



Ministry of Justice

CONFIDENTIAL

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19 December 2016

Dear Martin

Subject: The Damages Act 1996 – The Discount Rate

I am writing to seek your views on behalf of the Lord Chancellor in accordance with the consultation requirement in section 1(4) of the Damages Act 1996.

The discount rate is used to adjust lump sum awards for future pecuniary loss in personal injury claims. It is set in line with the principles set out by the House of Lords in *Wells v Wells* in 1998. They assume that the claimant will draw an income from the lump sum and any return on investment of that lump sum to meet the predicted losses as they fall due. The discount rate should reflect the return a hypothetical risk-averse investor can expect if investing in a suitably low-risk security.

When setting the discount rate in 2001, the then Lord Chancellor based the rate he set of 2.5%, which is still in force, on the three year average yield of the Index Linked Gilts (ILGs) as described in *Wells v Wells* 1998. The yields on ILGs have changed since then and the Lord Chancellor is currently reviewing the rate.

Methodology

Consistent with *Wells v Wells* and when the rate was last set in 2001, we are minded that the new discount rate be based on a three year average yield. The yield will be calculated using data up to 31 December 2016.

Provisionally, we estimate an average gross redemption yield in ILGs of minus 0.79%, pre-tax, for the three years ending on 30 November 2016. Stock with less than five years to maturity have been removed from the calculation. We have adjusted, notionally, for tax by rounding down. In order to be consistent with the Ogden tables, the value has been rounded to the nearest 0.5% point; that is to minus 1%.

Please see attached for a more detailed methodology note for comment.

Questions

In responding I would be grateful if you could address the following questions:

- Is there any reason to think that the calculated yield could be a misleading indicator of real returns on investment in ILGs over the past three years?
- We are proposing to base the new discount rate on the yield calculated for 31 December 2016. Do you agree?
- Is there any reason to think that there are any factors likely to have a significant impact in the market for ILGs in the short to medium term (i.e. the next three years), which, it would be reasonable to assume, will have a material impact on bond yields?
- We have used rounding to adjust the values to taxation. We know that tax is more complex than this but think that this is a simple proxy and is consistent with the recommendation from the expert panel report (October 2015). Do you agree with this approach? If not, please advise as to how the yield on ILGS should be corrected with respect to tax on income?

Your views on these issues are of course sought in strictest confidence. I would be grateful for a reply by 5 January 2017.

I am copying this letter to Anna Harvey at the Debt and Reserves Management in HM Treasury. Please copy your response to Alex Wilks (alex.wilks@justice.gsi.gov.uk) and Brian Burton (brian.burton@justice.gsi.gov.uk) in MoJ Analytical Services.

Yours sincerely

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Director for Analytical Services and Chief Economist
Ministry of Justice



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Method

The current legal framework for setting the discount rate follows the approach as described in *Wells v Wells* 1998.

Under this method, the discount rate should reflect the return a hypothetical risk-averse investor can expect if investing in a suitably low-risk security, specifically Index Linked Gilts (ILGs), which preserve their values against RPI inflation. For ILGs, the appropriate measure of return is the redemption yield.

Calculation of redemption yields

Redemption yields are provided by the Debt Management Office (DMO) for all available ILGs. Following the approach described in *Wells v Wells*, and when the rate was last set in 2001, we have averaged the yields on ILGs using 3 years of data up to 30th November 2016. This contrasts with the views of an expert panel commissioned by the MoJ, who recommended using a one year average in their report (October 2015).

As advised by the Government Actuary's Department in a previous consultation exercise, we have excluded stocks with five years or less to maturity, for each day in the period we have considered.

The Debt Management Office at HMT provides instructions for removing from their data set all entries for stock listed before the stock's auction date and adjusting yields on stocks in the last few months before maturity. We have removed entries identified by the 'WI' (when issued) suffix as being pre-auction. Adjustment of yield for stocks reaching maturity is not relevant to our calculation as we have excluded stocks with less than five years to maturity.

In order to be consistent with the Ogden tables, used for assessing lump sum values, we have rounded to the nearest 0.5 percentage point.

Adjusting for tax

Following the method recommended by the expert panel with respect to taxation, the proposed discount rate has been corrected for income tax by rounding down to the nearest 0.5% rather than up.



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6 January 2017

Dear Martin

Subject: The Damages Act 1996 – The Discount Rate

Further to the original questions posed in our consultation letter of 19th December 2016, please can you consider the following supplementary question:

- Please can you advise on the best proxy to use to arrive at an appropriate discount rate which complies with the legal principles set out below?

The rate must be in accordance with the legal principles that the courts would themselves have to use. The court's approach was described by Lord Hope in *Wells v Wells* (1998):

- "The measure of the discount is the rate of return which can reasonably be expected on that sum [the lump sum for future pecuniary loss] if invested in such a way as to enable the plaintiff to meet the whole amount of the loss during the entire period which has been assumed for it by the expenditure of income together with capital"
- "This [the discount rate] is the rate of interest to be expected where the investment is without risk, there being no question about the availability of the money when the investor requires repayment of the capital and there being no question of loss due to inflation."

The rate chosen should therefore ensure as far as is practicable that the amount of damages awarded will enable the claimant to meet the cost of the expected losses as they fall due without shortfall so that the claimant gets compensation for the whole of the loss suffered neither more nor less ("the 100% rule"). It follows that the effect of a change in the rate on defendants is otherwise immaterial.

Please feel free to include any additional points that you feel are relevant.

Your views on these issues are of course sought in strictest confidence. I would be grateful for a reply to this and the original consultation questions by 12 January 2017.

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12 January 2017

Dear Osama

Subject: The Damages Act 1996 – The Discount Rate

Thank you for your letters of 19 December 2016 and 6 January 2017 asking for my views in accordance with the consultation requirements in section 1(4) of the Damages Act 1996. My main comments regarding the questions you have asked are:

- > The proposed discount rate approach is unlikely to reflect the real return achievable on a portfolio of index-linked gilts (ILGs) for most awards to which it would apply, for reasons such as the fact that averaging historic yields does not reflect the yields expected to be available on ILGs in future.
- > Use of a calculation date of 31 December 2016 to set the discount rate is not unreasonable if market yields are to be averaged over an extended period, eg 1 to 3 years.
- > There are factors that could materially alter ILG yields over the next few years. Extraordinary global, economic and monetary factors have reduced real yields to historically low levels and, whilst the market price reflects the investor views of future economic outturns, there is every reason to believe that these views will in current conditions prove to be inaccurate and variable.
- > The tax position will vary by plaintiff but rounding the discount rate down to the next 0.25% pa or 0.5% pa provides a not unreasonable adjustment for tax on this occasion; the adjustment would need to be reassessed in future reviews.
- > Based on the legal principles set out in *Wells v Wells* (1998), where the requirement is for a rate appropriate to investments providing inflation protection without risk, a portfolio strongly aligned to index-linked gilts would appear to be the most appropriate for the purposes of setting the discount rate. However the feasibility of such a portfolio for an individual investor and the challenge of achieving a portfolio that perfectly matches expected future costs in both timing and real amounts means that some element of residual investment risk is inevitable.

