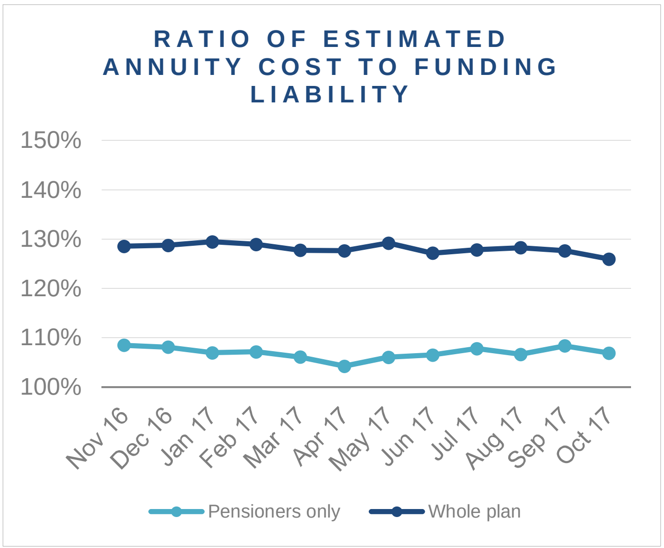
The chart on the left is based on a set of liabilities with pension benefit obligations of US$50 million, cash flow duration of 9 years, and discounted using the Mercer Yield Curve.

The figures in the charts should be used as an indication of the market pricing for annuity placements; actual pricing received will depend on plan-specific factors such as plan provisions, size, and age of the population. It is important to note that some of the insurers who provide pricing do not reflect mortality sensitivity in their illustrative rates, or benchmark to a standard table.

UNITED KINGDOM

The charts track the cost of a buyout and buy-in of a representative pension plan against accounting and typical funding liabilities. The plan has pensioner and non-pensioner liabilities, with a weighting towards pensioners. Pensioner and non-pensioner members receive a mixture of flat and increasing pensions in payment, commensurate with an “average” UK pension plan.





At the end of October 2017, if the plan had accounting liabilities in respect of all members of £100 million, the buyout cost would be broadly £39 million higher.

If the accounting liability in respect of plan pensioners only was £100 million, the buy-in cost of pensioners would be broadly £13 million higher.

At the end of October 2017, if the plan had typical funding liabilities (technical provisions) in respect of all members of £100 million, the buyout cost would be broadly £26 million higher.

If the typical funding liability in respect of plan pensioners only was £100 million, the buy-in cost of pensioners would be broadly £7 million higher.

