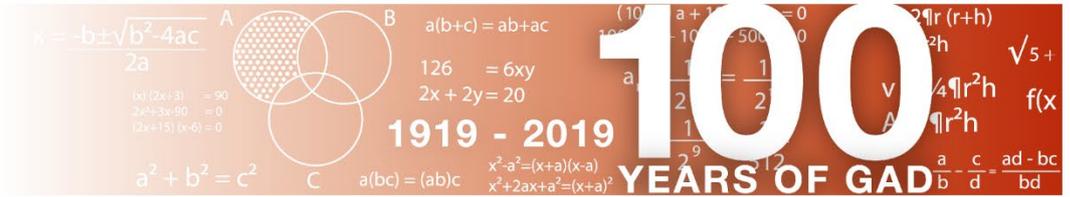




Government
Actuary's
Department



The Personal Injury Discount Rate

Review and determination of the rate
in Scotland by the Government
Actuary

27 September 2019

Martin Clarke, Government Actuary



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1 Executive Summary

Background

- 1.1 The Personal Injury Discount Rate ('PI discount rate') is used to determine lump sum damage awards to pursuers who suffer a serious personal injury.
- 1.2 The Damages (Investment Returns and Periodical Payments) (Scotland) Act 2019 ('the Act') sets out the way in which the PI discount rate is to be set by the Government Actuary in my role as the 'rate assessor' as defined in the Act.
- 1.3 This report has been prepared in accordance with the requirements of the Act and as per the letter of engagement received from the Minister for Community Safety dated 25 June 2019. It sets out my determination of the PI discount rate together with a summary of the calculations on completion of my review on 27 September 2019.

The PI discount rate

- 1.4 **Following my review of the PI discount rate I have determined that the rate should remain at RPI-0.75% pa.** The PI discount rate is expressed relative to RPI (ie $RPI \pm X\%$ pa) as set out in the Act and remains unchanged from the current method of expressing the PI discount rate in Scotland.
- 1.5 Table 1 provides a breakdown of this rate and sets out its different component parts that make up this rate of RPI-0.75% pa.

Table 1: Breakdown of the PI discount rate

	% pa
Gross return above RPI inflation from notional portfolio before standard adjustments	RPI+0.50%
Standard adjustment for tax and costs of investment advice and management	-0.75%
Standard adjustment for further margin involved in relation to the rate of return	-0.50%
PI discount rate	RPI-0.75%

- 1.6 The return of RPI+0.50% pa represents my assessment of the median gross expected return over RPI inflation on the notional portfolio over 30 years in accordance with the requirements of Paragraphs 7, 9 and 12 of Schedule B1 of the Act. Whereas the standard adjustments are those deductions set out in Paragraph 10(2) of Schedule B1 of the Act.
- 1.7 Were the PI discount rate to be set with reference to average yields on Index-Linked Gilts as set out under the previous framework of the Damages Act 1996 ('the 1996 Act'), I expect the resulting PI discount rate to be in the region of RPI-2.0% to RPI-1.5% pa.

2 Background and approach

This Chapter provides background information on how the PI discount rate is set and an overview of the previous analysis GAD undertook for Scottish Ministers which informed the key assumptions, parameters and adjustments that feed into the current review.

How the PI discount rate is used

- 2.1 Awards of damages for pursuers with serious and long-term injuries are intended to provide victims of life-changing events with full and fair financial compensation for all the expected losses and costs caused by their injuries.
- 2.2 Where a claim for future losses is settled as a single cash amount, the assessment of future losses and costs is converted into a lump sum allowing for:
 - the period over which losses and costs are expected to be met
 - the assumed investment return that a pursuer expects to earn on the lump sum award
- 2.3 The assumed investment return is referred to as the Personal Injury Discount Rate ('PI discount rate').

Legislative background and requirements

- 2.4 Hitherto the Damages Act 1996 ('the 1996 Act') provided for Scottish Ministers to set the PI discount rate in Scotland, and this was done based on principles set out in case law, principally the decision of the House of Lords in *Wells v Wells*¹. Under these principles the PI discount rate in Scotland has been set with reference to average yields on Index-Linked Gilts - resulting in a current real PI discount rate of -0.75% pa².
- 2.5 If the PI discount rate were to be set with reference to the above principles, then I would expect the resulting PI discount rate to be in the region of RPI-2.0% to RPI-1.5% pa, depending on the period over which gilts yields are averaged, which gilts are used as a reference and the exact allowance for tax and expenses.
- 2.6 On 24 April 2019, the Damages (Investment Returns and Periodical Payments) (Scotland) Act 2019 ('the Act') received Royal Assent, thus amending the 1996 Act and introducing a change to the way that the PI discount rate is to be set in the future.