- > There are a number of other matters that should be considered when setting the appropriate discount rate including:
 - o The frequency of review of the rate
 - o The investment expenses that would accrue in managing investment of any award
 - o The rate of inflation appropriate to the expenses the award is expected to cover

Further discussion of the main points is provided below.

Proposed approach

In your letter dated 19 December 2016, you set out a proposal for setting the discount rate to be used to determine lump sum awards in personal injury claims such that the lump sum and investment return is sufficient to meet the expected losses as they fall due. You note that you are currently minded to set the new discount rate based on a three year average of the yield on ILGs, calculated using data up to 31 December 2016. Stock with less than 5 years to maturity will be removed from the calculation and tax will be allowed for notionally by rounding down the figure to the next 0.5%. You have provisionally estimated an average gross redemption yield on ILGS of minus 0.79%, pre-tax, for the three years ending 30 November 2016, to give a rounded discount rate of minus 1% pa.

You have asked me to address five specific questions (four in the 19 December 2016 letter and one in the 6 January 2017 letter). These are set out below, together with my response to each of the questions. Following this I have set out some further matters that may be considered when setting the discount rate.

Averaging period

The first question asked in your letter is as follows:

- 1) *Is there any reason to think that the calculated yield could be a misleading indicator of real returns on investment in government bonds over the past three years?*

We have agreed that this should be interpreted as asking the following question:

- 1) *Is there any reason to think that the calculated yield could be a misleading indicator of the expected real returns on investment in government bonds over the period compensation awards are intended to cover?*

There are a number of reasons why a calculated yield based on a three year average of the yield on ILGs could be misleading relative to the real returns achieved on ILGs for the period an award covers¹. The main reasons are summarised below:

- > *Averaging is a way of smoothing market volatility*
It won't necessarily capture current expectations of future yields. This is particularly the case where there has been in a trend in the change in yield over the averaging period. As can be seen in figure A1 in Appendix A, yields on ILGs with over 5 years to maturity have generally been falling over the last three years, although in the

¹ Some of these reasons have been discussed in previous GAD advice relating to The Damages Act 1996 (to the Ministry of Justice in December 2010 and January 2011, the Lord Chancellor's Department in December 2003 and the Department for Constitutional Affairs in 2005)

most recent months this trend has somewhat reversed. Hence averaging over this three year period provides a higher return than expected at the current date.

- > *Averaging does not provide any information about future yields*
Whilst the yield averaged over the last three years provides a higher return than the current yield available on ILGs, it provides no indication of what yields might be in future when awards yet to be made are ready to be invested.
- > *Yields vary significantly by duration*
Compensation awards are made to individuals with a wide range of future life expectancies and hence are expected to cover costs for differing periods. Over different periods of investment the returns produced by ILGs will be significantly different. Figure A2 in Appendix A shows that currently real yield on ILGs with 5 years to maturity is around -2.5% pa, whereas for ILGs with 20 years to maturity it is -1.6% pa.

Additionally, the current yields available in the ILG market are at rates not previously experienced. There are a number of factors influencing these yields; high demand from insurers investing to meet regulatory requirements and pension funds attempting to match their inflation linked pension liabilities, combined with a reduced supply of conventional gilts, due to the Bank of England's Quantitative Easing (QE) programme, causing increased investor demand for ILGs. Future yield levels and hence returns achievable on the investment of awards could vary materially from the current market position.

Over five year ILG yields at 31 December 2016 were around -1.7% pa, using a three year averaging approach the average yield would be around -0.8% pa. Adopting a yield averaged over a period is unlikely to represent the return achievable on investment in an appropriate ILG portfolio for most awards. However, due to the unprecedented position of the ILG market, using an averaging period will reduce the risk of setting a rate at what might prove to be a low point for yields.

There is no certainty about the future direction of yields in the ILG market, although the upward sloping yield curve (see Figure A2 in Appendix A) indicates that investors believe future short to medium term yields will be higher than current yields. If future yields do increase, then using an averaging approach at a future review would result in the average yield being lower than the yield at the calculation date.

The frequency at which future reviews occur could affect the decision about the extent to which an averaging approach is required. Frequency of reviews is discussed later in this letter.

Calculation date

- 2) *We are proposing to base the new discount rate on the yield calculated for 31 December 2016. Do you agree?*

There is no reason not to use the 31 December 2016 date, if it is decided to average the yields over a long period such as 3 years or 1 year. If a shorter period is decided upon, then it should be noted that year end yields can often be distorted by traders closing out positions for the year. However, there is little evidence of large movements in yields on ILGs at the end of 2016. It is worth noting that 31 December 2016 fell on a Saturday so in practice the earlier date of 30 December (or later date of 3 January 2017) would be used.

Factors affecting ILG yields

- 3) *Is there any reason to think that there are any factors likely to have a significant impact in the market for ILGs in the short to medium term (i.e. the next three years), which, it would be reasonable to assume, will have a material impact on bond yields?*

The main factor affecting the yield available on ILGs (and other assets) is the supply of and demand for the asset. Both the supply of and demand for ILGs can vary over time as market conditions and the economic outlook alter. As noted above yields on ILGs are currently at historically low levels, with over five year ILG real yields around -1.7% pa compared to 0% pa in early 2014 (see Figure A.1 in Appendix A) and around 2.4% pa in early 2002.

One reason often cited for the current low level of index-linked gilt yields is caused by excess demand from pension funds for ILGs to match the characteristics of their liabilities against controlled supply. The Purple Book², published annually by the Pension Protection Fund, suggests that pension funds in the UK have increased their holdings of ILGs substantially in recent years, with asset allocation to ILGs more than doubling since 2006. This demand is increased by insurers, particularly those with large pension annuity books, with regulatory requirements that increase their desire for ILGs to back their liabilities. This demand trend may continue as pension schemes seek to reduce the risks arising from their liabilities, which are likely in the main to be pension payments with index-linked characteristics, either directly within their investment strategy or through buy-outs with insurance companies.

