



TO: [Treasury officers]

COPIED TO: [GAD]

FROM: [GAD]

DATE: 28 April 2020

SUBJECT: Isle of Man Personal Injury Discount Rate (PIDR)

MEMO

- 1.1 The memo below outlines GAD's advice to the Isle of Man government to inform their consideration of whether and/or how to review its Personal Injury Discount Rate ('PIDR' or 'the rate'). The advice includes a high-level illustration of the key factors that might influence the decision and advice on what the rate might be under different decision criteria.
- 1.2 This advice was prepared for IoM in Autumn 2019 and was based on similar analysis to that which we carried out for the Lord Chancellor's review of the PI discount rate in England and Wales earlier in 2019. One of the key assumptions is in relation to future investment returns and in our advice to IoM in Autumn 2019, we showed analysis based on markets conditions at both:
 - 31 December 2018; as used to inform the review in England and Wales earlier in 2019; and
 - 30 June 2019; to demonstrate the impact of different economic assumptions and as used to inform the review in Scotland in summer 2019 (along with the calibration from 31 December 2018).
- 1.3 Since the effective date of our analysis and advice to IoM (i.e. Autumn 2019), there has been considerable movement and volatility in financial markets. In particular, the COVID 19 pandemic and the resulting government response has resulted in significant movements in equity markets, gilt yields and credit spreads. Further, economic commentators and forecasters are predicting a large impact on the economy. As such, there are technical challenges in setting an appropriate rate in the current economic climate. Market reaction to the development of the pandemic and future policy responses is hard to predict but it is quite possible that market volatility will be elevated for the next few months.
- 1.4 As a result of this volatility and because of a significant deterioration in the economic outlook, we believe that the analysis presented in our original advice may not be appropriate to inform a review of the PI discount rate in current conditions. In particular, we believe that views on future investment returns have fallen relative to the views as at December 2018 and June 2019.
- 1.5 Whilst we have not repeated the full analysis included in our original advice, we believe that it is likely that expected future returns on the modelled portfolio have fallen by around 0.25% to 0.5% pa. In other words:
 - Our original advice illustrated that it might be appropriate to set a single PI discount rate between CPI-0.75% pa and CPI+0.25% pa, depending on the decision basis and assumptions used.
 - In the current economic environment, we estimate that the equivalent range is likely to be in the region CPI-1.0% pa and CPI-0.25% pa¹.

¹ The impact on the short-term rate under a dual rate model is likely to be larger (because the long-term rate is likely to be unchanged and most of the expected fall in investment returns is in the short term).



- 1.6 It may still be appropriate and possible for the IoM to review the PI discount rate in the current environment. Indeed, the fall in investment returns means that it is likely to be even harder for personal injury claimants to achieve returns of the current PI discount rate (2.5% above inflation). However, we feel it would be more appropriate to set a lower PI discount rate than might otherwise have been set based on our previous advice, to allow for current market conditions. This is because return expectations have fallen relative to conditions at December 2018 and June 2019 presented above.
- 1.7 We have considered the extent to which our original analysis may be affected by material risks arising from the impact of the COVID-19 pandemic. The situation around COVID-19 continues to rapidly evolve and the full impact of the virus will not be known until further evidence has been established. As such, once the implications of the COVID-19 pandemic become more apparent, it is likely to be appropriate to check that the appropriateness of our advice in light of the emerging information. In particular, it may be appropriate to review developments in the investment market in order to assess the potential impacts on the views on expected investment returns and hence PI discount rate.