¹ [1999] 1 AC 345

² This rate is net of RPI inflation

- 2.7 The Act requires the Government Actuary, as the rate assessor in Scotland, to set the PI discount rate with reference to the return expected on the notional portfolio set out in the Act. The Act requires that this investment return is adjusted for:
- tax and costs of investment advice and management as set out in Paragraph 10(2)(a) of Schedule B1 of the Act; and
 - a ‘further margin’ as set out in Paragraph 10(2)(b) of Schedule B1 of the Act, which improves the likelihood of the pursuer having sufficient funds to meet their damages.
- 2.8 This report includes the PI discount rate determined following my review and a summary of the calculations. This report has been prepared in accordance with the requirements of the Act and is in line with the letter of engagement received from the Minister for Community Safety dated 25 June 2019 (which is copied in Appendix C).
- 2.9 As required by Paragraph 23(3) of Schedule B1 of the Act, the date my review was concluded and sent to Scottish Ministers is 27 September 2019.

Approach

- 2.10 My approach to determining the investment return on the notional portfolio is to consider:
- simulated portfolio returns using a stochastic Economic Scenario Generator (ESG); and
 - other views on the returns of asset classes included in the notional portfolio such as GAD’s own house views and publicly available views of other investment managers and advisers on investment returns.

In view of the experience of investment markets in 2019, I have also had regard to any short term political and economic uncertainty and volatility in investment markets that feed into the ESG models and views on future returns.

- 2.11 ESGs can be used to generate possible future paths of economic and financial variables allowing for any inter-dependencies that exist between each variable. In this case I have used the ESG to generate the possible future rates of inflation and investment returns that may be achieved from different asset classes. I have determined the expected investment return on the notional portfolio in the ESG with reference to the median simulated return over the prescribed investment period.
- 2.12 I have considered simulations from ESGs calibrated to economic conditions at 30 June 2019, the latest quarterly calibration available. However, given the recent volatility in expected investment returns and bearing in mind that the PI discount rate is likely to be in force for 5 years, I have also considered how the expected investment returns produced by ESGs have changed since those calibrated for economic conditions as at 31 December 2018. Further details on the Economic Assumptions are outlined in Appendix B.

- 2.13 Although the Act does allow me to consult in making my recommendation, I have not chosen to consult because:
- there was a relatively short period between the new legislation being debated and coming into force and the timing of the first review, which means that there is limited scope for new evidence or views to emerge;
 - I have been able to test the suitability of the economic assumptions made against GAD's house views and other publicly available sources; and
 - evidence was collected for the Lord Chancellor's determination of the PI discount rate in England and Wales, which is broadly applicable and relevant and permissible for me to use under Paragraph 29(1) of Schedule B1 of the Act.
- 2.14 Although I have not launched a consultation, I have received submissions from two interested parties expressing views on my determination.

Previous GAD advice

- 2.15 Previously the Scottish Government had asked the Government Actuary's Department (GAD) to produce analysis to inform the parameters and adjustments within the Act and the impact of potential changes to the law. The GAD report dated 5 September 2018³ considered the following key factors:
- analysis of the construction and composition of low risk portfolios – to inform the choice of the notional portfolio;
 - the levels of allowance for expenses and tax – to inform the adjustment for tax and costs of investment advice and management; and
 - analysis of outcomes for pursuers in receipt of a lump sum award of damages for future financial loss under different PI discount rates and different assumed pursuer profiles – to inform the choice of the 'further margin'.
- 2.16 As it was not requested in my letter of engagement, the impact that the recommended PI discount rate might have on pursuers is not quantified and considered further in this report. However, the impact of the rate can be inferred from the analysis in the previous GAD report.