There are various other factors that could alter supply and/or demand in the ILG market, such as:

- > *Brexit*: as details emerge of the type of Brexit that occurs and hence implications for the economy, borrowing requirements and investor confidence in repayments.
- > *US political scene*: the new president and what that means for global trade and economic growth.
- > *Quantitative Easing (QE)*: the Bank of England could extend or begin unwinding QE, with potentially significant implications for yields.

In my view, therefore, there is considerable uncertainty regarding the future yields that will be available in the ILG market. It is difficult to predict how the market will develop, but it is highly likely that the yields available on ILGs in the short to medium term will vary, to some extent, from the current yields.

Taxation

- 4) *We have used rounding to adjust the values to taxation. We know that tax is more complex than this but think that this is a simple proxy and is consistent with the recommendation from the expert panel report (October 2015). Do you agree with this approach? If not, please advise as to how the yield on ILGs should be corrected with respect to tax on income?*

The amounts of the future losses to be compensated are calculated net of tax, because the aim is to replace the net loss to the plaintiff. In the House of Lords judgment in *Wells v Wells*, all the law lords stated that the chosen discount rate should be adjusted for tax. However, no objective method for doing this was given in the judgment, thus leaving open the question of how this should be determined.

² http://www.pensionprotectionfund.org.uk/Documents/Purple_Book_2016_chapter7.pdf

Their Lordships in *Wells v Wells*, and subsequently the Lord Chancellor, took a broad brush approach to adjust for tax by reducing the prevailing gross real yield by 15%, suggesting a reduction to the yield at the time of 0.37 percentage points.

If the calculated yield at the end of December remained at minus 0.79% the proposed approach would reduce the yield from minus 0.79% to minus 1.00%. This represents a reduction of 0.21 percentage points.

Individuals who invest in ILGs pay income tax on the coupon payments but the capital gains are tax free. The steady issuance of new ILGs with lower coupons has reduced average coupons on ILGs from around 2.5% in 2001 to less than 1% in December 2017. As such, the proportion of the return from investing in ILGs that would be subject to tax will be lower now than it was in 2001. Therefore, it is not unreasonable that the adjustment for tax is lower than that determined by the Lord Chancellor in 2001.

The actual tax implications will vary depending upon the actual rate of coupons on the portfolio of ILGs considered, and on the individual tax circumstances of the individual. At the current time, an adjustment of up to 0.2 percentage points would be reasonable for a basic rate taxpayer. However, the proposed approach to adjust the yield to allow for taxation could result in a reduction of between 0 and 0.5 percentage points from the calculated yield, and as such may not be appropriate under all circumstances. For example, if the calculated yield is minus 0.99% then rounding down to minus 1% would only include a very modest adjustment of 0.01%.

Given the other simplifications involved in assessing the amount of damages to be awarded, and the proposed average yield of around minus 0.8% pa, I consider the proposed adjustment to be reasonable, on this occasion.

With regard to higher rate tax, I would agree with the comments made by Lord Steyn in the *Wells v Wells* judgment that:

‘the position regarding higher tax rates should remain as Lord Oliver of Aylmerton in Hodgson v Trapp [1989] 1 AC807 at 835B described it, viz. that in such exceptional cases plaintiffs would be free to place their arguments for a lower rate before the court.’

Best proxy to determine discount rate

5) *Please can you advise on the best proxy to use to arrive at an appropriate discount rate which complies with the legal principles set out below?*

In your letter dated 6 January 2017 you note that the legal principles set out in *Wells v Wells* (1998) are:

- > “The measure of the discount is the rate of return which can reasonably be expected on that sum [the lump sum for future pecuniary loss] if invested in such a way as to enable the plaintiff to meet the whole amount of the loss during the entire period which has been assumed for it by the expenditure of income together with capital”
- > “This [the discount rate] is the rate of interest to be expected where the investment is without risk, there being no question about the availability of the money when the investor requires repayment of the capital and there being no question of loss due to inflation.”

The principle set out in the first bullet point above is consistent with determining a discount rate by considering a typical investment portfolio that would be expected to meet the plaintiff's financial needs. Such a portfolio would typically be constructed allowing for the financial needs of the individual, and hence the level of inflation protection required, as well as their risk appetite. Portfolios could then be constructed using various asset classes, to try and maximise the potential return subject to the level of risk appropriate for the individual. For individuals where a degree of risk taking is acceptable, portfolios would be expected to provide a higher return than that produced by the proposed approach, but with a greater risk of poor performance. The increased risk can result from a variety of factors including the risk from defaults, market risks (eg if equities were held and needed to be sold following a market crash) and the level of inflation protection provided.

The principle set out in the second bullet point is, however, unequivocal in requiring the investment portfolio to be "without risk" and there being no question of "loss due to inflation". Whilst it is relevant to note that no investment is entirely without risk, the requirement to avoid loss due to inflation provides a strong steer towards a portfolio of ILGs, being government backed and inflation proof (subject to limitations of the inflation measure, discussed further below, and availability). Whilst other investments may provide an indirect match to inflation risk and potentially more attractive real returns, they do so only by exposing the investor to underperformance risks.

Despite the view that the second principle is unequivocal in direction towards a risk free approach, it should be noted that in practice an investor may not be able to achieve the truly risk free portfolio. Whilst there are a wide range of index-linked gilt securities with different durations, even with a range of stocks and with access to more sophisticated products an investor will be unlikely to achieve a precise match between the expected cash flows and will therefore be exposed to investment risk.

Additionally, and as noted earlier, the price of ILGs has been driven to unprecedented levels such that ordinary investors have to pay a very high price for inflation protection. It is unlikely that such a position was envisaged at the time the above principles were set in 1998. Nevertheless, this second principle inevitably directs the approach for the "best proxy" towards a portfolio based on the least risk inflation linked investment, namely ILGs. Hence the discount rate would be set allowing for the return expected from such a portfolio.

Other considerations

Frequency of review

Consideration will need to be given as to how the rate will be updated in the future. Will this be done from time to time or on a periodical basis or only if market changes warrant a change? If the latter, what changes would prompt a review? These considerations may influence how rounded a rate might be appropriate e.g. is it intended to be stable and broadly reflective of the market for a relatively long period or change on a more frequent basis? More frequent reviews may also mean that there is less need to use an average rate, as any concern about latest rates being unrepresentative will be dealt with by regular updates.