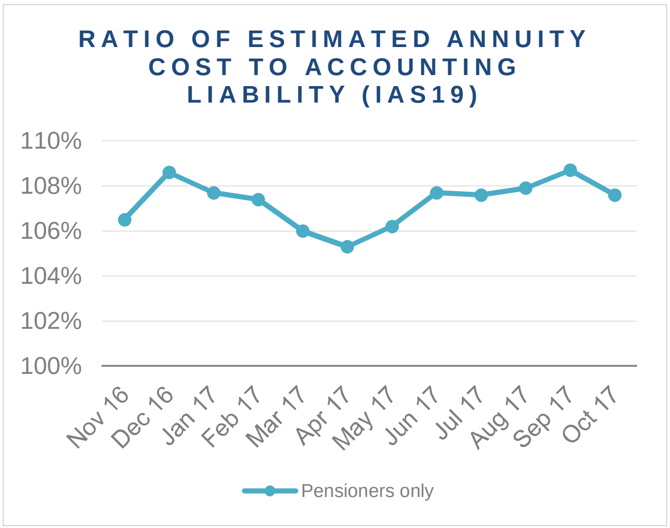
UNITED KINGDOM MARKET NEWS

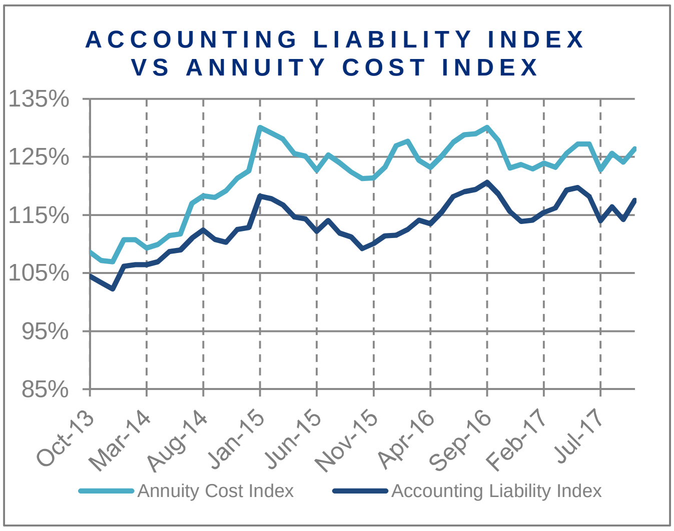
Despite the low real yields in 2016, activity in the UK bulk annuity market increased dramatically in the second half of 2016, as sponsors became more determined to remove risk and insurers became more proficient at operating within the new post 1 January 2016 Solvency II regime. Over the course of 2016 some £10bn of UK pension liabilities was insured, plus a further £12 billion of annuity back-books transferred between insurers.

Insurer capacity among the 7 or so insurers who are active in the bulk annuity market remains good. 2017 has been very busy with around £5bn of liabilities insured in the first half of 2017, which is considerably higher than 2016 for the same period. The current outlook is that 2017 will see around £11bn of liabilities insured in total, which is broadly similar to the levels of business written in 2016. We expect there to be high demand in 2018 from both pension schemes and closed insurers who are considering transferring their legacy annuity books, with the potential for several multi-billion pound deals to be done.

CANADA

The charts track the movement in the cost of a group annuity as a percentage of the associated accounting liabilities for a representative sample group of retirees.





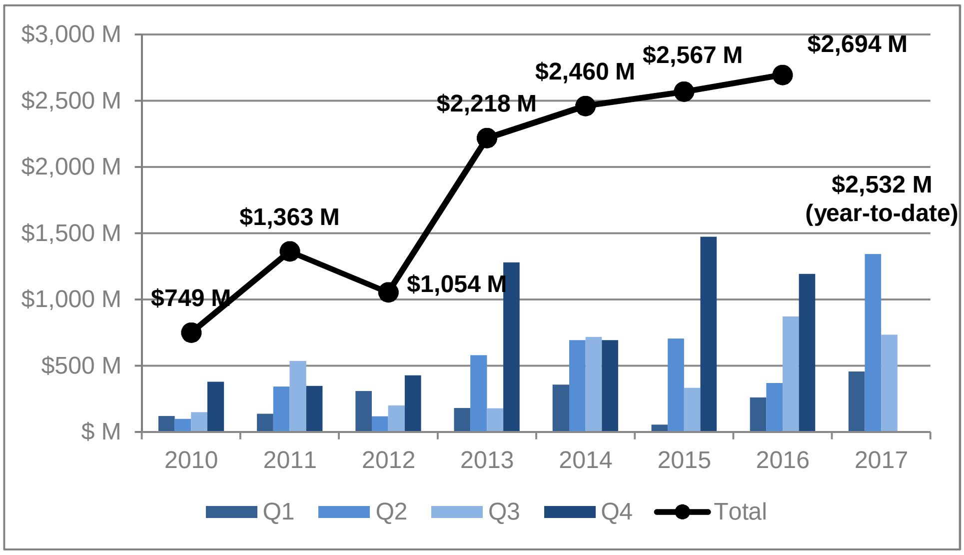
During October 2017, the Index decreased by 1.1% from 108.7% to 107.6%. This implies that, at the end of October, the cost of settling obligations through the purchase of annuities was between 7% and 8% higher than the accounting liability.

It is also important to consider the absolute cost of settling plan obligations. This can be best accomplished by looking at the movement of each component of the index in isolation. To do so, we look at the yields of long -term government bonds, which drive annuity pricing, and compare them to the yields on AA corporate bonds, which are used to calculate accounting liabilities.

In the month of October, yields on long-term federal bonds, which are assumed to back annuity purchases, decreased by approximately 17 basis points, while yields on corporate bonds, assumed to back accounting liabilities, decreased by around 21 basis points. Due to the larger drop in underlying yields, accounting liabilities increased more than the corresponding estimated annuity purchase cost, leading the Index to drop sharply from 108.7% to 107.6%.