Rest of this report

- 2.17 In the rest of this report:
- Chapter 3 outlines the assumption and parameters I have used in my recommendation
 - Chapter 4 outlines the results of my recommendation and the sensitivity to the assumptions used

³ <https://www2.gov.scot/Resource/0054/00540068.pdf>

3 Assumptions and parameters

This Chapter sets out the assumptions made and parameters used in determining the PI discount rate.

Parameters specified in legislation

- 3.1 Many parameters for my determination are specified in legislation. The previous GAD analysis informed the setting of these parameters by Scottish Ministers, who considered these together as a whole and not in isolation from each other. They were scrutinised as part of the parliamentary process in Scotland as the legislation was debated and approved by the Scottish Parliament and received Royal Assent.
- 3.2 These parameters are now prescribed within Schedule B1 of the Act, have been incorporated into my assessment and are summarised below for reference.

Table 2: Parameters prescribed within the Act

Prescribed assumption/parameter	Regulatory reference
Composition of notional investment portfolio	Paragraphs 7(2), 12
30 year investment period	Paragraph 7(2)
Real returns to be assessed relative to RPI inflation	Paragraph 9(2)
Deduction for tax and expense of 0.75%	Paragraph 10(2)(a)
Deduction for further margin of 0.50%	Paragraph 10(2)(b)

- 3.3 Although these parameters are prescribed and have been set by Scottish Ministers, Chapter 4 of this report does provide some further comment on the impact that they have on the PI discount rate determined.

Future of RPI

- 3.4 As outlined in Table 2, the Act prescribes that I determine the real return on the notional portfolio, relative to RPI inflation. On 4 September 2019, the Chancellor responded⁴ to both the UK Statistics Authority's (UKSA) proposed reforms to RPI⁵ and the Lords Economic Affairs Committee report 'Measuring Inflation'⁶, which outlined the potential for future changes to the way in which RPI is measured.
- 3.5 In his response to the UKSA, the Chancellor recognised that there are flaws in the way that RPI is measured. However, he did not give consent for UKSA to stop publishing RPI

⁴ <https://www.gov.uk/government/publications/a-response-from-sajid-javid-to-sir-david-norgrove-on-uksas-proposed-reform-of-the-retail-prices-index-and-the-governments-response-to-the-house-of>

⁵ <https://www.statisticsauthority.gov.uk/correspondence/letter-to-the-chancellor-of-the-exchequer-section-21/>

⁶ <https://www.parliament.uk/business/committees/committees-a-z/lords-select/economic-affairs-committee/news-parliament-2017/measuring-inflation-report-publication/>

or to change its methodology to bring RPI in line with CPIH⁷, as the UKSA had proposed. The Chancellor stated that the government will begin consultation in January 2020 to decide if changes, based on proposals by UKSA, should take place between 2025 and 2030. After 2030, the UKSA will no longer need the Chancellor's consent to make changes to RPI.

- 3.6 Ahead of the consultation, it is not possible to know what changes might be made to RPI and when such changes might be introduced. Given the uncertainty, I have not made any allowance for the outcome of this consultation in my advice. Instead I would recommend that the appropriateness of the PI discount rate is reviewed when the consultation is concluded and there is more clarity on potential changes to RPI.

Other necessary assumptions

- 3.7 Although the Act specifies many of the material parameters for my assessment of the PI discount rate, it is still necessary for me to make a number of other assumptions in relation to the returns that I have modelled on the notional portfolio. These include:
- **Economic assumptions** – simulations or views of inflation and asset class returns for a wide range of asset classes
 - **Asset class assumptions** – assumptions made in mapping the asset classes contained in the notional portfolio to:
 - those available in ESG simulation sets and the indices and historical returns that these are calibrated to; or
 - views on asset class returns that are provided by others
 - **The investment approach** – the decisions investors make when investing in the notional portfolio

Economic assumptions

- 3.8 I have considered scenarios employed from two proprietary third party models calibrated to economic conditions at both 31 December 2018 and 30 June 2019. The results from using both simulation providers in this way is broadly consistent with the GAD house view of future investment returns and the publicly available views of other investment managers and advisers.
- 3.9 I have considered calibrations at both 31 December 2018 and 30 June 2019 to better understand the short-term impact on the expected returns that currently arises due to recent volatility in investment markets linked to short-term political and financial uncertainties.