If the rate is not changed for a lengthy period, then identical plaintiffs with the same amount of award could purchase significantly different income streams depending on the market conditions at the time they invest the award. Anomalies may also occur for awards made around the date that the rate is changed, especially if a change is made only if yields have moved by a relatively large amount.

The use of a system whereby the rates used move in discrete steps at regular intervals would provide scope for plaintiffs and defendants to try to accelerate or delay hearings to take account of anticipated changes of the rate which would result in amounts of awards moving in, or against, their favour.

The existing rate has been in place for many years, and it would seem appropriate to take the opportunity at this review to establish a process by which future review timings can be determined. This could for instance be at regular intervals of time, when a market indicator reaches, or departs from, a certain level or some other metric to ensure the rate remains at a reasonable level.

Rounding

Lord Lloyd of Berwick and Lord Hope of Craighead, in the *Wells v Wells* judgement, expressed the view that the rate chosen should be rounded, if necessary, to coincide with the rates currently set out in the Ogden Tables, or should only change by an amount of 0.5% or multiple thereof when altered. Although this also effectively corresponds to choosing a rate amongst those currently given in the Ogden Tables, there is no particular virtue in any of the rates given in the Ogden Tables. For example, using a rate of say 2.62% is no more or less accurate than using 2.5% and the underlying calculations are no more difficult.

It is possible to provide computer software which could calculate the multiplier at any rate of interest, or, alternatively, using multipliers at rates not given in the Ogden tables can easily be obtained by simple linear interpolation between the multipliers given in the Ogden tables at specified rates of return. This would be accurate enough in the context of the other imprecisions involved in the process.

However, given the uncertainties and imprecisions involved in the process, it would be customary to adopt a rounded rate. The extent of rounding need not however be as significant as to the next 0.5% and could instead reasonably be to the next 0.25% for instance.

Inflation

The arguments above for using the yields available on ILGs implicitly assume that the amounts of future losses are likely to increase in line with RPI inflation, which is the inflation measure incorporated in these bonds. However, some elements of the loss, such as loss of earnings or medical care costs, are unlikely to be subject to RPI inflation. It may also be argued that some elements would increase in line with CPI inflation rather than RPI inflation. In general CPI inflation has historically been around 75 to 100 basis points below RPI inflation, with a current expectation that such a gap will continue in the future. Assuming loss increases linked to CPI would increase the discount rate by the assumed differential between RPI inflation and CPI inflation.

Investment expenses

It is unlikely that a plaintiff would wish to manage the investment of any damages award themselves. Thus, it is likely that the plaintiff would need advice on how to invest the award. The costs of such advice would effectively reduce the gross investment return earned. Gilts can be bought and sold very cheaply, although advice would probably be taken to arrange an appropriate portfolio. The proposed method to determine the discount rate makes no allowance for investment expenses.

Please contact me, Stephen Humphrey or Steve Lewis if you have any questions on the matters raised in this letter.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Martin Clarke'. The signature is written in a cursive style with a large initial 'M'.

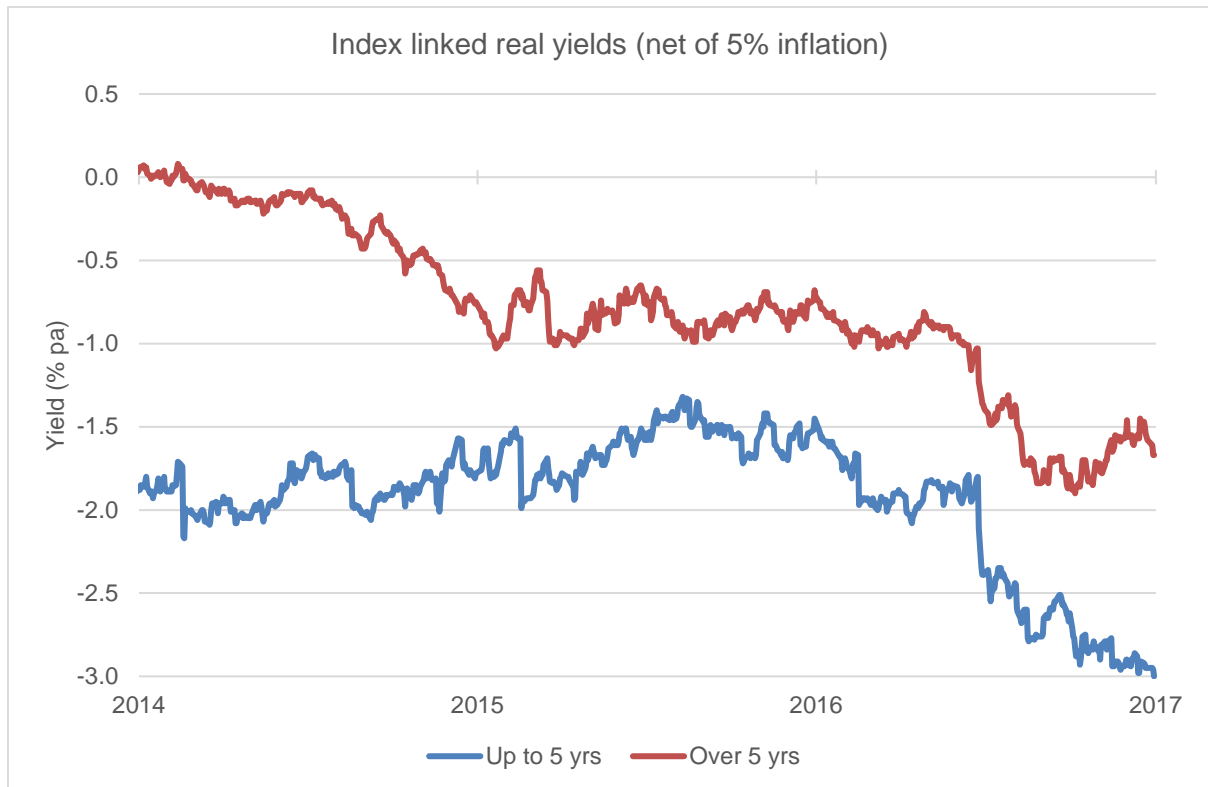
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Appendix A

Figure A1 shows the yields, net of 5% inflation, on ILGS of terms 5 years or less and greater than 5 years over the 3 years to 30 December 2016 (based on the FTSE Actuaries UK Index-Linked Gilts Over 5 Years Index).