CANADA MARKET NEWS

After an incredibly active third quarter that saw $733M in group annuities secured, total 2017 group annuity business in Canada stands at $2.5B at end Q3. Based on the current amount of activity during the fourth quarter, it is likely that the market will have another record-breaking year, ultimately settling between $3.5B and $4.0B.



With more than 215 plans having enrolled as of November 2017, the [Mercer Pension Risk Exchange®] has established itself as a global tool to help clients meet their de-risking objectives in an efficient and cost-effective manner. Close to US$39B of plan liabilities have been committed to the platform and more than US$15B has been successfully secured with insurers. In Canada, 19 pension plans have executed transactions through the Exchange with premiums above C$770M.

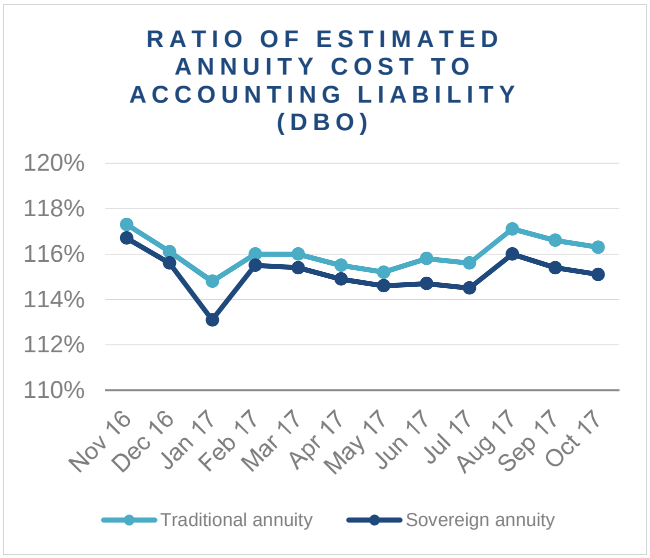
NOTES

The Index is based on an estimate of settling non-indexed pension obligations through the purchase of annuities and an accounting discount rate based on a proprietary model developed by Mercer to assist our clients with selection of the discount rates used for the purpose of corporate financial reporting. It is provided for a sample group of non-indexed retired members and is only intended to illustrate general trends. The actual premium can vary significantly for individual plans based on a number of factors that may include:

- The plan's benefit structure and timing of its anticipated benefit payments.
- The demographic profile of the plan's participants.
- Market conditions prevailing at the time benefits are distributed and annuities purchased.
- Insurer appetite and capacity for a transaction.
- Which employees, if any, receive and accept an offer to take a lump sum instead of an annuity.

IRELAND

The chart shows the relative cost of a buyout of pensioner liabilities of a sample defined benefit plan versus the equivalent liabilities on a company accounting basis.



At the end of October 2017, if the Plan had accounting liabilities in respect of pensioners only of €100 million, the cost of a traditional annuity would be broadly €16 million higher.

At the end of October 2017, if the Plan had accounting liabilities in respect of pensioners only of €100 million, the cost of a sovereign annuity would be broadly €15 million higher.

IRELAND MARKET NEWS

Bond yields in core Eurozone countries decreased over the month of October 2017; leading to an increase in the indicative cost of buying out pensioner liabilities. Corporate bond yields, which drive the equivalent accounting liabilities, also decreased over the month (to a greater extent). There was no change in the discount available via the purchase of sovereign annuities (where payment terms are subject to the performance of the reference bonds underlying the contract), compared to conventional annuities over the month of October. Activity in the bulk buyout market in Ireland is largely driven by the winding up of pension plans which, under Irish legislation, requires the buyout of pensions in payment.

October 2017 proved to be a largely positive month for pension schemes on the asset side with positive returns on core Euro government bond portfolios (given falling yields) coupled with strong positive returns on equity portfolios over the month.

NOTES

The index is provided for a sample mature pensioner population and is indicative only. The benefits secured (and valued as an accounting liability) are flat pensions, with no increases in payment.

The price differential identified above will also be affected by the nature of the assumptions adopted for the accounting disclosures.