⁷ Consumer Prices Index including owner occupiers' housing costs

- 3.10 Although the assumptions and models underpinning the two scenario sets differ between the two providers, the high-level approach is similar in that:
- different models and assumptions are chosen for different variables and asset classes based on the characteristics of the assets and observed historical trends;
 - the assumptions and models are informed by consideration of historical returns data from broad market indices (such as the Financial Times Stock Exchange or “FTSE”), as such they are intended to replicate investments in such broad indices or benchmark returns for the asset class; and
 - the models are calibrated to reflect both recent economic conditions and longer-term trends that reflect the assumption that economic cycles revert back towards long term economic “norms”.

Asset class interpretation

- 3.11 Given that the scenario sets include a wide range of simulated asset returns, I have had to make assumptions in relation to how the notional portfolio is best represented and modelled. For example, which assets classes included in the simulation set might best represent “other types” included in the notional portfolio. Appendix B contains further details on the asset classes that I have assumed and the broad market indices that these asset classes are calibrated to.
- 3.12 Further, in projecting the notional portfolio returns, I have assumed that investments within it are selected consistently with the specified investment period. In particular, I have assumed that bond investments (apart from high-yield bonds) within the portfolio are chosen such that their redemptions broadly match the need to meet regular cashflows during the 30-year period of investment prescribed in the Act⁸.

Investment approach

- 3.13 In my modelling of the return on the notional portfolio I have assumed (i) the asset allocation remains constant throughout the entire period (ii) benchmark or passive returns under each asset class and (iii) an investment objective that remains unaltered throughout. I have not explicitly modelled enhancements to these returns from active management of each investment mandate, of the asset allocation or of the regular drawdown of funds, all of which might result from the employment, at a cost, of persons or firms that are skilled in providing advice in these areas.

⁸ Further details are outlined in the Technical Memorandum: <https://www.gov.uk/government/publications/setting-the-personal-injury-discount-rate>

- 3.14 I believe that it is appropriate to assume passive returns from a static asset allocation and with an unchanging investment objective because:
- the notional portfolio defined in the Act does not provide any provisions for the asset class allocation to alter over time;
 - the modelling of benchmark returns is consistent with the return series that are calibrated and included in the ESG scenario sets; and
 - I believe such an approach to be consistent with the level of expenses prescribed by the Act. In particular, the standard adjustment debated and chosen by Scottish Ministers was broadly consistent with previous GAD advice that such an allowance would be consistent with a passive investment approach.

Sensitivity

- 3.15 Chapter 4 provides further detail on the sensitivity of the assumptions made.

4 Results of review

This Chapter sets out the resulting PI discount rate following the review, and the sensitivity of the rate to the economic assumptions made about the future.

PI discount rate to be applied in Scotland

4.1 Following the analysis I have carried out, and having regard to provisions of Paragraphs 19 and 20 of Schedule B1 of the Act⁹, I expect the notional investment portfolio set out in Paragraph 12 of Schedule B1 of the Act to produce a rate of return of RPI+0.50% pa rounded to the nearest 0.25% pa. This rate of return reflects my judgement and consideration of:

- simulated returns from the ESG models calibrated to financial conditions at both 31 December 2018 and 30 June 2019;
- adjustments to these simulated returns that I believe to be appropriate to reflect the larger than usual short-term volatilities in expected investment returns, particularly given the PI discount rate is to apply over a five-year period; and
- other views on the returns of asset classes included in the notional portfolio such as GAD's own house views.

The return is expressed relative to RPI as set out in the Act and does not include allowance for tax and expenses which would act to reduce pursuers' net returns.

4.2 Table 3 shows the simulated returns from the ESG models calibrated to different dates and illustrates the impact of recent short-term volatility in market conditions and expected investment asset returns.

Table 3: ESG simulated rate of return (unrounded) produced by the notional portfolio at different calibration dates

ESG economic calibration date	Portfolio return (pa)
31 December 2018	RPI+0.68%
30 June 2019	RPI+0.30%

4.3 Paragraph 10 of Schedule B1 of the Act sets out the standard adjustments that must be made to the rate of return to calculate the PI discount rate. These adjustments are deductions of:

- 0.75% pa for the impact of taxation and costs of investment advice and management; and

⁹ Which set out the requirement to round the investment return to the nearest 0.25% pa.

- 0.50% pa as the further margin involved in relation to the rate of return.