[GAD] , Fellow of the Institute of Actuaries

28 April 2020



TO: [Treasury officers]

COPIED TO: [GAD]

FROM: [GAD]

REF: 4165-00001

DATE: 8 October 2019

SUBJECT: Resetting the Isle of Man Personal Injury Discount Rate (PIDR)

MEMO

1. Executive Summary

- 1.8 This memo provides a high-level illustration of the key factors that the Isle of Man government ('IoM') might consider when deciding whether and/or how to reset its Personal Injury Discount Rate ('PIDR' or 'the rate'). The PIDR influences the size of financial settlement that personal injury claimants receive. A lower (higher) PIDR rate leads to larger (smaller) settlement and hence a higher (lower) chance of the claimant being sufficiently compensated but also a higher (lower) cost to insurance policy holders.
- 1.9 The current legislation in the IoM provides for the PIDR to be set with reference to index-linked gilt yields under the principles set out in *Wells vs Wells*. Whilst the PIDR in parts of the UK was previously set on a similar basis, new legislation has been introduced in England & Wales ('E&W') and Scotland last year to set the rate to reflect the way that claimants invest. This culminated in the E&W PIDR being set at CPI-0.25% pa in July 2019 and the Scottish PIDR being set at RPI-0.75% pa in September 2019.
- 1.10 Setting a new PIDR requires judgement and a balance of considerations. The PIDR applies across a wide range of potential claimants – each facing very different needs and circumstances. Further, as the costs of personal injury settlements are met by taxpayers and insurance customers, there is a balance between providing fair compensation to personal injury claimants and not incurring excessive costs. Hence in updating the PIDR, it is important to determine and consider:
- The way in which the rate is set – for example whether a single rate will apply for all claimants or if different rates apply for different claimants
 - What assumptions are made and which risks and claimants are considered in setting the rate – for example whether the PIDR is set with reference to claimants with particular characteristics or whether certain risks or factors are given more weight
 - The level at which the discount rate is set – in particular how to balance the desire to give claimants fair compensation and the overall cost
- 1.11 The Government Actuary's advice to the Lord Chancellor, as part of his review of the rate in E&W, set out advice and analysis on many of these issues. Given the recency of this advice and that the majority of issues outlined in this advice apply equally to the IoM, the IoM Treasury have asked GAD to use this previous advice / analysis as a starting point for the IoM review of the PIDR, but with any appropriate additional IoM perspective applied. This note sets out our advice in this area.

The way in which the rate is set

- 1.12 In both our E&W analysis and in this note, we have set out analysis and advice (i) under a single PIDR that would apply to all claimants; and (ii) under a system whereby two different PIDR rates would apply differently for claimants with different award periods. Whilst it is possible to set multiple PIDR rates under different factors – for example different types of loss – there is limited evidence to inform such an approach.
- 1.13 Using dual PI discount rates that vary by period of award may reduce potential disparities in the risk of over- or under-compensation between claimants with different periods of damages. As such, using dual rates can possibly be considered as a means of providing “fairer” compensation for claimants investing over different periods. However, a dual rate is more complex and hence might be harder to understand and there would likely be added complexity when processing claims.
- 1.14 There are different ways in which dual rates can be implemented and we believe that the method adopted in Ontario is most appropriate, for reasons described further in Section 5. However, the Ontario method requires a customised "expanded" Ogden table which may be more complicated to implement and may require consultation.

Assumptions

- 1.15 As for our advice to the Lord Chancellor in the E&W review, the key factors considered are:
- (i) **the financial conditions at the assessment date** – which influence expected future returns that claimants might earn on their settlement
 - (ii) **the claimant characteristics** – in terms of the level and period over which a claimant needs to meet needs from their settlement
 - (iii) **the assumed investment portfolio** – in terms of the type of assets that the claimant invests in, which influences the returns they might earn
 - (iv) **tax and expenses** – including costs such as fund management costs
 - (v) **inflation for awarded damages** – which increases the level at which a claimant makes withdrawals from their settlement; and
 - (vi) **“prudence”** – which might be included in setting the PIDR in order to increase the chances of the claimant meeting their needs.

The IoM Treasury have also asked us to consider the mortality/longevity risk impact – which reflects the fact that a claimant might need to meet needs over a longer or shorter period than was assumed in determining their settlement.

- 1.16 We have considered the key factors and assumptions and believe that the E&W assumptions are suitable by and large for the local IoM environment. The main assumption that we have updated in comparison to our E&W analysis is the financial conditions – where we have also used scenarios calibrated to financial conditions at June 2019 to provide analysis on different economic conditions.