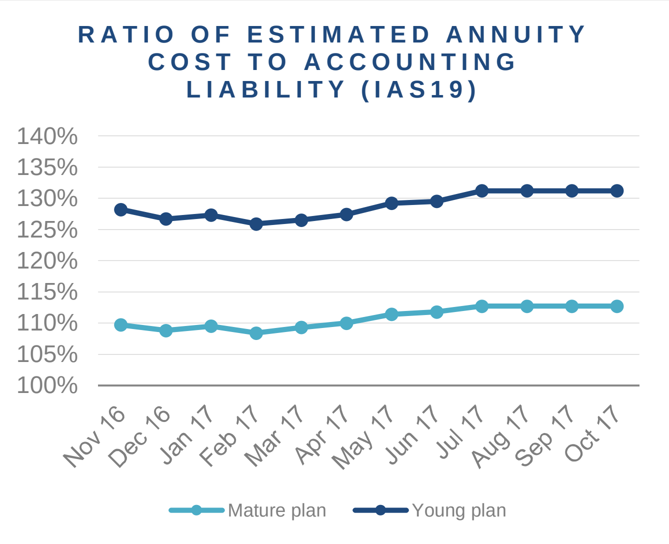
The accounting liabilities are valued using the Mercer Yield Curve, which is used by leading Irish and multinational companies to set their discount rate for accounting purposes.

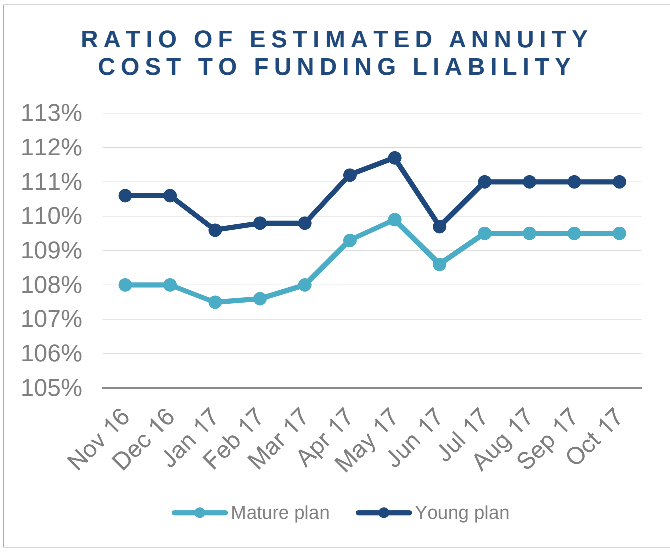
The index does not make any allowance for buyout costs for active or deferred members.

A sovereign annuity differs from a traditional annuity in so far as it is linked directly to reference bonds that back the contract. Importantly, this means that pension payments will be reduced in the event of non-performance of some or all of the underlying reference bonds. This transfers the credit risk to the annuitant. The discount available on sovereign annuities has historically been estimated from ‘live’ pricing for Irish Amortising Bonds; this is no longer available, so the discount is now estimated from historic norms.

NETHERLANDS

The charts track the cost of a buyout of two representative pension plans against accounting and funding liabilities. Mercer uses up-to-date pricing information[2] sourced directly from a key insurer and one multi-employer pension fund in order to compare these against the benefit liabilities based on current market conditions. The insurer price includes an estimate of the price of indexation at the same level as in the corresponding DB accounting liability, which reflects expected discretionary indexation.





At the end of October 2017, if the less mature, Young plan had accounting liabilities in respect of all members of €100 million, the buyout cost would be broadly €31 million higher.

At the end of October 2017, if the Mature plan had accounting liabilities in respect of all members of €100 million, the buyout cost would be broadly €13 million higher.

At the end of October 2017, if the less mature, Young plan had funding liabilities (technical provisions) in respect of all members of €100 million, the buyout cost would be broadly €11 million higher.

At the end of October 2017, if the Mature plan had funding liabilities (technical provisions) in respect of all members of €100 million, the buyout cost would be broadly €9 million higher.

NETHERLANDS MARKET NEWS

The increase during 2015 and 2016 of the buyout cost compared to the accounting valuations is due to a slow but steady increase in credit spread between the risk free rate used by the insurers for the buyout price and the interest rate used for accounting valuations. This rise in credit spread peaked at the end of March 2016. It should be noted that for a different subset of bonds there was less of a peak that month. From April 2016 through to the end of April 2017 the credit spread has generally been reducing, resulting in an overall drop in

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[2] With effect from September 2017, insurer pricing will be provided quarterly. The next update is due for market conditions as at 31 December 2017, and the index will be assumed to remain constant in the intervening months

the index. The trend over the second quarter of 2017 has been for slight upward movements in the index.