4.4 Applying these adjustments to the rate of return produced by the notional investment portfolio of RPI+0.50% pa, results in a final PI discount rate of **RPI-0.75% pa**. A breakdown of the PI discount rate is tabulated below.

Table 4: Breakdown of the PI discount rate

Component	pa
Gross return above inflation from notional portfolio before deductions	RPI+0.50%
Standard adjustment for tax and costs of investment advice and management	-0.75%
Standard adjustment for further margin involved in relation to the rate of return	-0.50%
PI discount rate	RPI-0.75%

Sensitivity of result

Economic assumptions and judgement

- 4.5 The determination of the PI discount rate is dependent on the choice of economic simulation model, its underlying parameters and judgements made in forming a view on expected future returns.
- 4.6 It is possible to take alternative views and judgements on the expected returns for different asset classes. For example, choosing one or other of the third-party scenario models (rather than using both of them) would increase or decrease the simulated investment return, and hence recommendation of PI discount rate, by up to 0.5% pa.
- 4.7 A further economic assumption is the date at which any simulations are calibrated or views formed. In my analysis I have considered scenarios calibrated to economic conditions at both 31 December 2018 and 30 June 2019.
- 4.8 Such ESG calibrations are normally updated quarterly. The 30 June 2019 calibration I have considered is the latest quarterly calibration available. I have also considered the calibration at 31 December 2018 in view of the greater than normal volatility in investment markets experienced during 2019. It can be seen from the rates of return in Table 3 that the unrounded rates of return from these two calibrations differ by as much as 0.38% pa, over such a relatively short, recent period.

Asset class interpretation

- 4.9 Many of the asset classes in the notional portfolio have a fair degree of common understanding and interpretation across the investment industry. The scenario sets that I have considered are calibrated to, and are intended to simulate returns on, broad market indices. I believe this is appropriate as I believe that it is likely that an informed investor would invest in investments that are well represented by such indices. In practice, investors may make decisions to invest in other ways – for example rather than investing

in equities represented by a broad all-share index, an investor may tilt their portfolios towards particular sectors or types of investment. Although this will have some impact on returns, I do not expect that such approaches would lead to materially different returns over the long term and hence do not believe it would impact on the recommended PI discount rate.

Investment approach

- 4.10 I have assumed passive returns from a static asset allocation and with an unchanging investment objective. Broadly speaking, I would expect more active or engaged investment approaches to deliver better returns for the higher expenses that they typically attract – as otherwise such approaches would not be profitable and sustainable in a rational and competitive market.
- 4.11 Hence, making an alternative assumption that the claimant invests in a more active investment approach would be expected to increase the PI discount rate. However, I do not believe it to be appropriate to include in my determination as it would result in an inconsistency between (i) the modelled investment approach and the prescribed notional portfolio; and (ii) the expenses that would be appropriate for the modelled investment approach and the prescribed allowance for expenses.

Other prescribed parameters

- 4.12 The PI discount rate is also sensitive to the prescribed parameters set out in Chapter 3 (ie the composition of the notional portfolio, the investment horizon, inflation assumptions, standard adjustments for tax and costs of investment advice and management and the further margin).
- 4.13 The prescribed parameters were scrutinised and debated as part of the parliamentary process in Scotland prior to the Bill for the Act being passed by the Scottish Parliament and receiving Royal Assent. The resulting parameters included within the Act were those that were considered together as a whole rather than being set in isolation from each other.
- 4.14 Given the above, the requirement of the Act for me to use these parameters and the relatively short period of time that has elapsed since they were considered and set, I have not analysed further the sensitivity of the PI discount rate to changes in them as part of this review of the PI discount rate. However, I would note the following key limitations and consequences of these parameters:
- **Notional portfolio** – pursuers are likely to invest in a wide range of portfolios to reflect their individual circumstances. As such pursuers may invest in portfolios that are materially different to the notional portfolio prescribed in legislation.
 - **Investment horizon** – depending on their needs and life expectancy, pursuers are likely to have to invest their settlement over a period other than the 30-year investment horizon prescribed in the Act. Given the pattern of expected future investment returns, which at the present time are characterised by lower short-term but much higher long-term rates, pursuers investing over much shorter or longer periods may be expected to earn returns that are materially different to the expected returns over 30 years.