Setting the rate

- 1.17 As for our analysis in E&W, our analysis focuses on the likelihood of claimants having insufficient funds to meet their needs as a result of the investment returns being lower than the PIDR. Whilst setting the PIDR at a lower rate would reduce such risks, this might be considered unreasonable from the perspective of those responsible for meeting the claim such as insurers and their policyholders or public sector bodies.

1.18 The table below shows the discount rates that might be set under:

- Different levels of confidence of the claimant being able to meet their needs
- Different PIDR structures (single vs dual rates)
- Different economic assumptions (see Section 3 for future details)

| Decision basis / likelihood of enough compensation | Single PI discount rate | | Dual PI discount rate | |
|--|-------------------------|--------------|----------------------------|---------------------------|
| | Dec 18 | Jun 19 | Dec 18 | Jun 19 |
| Broadly “50/50”: The representative claimant has 50/50 chance of receiving enough compensation to meet their needs | CPI+0.25% pa | CPI+0% pa | CPI-0.75% pa for 15 years | CPI-1.25% pa for 15 years |
| | | | CPI+1.5% pa after 15 years | |
| Broadly “60/40”: The representative claimant has 60% chance of receiving enough compensation to meet their needs | CPI+0% pa | CPI-0.25% pa | CPI-1.25% pa for 15 years | CPI-1.75% pa for 15 years |
| | | | CPI+1.5% pa after 15 years | |
| Broadly “70/30”: The representative claimant has 70% chance of receiving enough compensation to meet their needs | CPI-0.5% pa | CPI-0.75% pa | CPI-1.75% pa for 15 years | CPI-2.5% pa for 15 years |
| | | | CPI+1.5% pa after 15 years | |

1.19 As set out in paragraph 1.3 above, determining an appropriate PIDR will depend on factors including:

- The legislative approach;
- The assumptions made in the determination;
- The policy approach adapted to set the rate – for example in terms of how to strike a balance between the desire to give claimants fair compensation and manage the overall cost

1.20 For instance, if the IoM Treasury were to set a single PIDR based on the table above:

- Setting the PIDR towards the bottom of the range of rates shown (for example CPI-0.75% pa) might be considered as being consistent with:
 - A legislative approach that assumes that claimants invest in a lower risk portfolio; and/or
 - A more pessimistic view of future asset returns (for example, as was the case at June 2019); and/or
 - Including larger margins for prudence that, all other things equal, increase the chances of the claimant being compensated.
- Setting the PIDR towards top of the range of rates shown (for example CPI+0.25% pa) might be considered as being consistent with:
 - A legislative approach that assumes that claimants invest in a higher risk portfolio; and/or
 - A more optimistic view of future asset returns (for example, as was the case at December 2018); and/or
 - Including smaller margins for prudence that, all other things equal, reduce the chances of the claimant being compensated.

Mortality risk and sensitivities

- 1.21 For a representative claimant, we would expect that including mortality/longevity risk factor to stretch the distribution of simulated outcomes, but not significantly shift it. As such, for representative claimants, the analysis above is likely to remain broadly appropriate even if one wanted to make some allowance for mortality risks. For claimants with shorter life expectancy, the longevity risk (of living longer than expected) is likely to far exceed the investment risk they face in investing their settlement. Given this, and the fact that the discount rate has a smaller impact over shorter award periods, the choice of PIDR is unlikely to have a large bearing on whether such claimants are sufficiently compensated.
- 1.22 The impact of sensitivities conducted on the IoM model results would be expected to be of a similar direction and degree as those for E&W. This is because the IoM key assumptions used are similar to those for E&W.

Reliance

- 1.23 Please note that the findings and considerations in this memo should be read together with the E&W 25 June 2019 report where the Government Actuary provided advice to the Lord Chancellor to set the E&W PIDR (“Setting the Personal Injury Discount Rate, Government Actuary’s advice to the Lord Chancellor” at <https://www.gov.uk/government/consultations/setting-the-personal-injury-discount-rate-government-actuaries-advice-to-the-lord-chancellor>).