Figure A1: Index linked real yields (net of inflation)

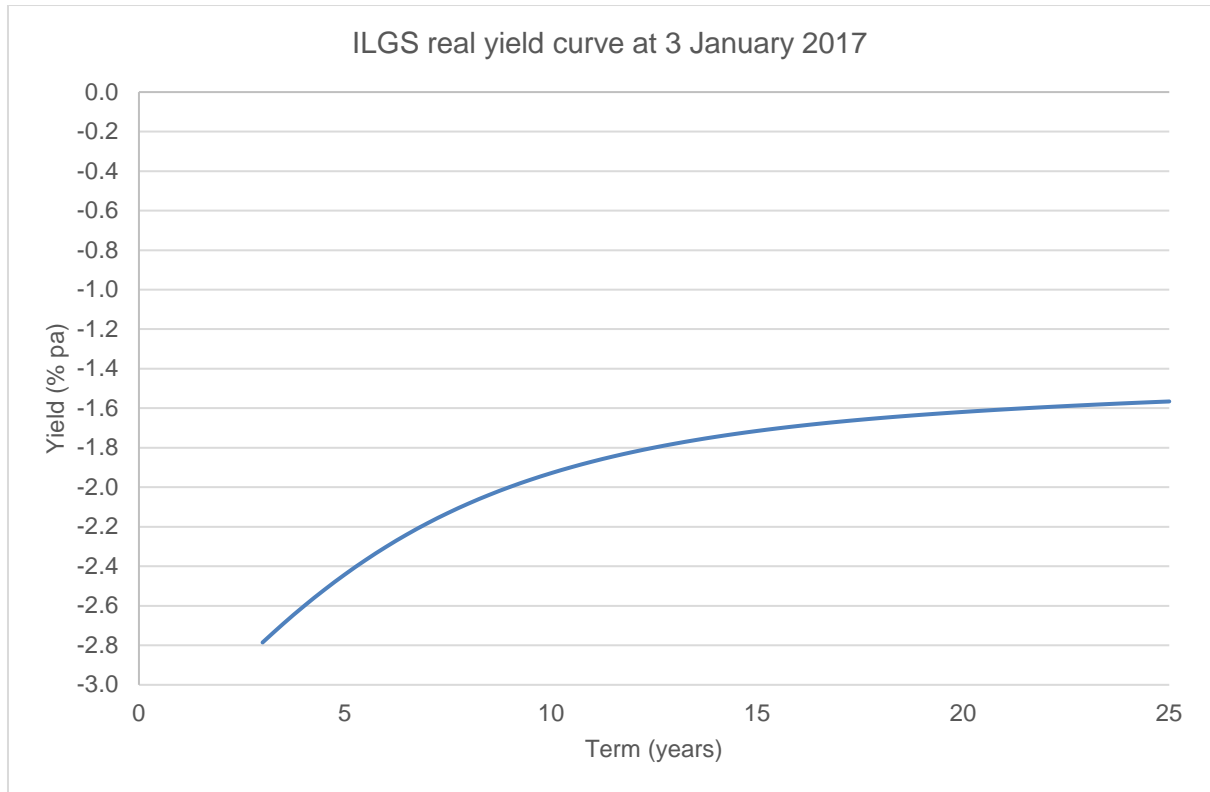


Source: FT ILGS indices

Figure 1 shows that over the last three years the yields on ILGS with over 5 years to maturity fell from around 0% in December 2013 to minus 1% in March 2015, then fluctuated between minus 0.7% and minus 1% before falling again from the end of June 2016 to a low of minus 1.9% in October 2016. Since then yields have gradually risen to around minus 1.5% in mid-December 2016, before falling back to around minus 1.7% at the end of December.

Figure A2: Index linked real yield curve (net of inflation), 3 January 2017

Figure A2 shows the real yield curve as calculated by the Bank of England as at 3 January 2017.





HM Treasury

Osama Rahman
 Director for Analytical Services and Chief Economist
 Ministry of Justice
 102 Petty France
 London SW1H 9AJ

12 January 2017

Dear Osama

Response to MoJ Consultation: The Damages Act 1996 – Discount Rate

1. Thank you for your letters of 19 December 2016 and 6 January 2017 seeking HM Treasury's views on setting the discount rate used to adjust lump sum awards for future pecuniary losses in personal injury claims (the "personal injury discount rate" or PIDR). This letter constitutes HMT's formal response to the consultation that is required by section 1(4) of the Damages Act 1996.
2. Our response is divided into two parts.
 - a. the first section considers the merits of continuing to rely upon index-linked gilt (ILG) yields as the appropriate reference rate for the PIDR and proposes an alternative proxy based on a more mixed portfolio of instruments; and
 - b. the second section responds to the specific questions you raised regarding the calculation of an updated 100% ILG-based PIDR were this approach to be retained.

A. An Updated Basis for Calculating the PIDR based on the Wells Principles

3. In its judgment in *Wells v Wells* (1998), the court ruled that its task in assessing damages for personal injuries is to arrive at a lump sum which represents full compensation for the injury which the claimant has suffered. In determining full compensation, the PIDR should be equivalent to "the rate of return which can reasonably be expected on [the lump sum award] if invested in such a way as to enable the plaintiff to meet the whole amount of [their] loss during the entire period which has been assumed for it by the expenditure of income together with capital." Given the particular circumstances of personal injury claimants, the PIDR should also reflect their exceptional aversion to risk and be calculated such that "the rate of interest to be expected is without risk, there being no question about the availability of money when the investor requires repayment of capital and there being no question of loss due to inflation."¹
4. The PIDR should therefore be based on the hypothetical investment strategy of an unsophisticated risk-averse investor, who has to balance the two very different risks highlighted in *Wells*: risks to availability of their capital and risks due to inflation. The court was clear that how a hypothetical risk-averse investor in fact invests their award is irrelevant; what matters is which hypothetical investment strategy is, in principle, in the best interests of claimants, and in particular what discount rate is implied by such a strategy.
5. In light of the above principles (the "Wells principles"), the court concluded that, based on the range of investment instruments available and their performance to date, the PIDR should be set with reference to the yield on index-linked gilts (ILGs) issued by the UK Government. Pursuant to his powers under Section 1 of the 1996 Damages Act, the then Lord Chancellor set a PIDR of 2.5 percent based on the tax-adjusted average yield on ILGs

¹ <http://www.publications.parliament.uk/pa/ld199798/ldjudgmt/jd980716/page01.htm>

over the preceding 3 years as well as expert advice on the investment performance of other low risk investments.²