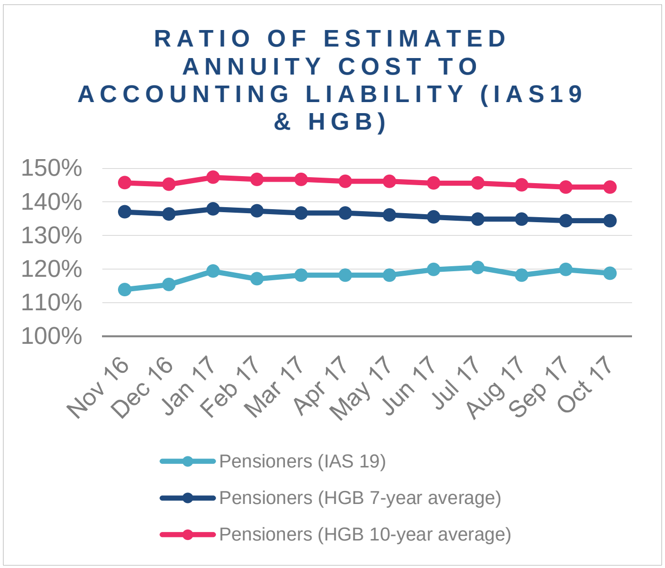
One of the likely reasons for this decrease is the expanded Quantitative Easing program of the European Central Bank, which now also includes corporate bonds.

The buyout cost compared to the funding liabilities was relatively stable during 2015 and the first half of 2016. The second half of 2016 saw a slow and steady decline in buyout costs. The only significant change was seen in July 2015 which was due to a change in the Ultimate Forward Rate (UFR) used to produce the yield curve (as published by the Dutch Central Bank) to be used by pension funds. Due to the decrease in discount rates in 2016, the UFR effect increases, hence the upward sloping ratio of annuity cost (based on mark-to market pricing) and funding liability (based on yield curve including UFR)

Within the Netherlands a new pension vehicle has been introduced – the so-called “Algemeen Pensioenfonds” – that could open up new possibilities to secure buyouts. Five of these funds have now received a license to operate from the pensions regulator. A further 1 to 3 parties have applied for a license.

GERMANY

The chart focuses on transactions in which the underlying benefit payment is reinsured for a group of retirees, but does not include additional potential liabilities from inflation indexation. It is built on a sample retiree population and compares the accounting liabilities against the insurance premium in a buyout / buy-in transaction. The pricing for the insurance policies is based on a 0.9% p.a. guaranteed rate of return (1.25% p.a. dates prior to 01/01/2017 and 1.75% prior to 01/01/2015) whereas the discount rate is based on a liability with a 10 year duration.



At the end of October 2017, if the plan had accounting liabilities under local German GAAP (HGB) in respect of all members of €100 million, the buyout cost would be broadly €44 million higher using the 10-year average rate and broadly €34 million higher using the 7-year average rate.

If the plan had accounting liabilities under international accounting standards (IFRS) in respect of all members of €100 million, the buyout cost would be broadly €19 million higher.

GERMANY MARKET NEWS

- The guaranteed rate of return for annuity provided through insurance companies has decreased from 1.25% to 0.9% as from 01/01/2017.
- Benefit obligations of the 30 DAX companies reached a level of about €400 billion at the end of 2016.
- The fair value of the corresponding plan assets was about €250 billion at the end of 2016.
- The New Occupational Pension reinforcement Law in Germany will be introduced as of January 1st.

A bill that includes a modification of the method for determining the discount rate used for pension valuations under German-GAAP (Generally Accepted Accounting Practice) passed parliament in 2016.

The new rules require companies to use a rolling average period of 10 years that will result in a reduction of the reported pension liabilities at the time of the change – previously a seven year rolling average of market rates was used.

Generally, larger organisations prefer funding through so-called Contractual Trust Agreements (CTAs), but buy-in solutions for annuities are also becoming more common. However, there remain a large proportion of companies with unfunded pension arrangements – with pensions being paid from operating cash flow. Alternatives to funding are also being considered to reduce benefit obligations, for example by changing the plan design or by including lump sum options.