2. Background and scope

Background and legislation

- 2.1 Awards of damages for claimants 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. 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 and the assumed investment return that a claimant expects to earn on the lump sum award. The assumed investment return is referred to as the Personal Injury Discount Rate ('PI discount rate').
- 2.2 The current legislation in the IoM provides for the PIDR to be set with reference to index-linked gilt yields under the principles set out in *Wells vs Wells*. Whilst the PIDR in parts of the UK was set on a similar basis, new legislation has recently been introduced in E&W and Scotland to set the rate to reflect the way that claimants actually invest. This culminated in the E&W PIDR being set at CPI-0.25%pa in 2019 and the Scottish PIDR being set at RPI-0.75% pa in September 2019.
- 2.3 Setting a new PIDR requires judgement and a balance of considerations. The PIDR applies across a wide range of potential claimants – each facing very different needs and circumstances. Further, as the costs of personal injury settlements are met by taxpayers and insurance customers, there is a balance between providing fair compensation to personal injury claimants and not incurring excessive costs. The E&W approach to setting the PIDR provides the Lord Chancellor discretion to set a rate deemed appropriate. The Lord Chancellor's decision follows the advice from the Government Actuary (GA) and Her Majesty's Treasury (HMT).
- 2.4 This approach contrasts with the Scotland approach which is more formulaic. The Scotland legislation enshrines certain considerations for the inputs to determine the PIDR, for example a specific "notional" investment portfolio and specified deductions for expenses and to increase the likelihood of claimants being able to meet their needs. Hence the judgements and discretion in setting the PIDR were considered when the parameters in Scottish legislation were determined.
- 2.5 The IoM Treasury ('the Treasury') is currently considering whether the existing IoM discount rate should be amended in light of recent developments in E&W, Scotland and Jersey. We understand that the Treasury has the vires to set separate discount rates applicable for consideration by IoM Courts when awarding damages, with the current rate set in 2014 at CPI+2.5% pa. The Treasury has asked GAD for advice on issues it should consider in determining potential changes to the way the rate is set.

Previous E&W advice

- 2.6 GAD's advice to the Lord Chancellor dated 25 June 2019², was used as a base for the Lord Chancellor's consideration in setting the PIDR in E&W. Given the recency of this advice and the fact that the majority of issues outlined in the advice apply equally to the IoM, the Treasury wish to use this previous advice and analysis as a starting point for the Treasury's review, but with any appropriate additional IoM perspective applied.
- 2.7 Specifically, this includes updating the advice to reflect any local rates of inflation, earnings and taxation and any other relevant factors. The Treasury noted that it does not believe that any "local" adjustment is likely to be significant regarding life expectancy, damage needs etc but welcomes GAD's views on these factors. Section 3 of this note sets out a high-level recap of the assumptions made in our E&W advice and comments on the appropriateness of these for reviewing the rate in IoM.

² <https://www.gov.uk/government/consultations/setting-the-personal-injury-discount-rate-government-actuaries-advice-to-the-lord-chancellor>

- 2.8 Please note that the findings and considerations in this memo should be read together with the E&W 25 June 2019 report where the GA provided advice to the Lord Chancellor to set the E&W PIDR. That note sets out the methodology and assumptions adopted in this note. In general, the general principles used in the E&W report to consider an appropriate set of assumptions and methods are also applicable to IoM. As regards the methods, we believe that the E&W approach is still suitable for the IoM. As regards the assumptions, we have considered the key factors and believe the E&W assumptions to be suitable by and large for the local IoM environment.

Analytical framework

- 2.9 To inform decisions on the PIDR (both previously in E&W and Scotland and now in the IoM), our advice focuses on the investment risks that claimants face when investing their settlements. In particular, our analysis focuses on the likelihood of claimants having insufficient funds to meet their needs as a result of the investment returns being lower than the PIDR. Whilst setting the PIDR at a lower rate would reduce such risks, this might be considered unreasonable from the perspective of those responsible for meeting the claim such as insurers and their policyholders or public sector bodies. Our analysis seeks to articulate this balance of risk and section 4 of this note outlines the analysis to support such a decision.