6. The Treasury is of the view that economic and financial developments in UK since 2001 warrant a reconsideration of the range and balance instruments used to calculate a PIDR which continues to meet the Wells principles in these changed circumstances. Specifically, in the decade-and-a-half since the Wells judgement and Lord Chancellor's 2001 decision:
 - a. Real yields on ILGs have gone from being universally positive to negative at every maturity point on the yield curve. This is due to a combination of macroeconomic, policy, and regulatory factors which have fuelled demand for ILGs, especially since the global financial crisis. The advent of universal negative yields on ILGs means that a personal injury claimant, investing solely in this instrument, would expect to see a negative real return on the sums invested.
 - b. Market risks have also increased in the gilt market, particularly since the global financial crisis – most notably, price volatility in ILGs is higher. This is particularly apparent as ILGs tend to have long maturities, and are therefore more price sensitive to smaller changes in yield. This means that a hypothetical risk-averse investor, looking to liquidate a relatively small ILG position on the secondary market prior to maturity now faces higher price risks in the market.
 - c. A range of new investment instruments have come onto the market which offer investors inflation-based returns. These include index-linked bonds issued by corporates and other public sector entities, many of which carry "investment grade" risk. A hypothetical risk-averse investor seeking inflation protection has a significantly broader range of instruments to choose from today than they did in the early 2000s.
7. All of these developments serve to reduce the appropriateness of ILGs alone for an unsophisticated risk-averse investor. ILGs protect against risks due to inflation but not against market risk unless held to maturity. Given that the profile of a claimant's future care needs and other expenditures cannot be predicted with certainty, it is not possible to exactly match the cash flow requirement with the maturity profile of ILGs. Such an investor is therefore likely to have to access their capital prior to maturity from time to time, and therefore is exposed to market risk. The increase in price volatility and market risks mean that the investor may not be able to access their capital in full when needed. We also note that constructing an ILG portfolio whose maturity profile even approximated their cash needs would be beyond the wherewithal of an unsophisticated investor and require expert financial advice.
8. As such, ILGs cannot be said to offer a hypothetical risk-averse investor with a "risk-free" return on their investment. Indeed, no individual investment instrument can be deemed "risk-free". Moreover, the above developments since 2001 increase the attractiveness of other instruments for the hypothetical unsophisticated risk-averse investor. An attempt to develop a discount rate which approximates the Wells principles in today's circumstances needs to look beyond ILGs toward a more diversified portfolio of instruments.
9. It is the Treasury's view that the "mixed portfolio" of the type developed by the expert panel report in October 2015 represents a more appropriate benchmark for the PIDR than ILGs alone. The results of the extensive financial analysis conducted by the expert panel in Appendix 2 of their report supports this conclusion. In particular:
 - a. A 100% ILG investment lies very far from the efficient frontier of achieving the best return for a given degree of risk, as it offers much poorer returns and significantly higher volatility than a "best risk" portfolio of bonds and equities (Chart 9).

² <http://www.publications.parliament.uk/pa/ld200102/ldhansrd/vo011129/text/11129-22.htm>

- b. In the period since 1983, the largest sustained drop in the market value of ILGs relative to RPI has been almost 30% (Chart 5) and there have been ten 2-year periods where ILGs returns relative to RPI were negative (Chart 7).
 - c. Chart 4 also notes that there are other portfolios with UK corporate bonds, which have risk equivalent to ILGs (where risk is measured by price volatility), yet offer higher returns. As a result, “ILGs have produced the lowest investment return per unit of downside risk [relative to RPI] over time”.
 - d. In the period 1999-2014, by investing 25% in the “best risk” portfolio (to provide liquidity) and 75% in ILGS (held to maturity), an investor would have earned returns above RPI while facing, at worst, a 2.2% fall in the value of their overall portfolio at any given moment (Chart 13). We note that this “mixed portfolio” is still 75% weighted with ILGs, and represents a cautious approach.
10. In light of the inevitable exposure to market risk that investors face, we believe the analysis in the Expert Panel’s report clearly supports a mixed portfolio approach as the right solution for risk-averse investors. Indeed, the panel was unanimous in its view that the mixed approach was the optimal solution, if risk-averse investors could be regarded as pursuing a more realistic “very low risk” investment strategy rather than the hypothetical “zero risk” strategy of simply holding ILGs to maturity.
 11. While the Panel could not agree unanimously on which of these perspectives was appropriate, it noted explicitly that “it would appear that the Lord Chancellor’s decision is one of whether a “very low risk” portfolio or a “risk-free” portfolio is consistent with the current legal framework.” In subsequent correspondence, certain members of the panel noted that continuing volatility in financial markets meant that “the advice we gave you in our report about both anticipated risk-free real returns and returns from low risk portfolios all [now] requires revision.” In our view this further confirms the impossibility of adopting an entirely “risk-free” approach; since the profile of a claimant’s costs can never be predicted with certainty, and the market price of any investment including ILGs can vary, all approaches must involve a degree of exposure to market risk.
 12. It is the Treasury’s view that the purpose of the legal framework is to provide unsophisticated risk-averse investors with the best possible chance of meeting their costs in full as they arise, which neither holding ILGs to maturity nor accepting market risk on a 100% ILGs portfolio can achieve. On that basis, the Treasury considers the expert panel’s mixed portfolio approach, combining some ILGs held to maturity with a liquid portfolio of bonds and equities, to be the appropriate benchmark for the Lord Chancellor to adopt when setting the new PIDR under current circumstances.
 13. The Treasury further notes that the House of Lords in *Wells v Wells* clearly acknowledged that the choice of ILGs as the appropriate benchmark was contingent and based on their ability to satisfy the Wells principles guiding the award of compensation; there is no *a priori* reason to prefer ILGs if other investment strategies can equally or better satisfy the principles. As Lord Lloyd writes in the leading judgment in the case, “What the prudent plaintiff needs is an investment which will bring him the income he requires without the risks inherent in the equity market.” As the nature of the discussions in the rest of the judgment make clear, whether or not ILGs meet this test depends on the facts prevailing at the time. The Lord Chancellor further acknowledged in 2001 that “the approach to setting the personal injury discount rate must be fairly broad brush”. As such, we believe the discount rate chosen should be robust to future market developments.
 14. Finally, the Treasury notes that major advanced economies with very low or negative real yields on government bonds do not have negative statutory discount rates. From what we understand, in Germany the rate is 4%, while in France it is 1.2%, even though real yields on government securities are negative.

B. Responses to Technical Questions regarding Calculation of a 100% ILG-based PIDR

15. In your letter of 19 December 2016, you also asked for responses to a set of questions related to the calculation of an updated PIDR based solely on the yield on ILGs. While the Treasury considers this to be inappropriate for the reasons stated above, the section responds to each of these technical questions as requested.