NOTES

The illustrations are based on values used by German life insurers, public information and a representative sample of a retiree population.

The performance of the Index reflects the changes in the valuation-related discount rates and the underlying rates used by German life insurers.

Due to the applied approximation method the Index is not suitable for any company - and plan-specific pricing.

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MERCER PENSION RISK EXCHANGE™

A GROUNDBREAKING APPROACH TO PENSION RISK MANAGEMENT

Many defined benefit plans are now closed to new employees, but these plans still represent significant obligations for the company to manage alongside its on-going business. In addition to the company specific situation, economic factors are also driving up the demand for annuity transactions; however, the annuity marketplace can be hampered by long execution timelines and lack of price transparency. A plan sponsor requires robust information on the financial position of the company's pension plan, needs an understanding for how key financial metrics are developing over time, and values customized pricing information. This information must be accurate, up-to-date, and easily accessible.

CURRENT BULK ANNUITY MARKET CHALLENGES

UNPREDICTABLE MARKET

Each deal is unique and attracts different insurers. Deal pricing can vary dramatically

PRICE VOLATILITY

Pricing fluctuates over time but is not visible to plan sponsors.

LACK OF PRICING TRANSPARENCY

Obtaining a price can be difficult and time consuming. Plan sponsors often don't know the price at which they should execute an annuity transaction.

MERCER PENSION RISK EXCHANGE™

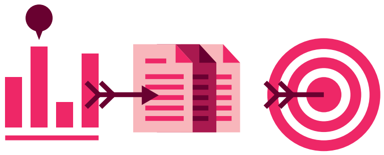
WHAT IS IT?

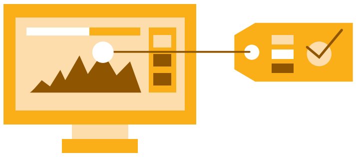
- Access to regular pricing from insurers in order to asses the true market price of a deal.
- Helps sponsors execute a deal in a more competitive price environment and in a shorter time frame than is currently possible.
- Allows plan sponsors to prepare data and documents in advance, enabling them to proceed quickly when the time is right.
- Online and mobile-optimized solution that gives sponsors and trustees access to valuable information anytime and anywhere.

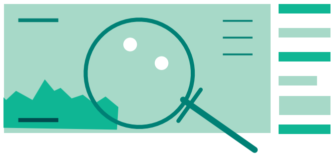
WHAT IS IT FOR?

- PLAN TERMINATIONS
- BUYOUTS
- BUY-INS

HOW DOES IT WORK?







READINESS

Mercer's systematic and disciplined approach finalizes all data and documents well in advance of the transaction, enabling swift execution. We advise on target price levels and plan metrics that should be monitored, and we establish triggers upon which to act.

DYNAMIC MONITORING

Our pricing platform allows insurers to submit regular bids for specific plans. This enables sponsors to continuously monitor their unique price and specific plan metrics and to execute when market conditions are optimal.

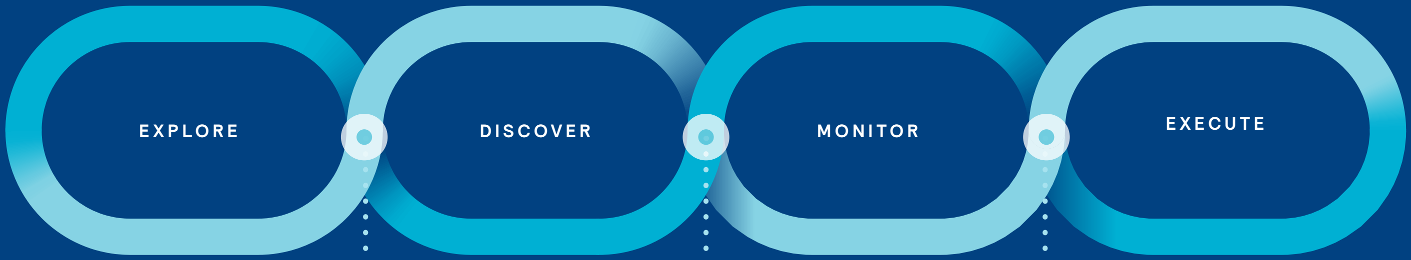
EXECUTION SUPPORT

Provides fiduciary training and insurer due diligence to support the final auction, insurer selection, and transition of responsibilities to the insurer, all while enhancing participant security.