- **Inflation assumption** – there is limited evidence of the level of damage inflation pursuers are subject to. Depending on their needs, the rate at which a pursuer’s needs inflate in the future might be materially different to the prescribed RPI.
- **Adjustment for tax and expenses** – the tax and expenses incurred by pursuers will be unique and depend critically upon individual circumstances and other factors (such as the tax structure that is in force at the time and their chosen investment approach). I would observe that were any significantly different views on expenses to be taken then the simulated returns should also be reviewed, for example by adopting a more active investment approach, to ensure consistency. Notwithstanding this, some claimants might face higher or lower tax obligations and/or face higher or lower expenses as a result of investing a smaller or larger lump sum.

4.15 As a result, there will be pursuers in different circumstances to those that might be implied from the parameters prescribed in the Act which may result in differences between their actual returns and the recommended PI discount rate. Such differences influence their ability to meet their needs from their settlement. Further, setting different parameters may materially influence the recommended PI discount rate. Further details on the sensitivity to these parameters is considered in more detail in the previous report GAD produced for Scottish Ministers in September 2018¹⁰.

¹⁰ <https://www2.gov.scot/Resource/0054/00540068.pdf>

Appendix A: Limitations and professional compliance

- A1. The analysis outlined in this report has been carried out in accordance with the applicable Technical Actuarial Standard: TAS 100 issued by the Financial Reporting Council (FRC). The FRC sets technical standards for actuarial work in the UK.
- A2. This report has been prepared for the use of the Scottish Government and must not be reproduced, distributed or communicated in whole or in part to any other person without GAD's prior written permission.
- A3. Other than the Scottish Government, no person or third party is entitled to place any reliance on the contents of this report, except to any extent explicitly stated herein, and GAD has no liability to any person or third party for any act or omission, taken either in whole or part on the basis of this report.
- A4. This report must be considered in its entirety, as individual sections, if considered in isolation, may be misleading, and conclusions reached by review of some sections on their own may be incorrect.



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Appendix B: Economic scenario assumptions

I have considered economic scenarios generated from proprietary third-party Economic Scenario Generators. This appendix outlines further details on the assumptions underlying my analysis.

Background

- C1. An ESG is a computer-based model of an economic environment. It can be used to generate possible future paths of economic and financial variables allowing for any inter-dependencies that exist between each variable. In this case I have used the ESG to generate the possible future rates of inflation and investment returns that may be achieved from different asset classes.
- C2. To mitigate model error, I have generated 2,000 scenarios employed from two proprietary third party models (Economic Scenario Generators). The result of the simulations using both simulations is not inconsistent with the GAD house view of future investment returns – which is reviewed regularly and informed from a broad range of external views and data sources. The simulations of future investment returns start from a recent and appropriate calibration date based on recent market conditions.
- C3. Given the larger than usual short-term volatilities in expected investment return, I have considered scenarios calibrated to economic conditions as at both 31 December 2018 and 30 June 2019.
- C4. These simulations provide a distribution of the possible outcomes for each variable that is required for the analysis and which are outlined in further details below.

Inflation

- C5. RPI is used as reference inflation measure throughout our analysis – as specified in the Paragraph 9(2) of Schedule B1 of the Act.
- C6. The table below shows the median¹¹ levels of RPI inflation which has been used as a basis to inflate damages in the analysis.

¹¹ The median value of a set of numbers is the middle value of the possible outcomes when considered in order of size.

Table 5: Median inflation simulations

Rate of RPI inflation over the period ¹² % pa, calibrated at	5 years	10 years	15 years	20 years	30 years	40 years	50 years
31 December 2018	2.8%	2.9%	3.0%	2.9%	2.9%	2.9%	2.9%
30 June 2019	2.8%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%

Source: *Economic Scenario Generators*

- C7. I believe that the projected inflation is broadly consistent with the Bank of England's 2% CPI target and the differences I would expect between RPI and CPI. Hence I believe that it is reasonable to use the simulated inflation projections.

Interpretation of investment assets within notional portfolio

- C8. My interpretation of how the asset classes that make up the notional investment portfolio are to be modelled are set out in Table 6 below, as required by Paragraph 13 of Schedule B1 of the Act.
- C9. I have also modelled the 'Other' asset class assuming it consists of equal proportions of commodities, hedge fund, infrastructure and private equity asset classes. This is consistent with what was assumed during the previous GAD analysis carried out for Scottish Government in 2018.