Dual rates

- 2.10 Currently a single PIDR applies for all claimants in the IoM – however a new PIDR approach could set different rates for different claimants. For example, a different rate could be set for claimants investing over longer periods to the one for claimants investing over shorter periods. Following the 30 September 2019 meeting between the Treasury and GAD, the Treasury expressed interest to also consider the “dual rate” option besides the “single rate” option.
- 2.11 The Treasury noted that E&W decided against dual rate currently due to a perceived lack of an appropriate evidence base, but they noted that Jersey introduced a dual rate depending on the length of time portfolios are expected to cover. In particular, Jersey set a rate to reflect that higher returns would be expected over longer periods of time and therefore this should be reflected in the discount rates applied. We understand that the Treasury does not wish to commission a new set of evidence but would welcome any GAD comment and the implications and issues for consideration that should be part of any Isle of Man policy review. Section 5 of this note outlines analysis to show the impact of setting dual rates, rather than single rates.

Policy objectives

- 2.12 In setting a discount rate, we understand that the Treasury’s background policy objective is to ensure that any sum of money awarded should amount to no more or no less than the agreed net loss. In other words, that a claimant should not be over- or under-compensated and the claimant’s settlement should be exhausted at the end of the period for which it is needed (e.g. when the claimant dies). As outlined in discussions with Treasury colleagues at the 30 September 2019 meeting, in practice it is impossible for any claimant to be perfectly compensated and as outlined above our analysis seeks to articulate the balance of risks.
- 2.13 The current legislative framework (whereby the rate is set with reference to index-linked gilts) is broadly consistent with an approach whereby claimants are assumed to take “very low” investment risk when investing their settlement. This contrasts the approach now taken in E&W and Scotland where “low risk” portfolios are considered that involve more risk than a very low level of risk but less risk than would ordinarily be accepted by a prudent and properly advised individual investor who has different financial aims. Following the 30 September 2019 meeting between the Treasury and GAD, we understand that the Treasury’s policy preference is to adopt a broadly similar approach to that now taken in parts of the UK and move away from setting the rate with reference to a “very low risk” investment approach.

2.14 Depending on policy objectives, there are different ways in which the IoM Treasury could implement changes to the legislation and determine a new rate under the new approach. This is demonstrated in the different approaches taken in Scotland and E&W which resulted in different PIDRs.

2.15 The fact that the Lord Chancellor determined a rate of CPI-0.25% based on similar advice provides a benchmark for determining a rate. For instance, it may be appropriate to set a different rate (either higher or lower) to reflect different policy objectives in terms of:

- the claimant characteristics to base the decision on
- the level of risk that claimants are assumed to adopt in their investment portfolio
- the assumptions made for other factors such as tax, expenses and inflation
- the appropriate likelihood of claimants meeting their needs (“prudence”)

In addition, it may be appropriate to allow for more recent economic conditions which are more likely to suggest that a slightly lower rate is appropriate (see section 3 for further details).

2.16 This report does not explore in detail these potential differences and is instead intended to provide an illustration of the impact of different PIDRs to inform initial policy discussions. Given that the report builds on our advice in E&W, it is broadly based on the assumption that a similar legislative framework and decision making approach applies.

3. Key assumptions

- 3.1 As for our advice to the Lord Chancellor in the E&W review, the key factors in determining the PIDR and considered are:
- (i) **the financial conditions at the assessment date** – which influence expectations of future returns that claimants might earn on their settlement
 - (ii) **the claimant characteristics** – in terms of the level and period over which a claimant needs to meet needs from their settlement
 - (iii) **the assumed investment portfolio** – in terms of the type of assets that the claimant invests in, which influences the returns they might earn
 - (iv) **tax and expenses** – including costs such as fund management costs
 - (v) **inflation for awarded damages** – which increases the level at which a claimant makes withdrawals from their settlement; and
 - (vi) **“prudence”** – which might be included in setting the PIDR in order to increase the chances of the claimant meeting their needs.