MERCER PENSION RISK EXCHANGE™ SUPPORTS YOU THROUGH EACH STEP OF THE ANNUITY PLACEMENT PROCESS

MERCER PENSION RISK EXCHANGE PROCESS

There are four components of the process. We work with clients to understand the services that are most applicable to their current situation, and timeline to execute a transaction. Our approach provides increasing financial certainty as a client moves through the purchase process.



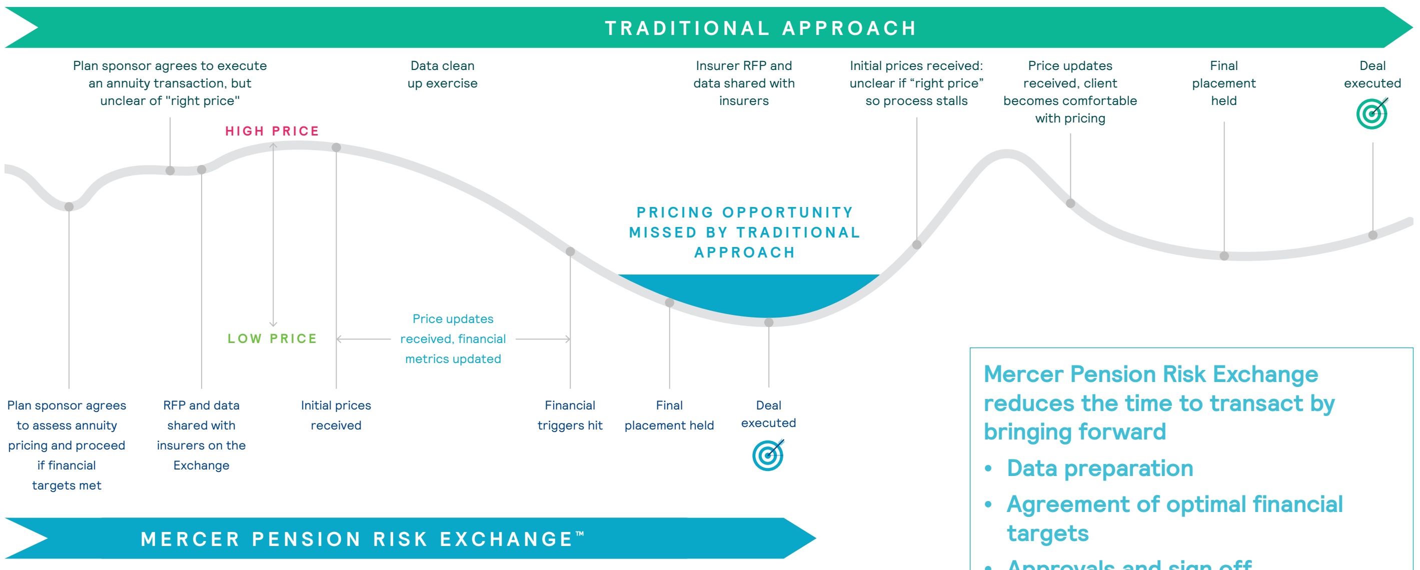
EXPLORE
- Understand market appetite and competitiveness
- Assess trends over time
- Determine timing / strategy to proceed with a transaction

DISCOVER
- Prepare insurer RFP and plan data
- Gather preliminary annuity quotes from insurers
- Establish financial metrics to monitor
- Start fiduciary education

MONITOR
- Monitor annuity pricing against financial metrics
- Complete fiduciary education and insurer due diligence

EXECUTE
- Hold final placement auction
- Select insurer and transfer premium
- Commence post deal transition

TIMELINE



Mercer Pension Risk Exchange reduces the time to transact by bringing forward

- **Data preparation**
- **Agreement of optimal financial targets**
- **Approvals and sign off**

IMPORTANT NOTICES

References to Mercer shall be construed to include Mercer LLC and/or its associated companies.

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Investing involves risk. The value of your investment will fluctuate over time and you may gain or lose money.

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