Table 6: Interpretation of investment assets used in the notional investment portfolio

Asset class	Modelling interpretation
Cash or equivalents	Cash return series calibrated to short dated nominal UK government bonds and money market investments.
Nominal gilts and index-linked gilts	Portfolio of UK government bonds with specified maturity and coupon that are modelled based on projected term structures of UK gilt yields (nominal and real) and UK inflation. Portfolios of different maturities (e.g. short-dated gilts, 5-15 year gilts, long-dated gilts etc) are rebalanced on an annual basis, and have characteristics similar to broad gilt and index-linked gilt indices.
UK equities	Equity return series calibrated to broad equity market indices.
Overseas equities	Equity return series calibrated to broad equity market indices such as global developed market large/mid-cap equity index. The returns are hedged to Pound Sterling (GBP).
High-yield bonds	Global portfolio of high-yield corporate bonds containing below-investment grade fixed-income securities issued by corporations in developed economies, calibrated to broad high-yield indices. The returns are hedged to GBP

¹² Note that the table records the rate of RPI over the period shown and not the rate of RPI inflation in the year shown.

Asset class	Modelling interpretation
Investment-grade credit	Portfolio of generic GBP denominated investment grade corporate bonds with specified maturity and coupon that is rebalanced on an annual basis, and has characteristics similar to corporate securities indices.
Property	Portfolio of diversified, direct property investments in the UK, calibrated using data from UK and European property indices.
Commodities	A well-diversified basket of commodities with similar characteristics to commodity indices. The returns are hedged to GBP.
Hedge funds	Broadly based on characteristics of large number of hedge fund strategies and a fund-of-funds benchmark, calibrated to hedge fund indices, with the returns hedged to GBP.
Infrastructure	Represented as investments in listed equities in the infrastructure sector calibrated to global infrastructure indices. Returns are hedged to GBP.
Private equity	Global, diversified investment in developed-market listed Private Equity companies, investing across diverse geographical regions and styles (buy-out, venture capital and mezzanine investments). Returns hedged to GBP.

Asset returns

- C10. Making regular withdrawals from a fund can have a significant impact on the effective returns achieved – for example, making a significant withdrawal from the fund following an early fall in asset values will hinder an investment manager’s ability to recover the fund in subsequent periods.
- C11. In technical terms – this is essentially the difference between Time-Weighted Rates of Return (which ignore withdrawals from the fund) and Money-Weighted Rates of Return (which are affected by withdrawals and additions to the fund).
- C12. We are assuming that the investor included in this analysis has to finance regular withdrawals from the fund in order to meet their needs and, as a result, is exposed to the risk of withdrawals following a period of low returns.
- C13. As such, references to projected returns in this report allow for the specified assumed withdrawals from the fund and the table below shows the median annualised effective real return achieved on key asset classes that will be modelled. These returns are real (in excess of RPI) and assume that regular level withdrawals are made from a fund that is solely invested in a representative broad index for each asset class as set out in the previous section.

Table 7: Median asset class return simulations (in excess of RPI) based on economic conditions as at 31 December 2018

Median money weighted real return % pa in excess of RPI	5 years	10 years	15 years	20 years	30 years	40 years	50 years
Cash	-1.9%	-1.7%	-1.5%	-1.3%	-1.0%	-0.7%	-0.6%
Nominal gilts	-2.8%	-2.5%	-2.2%	-1.8%	-1.3%	-0.9%	-0.6%
Index-linked gilts	-3.3%	-3.2%	-2.7%	-2.3%	-1.7%	-1.3%	-1.0%
UK equities	1.4%	1.7%	1.8%	2.0%	2.0%	2.0%	2.1%
Overseas equities	1.8%	2.0%	2.1%	2.1%	2.2%	2.3%	2.4%
High-yield bonds	0.6%	0.7%	0.8%	0.9%	1.1%	1.3%	1.5%
Investment grade credit	-0.9%	-1.1%	-0.9%	-0.7%	-0.2%	0.1%	0.4%
Property	-0.7%	0.1%	0.7%	0.9%	1.2%	1.4%	1.6%
Commodities	-0.6%	0.2%	0.3%	0.1%	0.2%	0.3%	0.4%
Hedge Funds	-0.2%	-0.1%	0.1%	0.2%	0.3%	0.5%	0.6%
Infrastructure	1.7%	1.8%	1.9%	2.0%	2.2%	2.2%	2.2%
Private Equity	0.5%	1.2%	1.8%	1.8%	1.9%	2.1%	2.1%