The IoM Treasury have also asked us to consider the mortality/longevity risk impact – which reflects that a claimant might have to meet needs over a longer or shorter period than was assumed in determining their settlement. Such risks were not included in our advice to the Lord Chancellor in E&W as our commission there was to focus on investment risks.

- 3.2 For each area above, we have considered the appropriateness of the assumptions made in our E&W advice and considered whether any appropriate additional IoM perspective supports making different assumptions or updates to our E&W advice. Each of these is discussed further below. Further details and background to these assumptions is outlined in GAD’s advice to the Lord Chancellor dated 25 June 2019.

Financial conditions

- 3.3 Given that it is not possible to predict returns in financial markets with certainty, our analysis depends heavily on assumptions made on future asset returns and price inflation. In light of uncertainty and volatility in financial markets and to illustrate the impact of using different economic assumptions, we have updated our E&W analysis to also show results using simulations from economic scenario generators based on financial conditions as at June 2019. This contrasts with the E&W report which only used scenarios calibrated to December 2018. Further details on the updated financial assumptions is outlined in Appendix B. At a high level, expected returns reduced between December 2018 and June 2019 which reduces the resultant modelled PIDR by the order of 0.25%.
- 3.4 Given that assumptions on future asset returns are subject to judgement and can change frequently with changing market conditions, there is a relatively wide range of alternative plausible assumptions that could be made. As such, throughout this note we have presented advice on assumptions calibrated to both December 2018 and June 2019. Financial conditions and market conditions have continued to move relative to the conditions at both December 2018 and June 2019, however at a high level I believe that the scenarios are reasonable to use as the basis for illustrating the impact of setting different PIDRs.

Claimant characteristics

- 3.5 We compared the IoM population and claimant cohort characteristics to the E&W cohort and believe there is no material difference between them. Hence, we have assumed the E&W applies reasonably well to the IoM analysis.
- In particular, we assumed that a representative claimant invests over 43 years, as in E&W. In practice, how sufficiently a claimant is actually compensated will depend on the claimant's individual characteristics.
 - For the additional mortality/longevity risk analysis that the IoM Treasury has requested, we use assumptions from the 2008 ONS UK population projections – for consistency with the mortality rates used in the current “Ogden tables” which are used in determining settlements.

Investment portfolio

- 3.6 GAD believes and the Treasury confirmed that it is reasonable to assume that IoM's claimants can assess the same investment asset and product universe as E&W claimants. As in the E&W case, we assume claimants investing over shorter (longer) periods can take less (more) risk. The base (central) portfolio assumes 42.5% allocation to growth assets.

Expenses and tax

- 3.7 We assume that the level of expenses and tax that a claimant incurs are the same as for E&W. Although there are tax differences between E&W and IoM, we believe that these are relatively immaterial for a representative claimant.

Damage inflation

- 3.8 We have used the E&W assumption as there is no strong evidence to suggest that the IoM rate differs materially from that for E&W. The assumes that the damages that a claimant must meet inflate at CPI+1%pa, which is approximately a 50:50 blend of CPI-linked damages and earnings-linked damages.