Is there any reason to think that the calculated yield could be a misleading indicator of real returns on investment in ILGs over the past three years?

16. We distinguish between ILG real returns and yields. The return on an investment in a bond takes into account the changes in the price of the bond from when the bond is bought and sold (before maturity). The yield is a measure of return if the bond is held until maturity. The calculated real yield, -0.79% , is appropriate and not a misleading indicator of average real yields on ILGs over the past three years (to 30 November 2016), if the portfolio of ILGs were held until maturity. However, the real return on this portfolio over the past three years would be higher than -0.79% (and indeed positive, given that the price of ILGs has risen over this period), although this would require the investor to have sold the portfolio to realise the return.

We are proposing to base the new discount rate on the yield calculated for 31 December 2016. Do you agree?

17. We think it is reasonable to set the period as 1 January 2014 – 31 December 2016 inclusive.

Is there any reason to think that there are any factors likely to have a significant impact in the market for ILGs in the short to medium term (i.e. the next three years), which, it would be reasonable to assume, will have a material impact on bond yields?

18. The price for, and therefore yield on, ILGs will be driven by macroeconomic factors and demand for these instruments. As discussed in the previous section, economic, policy, and regulatory developments since the global financial crisis have introduced significant volatility into the demand for ILGs. The Treasury cannot predict the level and pattern of investor demand for ILGs over the next three years.


We have used rounding to adjust the values to taxation. We know that tax is more complex than this, but think that this is a simple proxy and is consistent with the recommendation from the expert panel report (October 2015). Do you agree with this approach? If not, please advise as to how the yield on ILGs should be corrected with respect to tax on income?

19. HMRC will be best placed to confirm tax treatment in detail, which will depend on the particular circumstances of each taxpayer. Individuals are usually taxed on interest income from ILGs (including the inflation uplift on the interest income) – but not taxed on the principal repayment at maturity (nor the inflation uplift on that principal). In other words, the tax on ILGs is highest for bonds which carry a high coupon.

20. As of 30 November 2016, only 5 of the 28 ILGs outstanding carried a coupon greater than 1.5%. This contrasts with the situation in mid-2001, when the discount rate was last set, where 10 of the 11 ILGs outstanding at the time carried a coupon greater than 2.5%. All else equal, this suggests that there is now less of a need to adjust gross real yields for tax when calculating the PIDR.

21. I am copying this letter to Martin Clarke at the Government Actuary's Department, Sir Robert Stheeman at the Debt Management Office and Sir Dave Ramsden at HM Treasury.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Richard Hughes". The signature is written in a cursive, flowing style.

Richard Hughes
Director, Fiscal Group
HM Treasury

ANNEX: Overview of discount rate expert panel’s portfolio analysis

Appendix 2 of the expert’s report models the appropriateness of various asset classes and portfolio mixes of these assets for a risk-averse investor on the basis of:

- Variability of investment returns below RPI inflation, based on looking at the standard deviation of performance of different asset classes since 1900 (or the earliest point that data becomes available e.g. 1983 for ILGs)
- Severity of drops from high to low in market value, to measure the worst case scenario effect on an investor who has to sell assets unexpectedly at a given point in the economic cycle.
- Sequencing of investment return risk, or the length of time periods when an asset class performed below inflation, as a measure of the likelihood that an investor might face having to sell in such circumstances.

The analysis is based on treating a 100% ILGs portfolio as being exposed to market risk rather than held to maturity. It benchmarks returns against RPI and assumes costs of 1% - 1.25% p.a. are incurred through investment management charges.

Key findings

Chart 4 considers the standard deviation of returns of different asset classes below RPI (i.e. ignoring upside returns above RPI) on the LHS chart, and the ratio of this standard deviation to the average performance above RPI on the RHS chart (i.e. how much compensation does one receive for the variability in performance). It shows that ILGs show roughly equal variability in returns below RPI to corporate bonds, but much worse average returns.

After cost variability of below RPI total returns in UK£

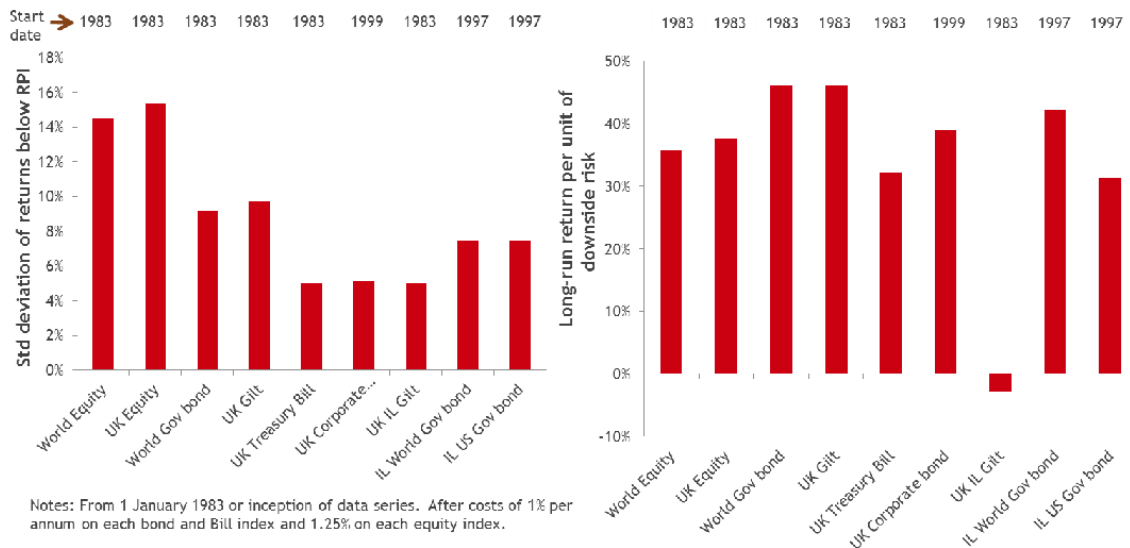
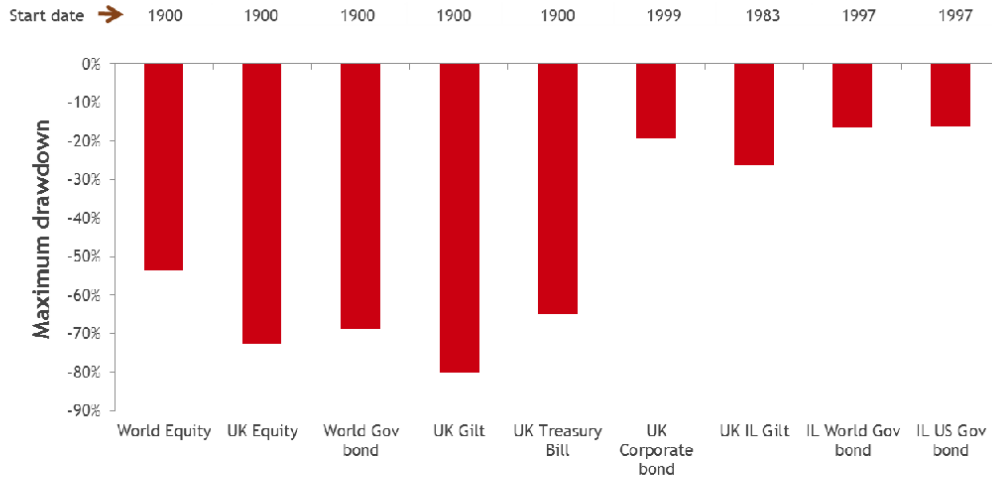