Source: Economic Scenario Generators

Table 8: Median asset class return simulations (in excess of RPI) based on economic conditions as at 30 June 2019

Median money weighted real return % pa in excess of RPI	5 years	10 years	15 years	20 years	30 years	40 years	50 years
Cash	-2.1%	-1.8%	-1.6%	-1.4%	-1.1%	-0.8%	-0.6%
Nominal gilts	-3.4%	-3.2%	-2.8%	-2.3%	-1.7%	-1.2%	-0.9%
Index-linked gilts	-3.2%	-3.5%	-3.2%	-2.7%	-2.0%	-1.5%	-1.2%
UK equities	1.0%	1.3%	1.7%	1.7%	1.8%	1.9%	2.0%
Overseas equities	1.2%	1.7%	1.8%	1.9%	1.9%	2.1%	2.2%
High-yield bonds	-1.3%	-0.7%	-0.3%	-0.1%	0.4%	0.7%	0.9%
Investment grade credit	-2.1%	-2.2%	-1.9%	-1.5%	-0.8%	-0.4%	-0.1%
Property	-0.4%	0.2%	0.6%	0.9%	1.2%	1.4%	1.6%
Commodities	-0.9%	-0.2%	-0.1%	0.0%	0.1%	0.2%	0.3%
Hedge Funds	-0.7%	-0.4%	-0.2%	0.0%	0.2%	0.3%	0.4%
Infrastructure	1.4%	1.7%	1.8%	1.9%	2.0%	2.1%	2.1%
Private Equity	0.5%	1.2%	1.7%	1.6%	1.9%	2.0%	2.1%

Source: Economic Scenario Generators

Appendix C: Letter of engagement

The letter of engagement received from the Minister for Community Safety is reproduced in this appendix.

Minister for Community Safety
Ash Denham MSP



T: 0300 244 4000
E: scottish.ministers@gov.scot

Martin Clarke
Government Actuary's Department
Finlaison House
15-17 Furnival Street
London
EC4A 1AB

— 25 June 2019

Dear Mr Clarke

Damages (Investment Returns and Periodical Payments) (Scotland) Act 2019 – Review of the Personal Injury Discount Rate

As you will be aware Commencement Regulations in relation sections 1 and 2 (returns on investment of damages) and the schedule (investments: setting the rate of return) of the Damages (investment Returns and Periodical Payments) (Scotland) Act 2019 were laid before the Scottish Parliament on 6 June with the appointed day for their coming into force being 1 July.

I am therefore writing to request that you commence the first review of the current rate of return on 1 July. The review should be completed within 90 days.

Schedule B1 sets out what requires to be taken into account in the review. For the purposes of the first review, the notional investment portfolio in paragraph 12(3) of Schedule B1 should be used. The rate of return should reflect the return that could reasonably be achieved on the notional investment portfolio for a period of 30 years (paragraph 7(2)).

Allowance must be made for the impact of inflation by reference to the retail price index within the meaning of section 833(2) of the Income and Corporation taxes Act 1988 as set out in paragraph 9(1) and (2)(a).

The standard adjustments set out in paragraph 10(2) should then be applied to the rate of return.

Scottish Ministers, special advisers and the Permanent Secretary are covered by the terms of the Lobbying (Scotland) Act 2016. See www.lobbying.scot

St Andrew's House, Regent Road, Edinburgh EH1 3DG
www.gov.scot

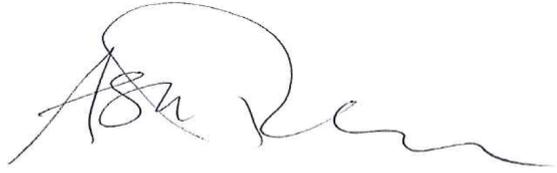


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I trust this is sufficient for you to undertake the first review and look forward to receiving your report before 28 September.



Ash Denham

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