Prudence

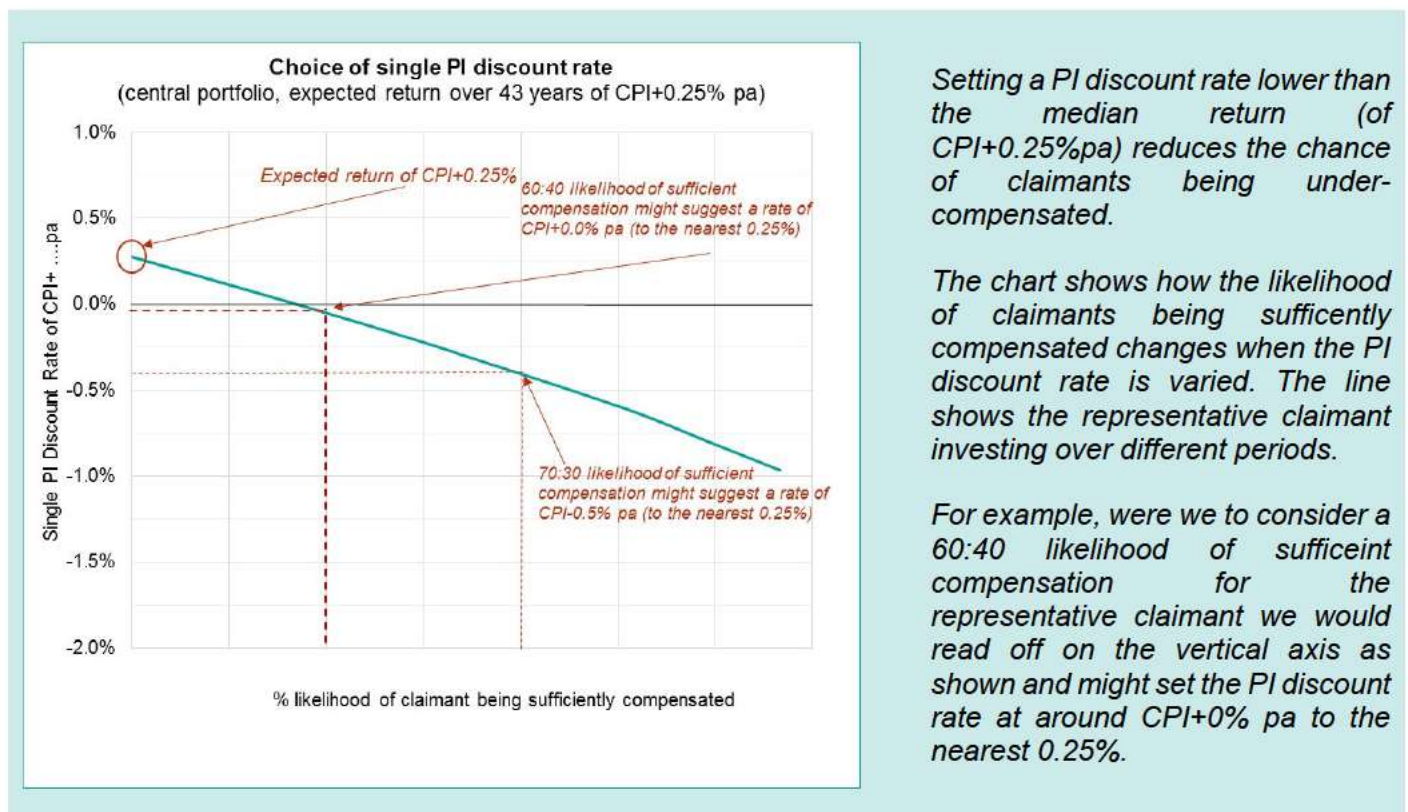
- 3.9 The baseline assumptions described above are used to generate analysis of the investment risks faced by claimants and quantify the likelihood of them being able to meet their needs for a given PIDR. For a given set of assumptions, setting a lower PIDR increase the likelihood of claimants meeting their needs and hence introduces more “prudence” in the PIDR. The analysis presented in our advice to the Lord Chancellor and in this note informs the choice of how much prudence to include and is shown separately for single and dual rate regimes.
- 3.10 The E&W PIDR was set at a rate of CPI-0.25% pa which, based on the baseline assumptions for the representative claimant included a degree of prudence set by the Lord Chancellor. Our analysis for E&W suggests that the CPI-0.25% pa set rate corresponded to 65% likelihood of the representative claimant receiving enough compensation instead of the 50% likelihood corresponding to CPI+0.25% pa. Similarly for IoM's case, this PIDR component will depend on IoM's own risk appetite.