Chart 5 considers the worst case scenario size of fall in the market value of different asset classes versus RPI in the period analysed. It shows that ILGs have fallen in value by almost 30% below RPI at one point.

After cost maximum drawdown of RPI adjusted total returns in UK£



Notes: maximum drawdown measures the change from the highest peak to the lowest trough during the whole data period. After costs of 1% per annum on each bond and Bill index and 1.25% on each equity index.

Source: Barclays & Dimson, Marsh, Staunton.

Chart 7 considers the frequency and duration of periods of below RPI returns for different asset classes. It shows that ILGs have returned below RPI for ten 2-year periods in the data analysed, which is considerably more frequently than corporate bonds.

How long do below RPI investment return sequences last?

Years of data	115	115	115	115	115	16	32	18	18
Length of investment return sequence	World Equity	UK Equity	World Gov bond	UK Gilt	UK Treasury Bill	UK Corporate bond	UK IL Gilt	IL World Gov bond	IL US Gov bond
2 years	11	21	27	38	35	2	10	3	3
3 years	6	10	15	25	25	1	5	1	
4 years	3	4	8	18	19		2		
5 years	2	1	5	13	14		1		
6 years	1		3	9	10				
7 years			2	6	7				
8 years			1	4	5				
9 years				3	3				
10 years				2	1				

Notes: each bar represents the length of investment return sequences. The numbers within the bars represent the times that sequence occurred.

Source: Barclays & Dimson, Marsh, Staunton.

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Chart 9 considers the 'efficient frontier' for different portfolio based investment strategies, which is defined as those investment strategies that achieve the highest returns for a chosen degree of volatility. It shows that ILGs lie well below this frontier compared to bonds or a mixed portfolio and offer both lower returns and higher annual risk than a mixed portfolio.

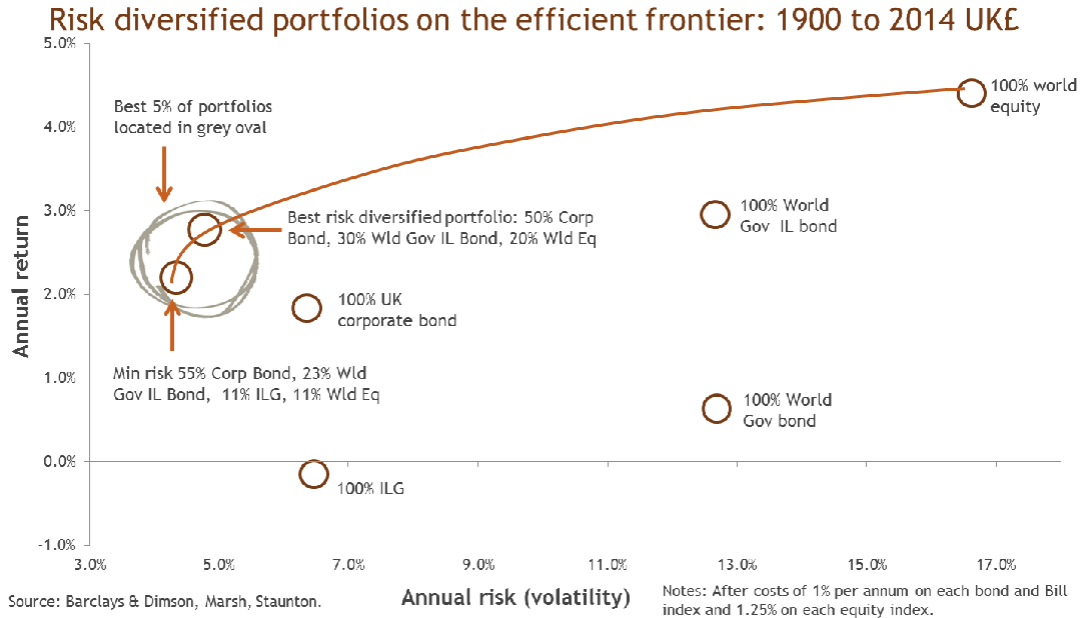


Chart 13 considers the performance achievable from a mixed portfolio of ILGs and the 'best risk' bond-equity portfolio located on the efficient frontier. The analysis assumes that ILGs are held to maturity because liquidity is provided by the bond-equity portfolio, and so the ILGs element of the portfolio does not suffer from any market risk. It shows that a portfolio 25% invested in bonds-equities has very low risk, considerably lower than a ILGs portfolio that is exposed to market risk as in the analysis above.

Investment risk according to proportion held in the best risk portfolio

		Proportion of risky portfolio held		
		100%	50%	25%
Investment return and volatility				
	Annual average return above RPI	2.5%	1.25%	0.625%
	Standard deviation (volatility) of returns	5.0%	2.50%	1.25%
Five key investment risk metrics most relevant to the Prime Directive				
1.	Downside volatility below RPI	2.5%	1.3%	0.6%
2.	95% Value at Risk	-5.3%	-2.7%	-1.3%
3.	5% Conditional Value at Risk	-7.0%	-3.5%	-1.8%
4.	Drawdown			
4a.	Drawdown 2000 to 2009	-8.8%	-4.4%	-2.2%
4b.	Drawdown 2010 to 2014	-0.2%	-0.1%	0.0%
4c.	Max drawdown 1999 to 2014	-8.8%	-4.4%	-2.2%
5.	Sequencing risk	virtually 0	virtually 0	virtually 0

Notes: RPI averages 2.85% between 1999 and 2014.