4. Single rate analysis

Choice of PIDR – investment risk only

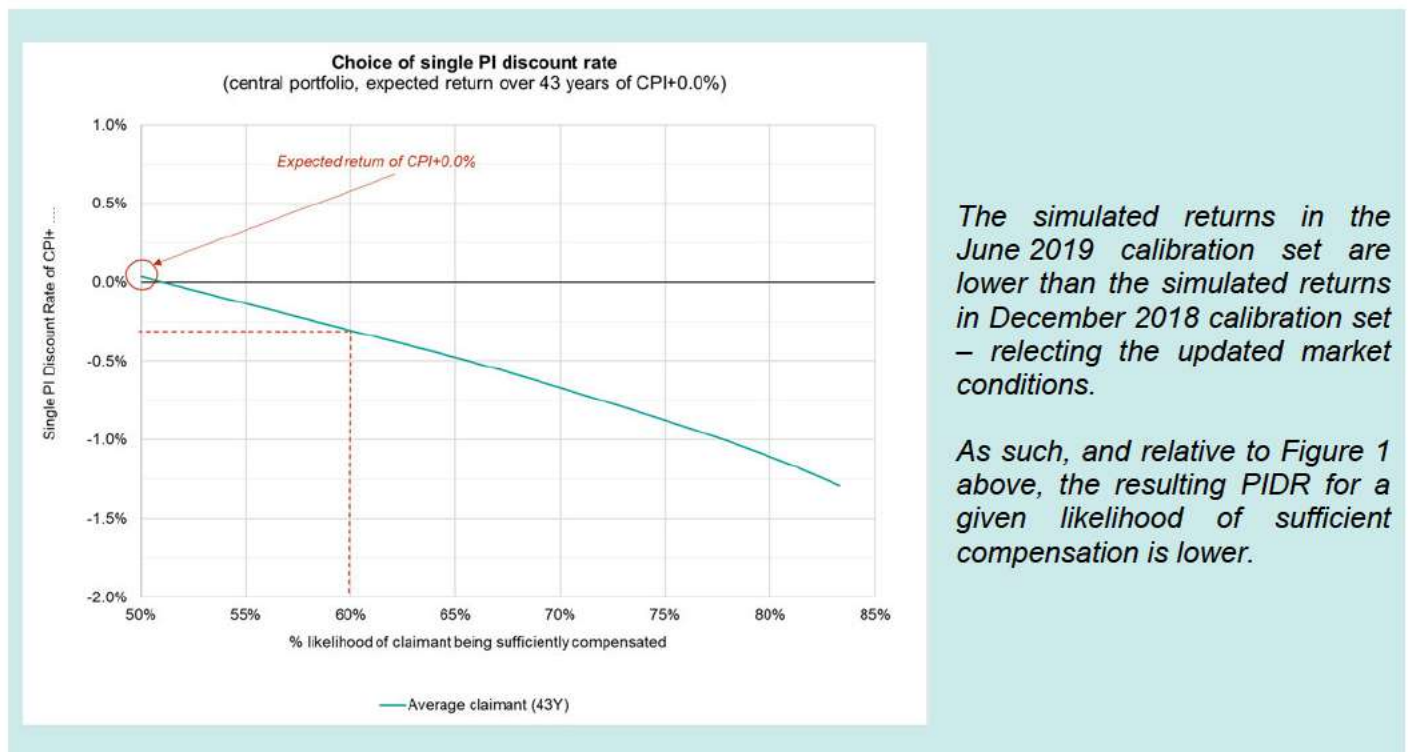
- 4.1 We first look at analysis to inform a single PI discount rate were we to focus on investment risk and do not consider the possible mortality/longevity risk that a claimant might face. This is similar to the case considered in the E&W report.
- 4.2 Figure 1 below is copied from our advice to the Lord Chancellor for determining the rate in E&W and shows how the single rate PIDR might be set based on different margins of prudence specifically for a representative claimant with a 43-year award. The x-axis shows the chance of a claimant being sufficiently compensated for a PIDR we decide to set as reflected in the y-axis. The results are based on financial assumptions as at December 2018.

Figure 1: Choice of PI discount rate – December 2018 assumptions



- 4.3 Figure 2 below updates this analysis based on financial assumptions as at June 2019. As outlined in the previous section, at a high level, the resultant modelled PIDR based on the June 2019 calibration is around 0.25% pa lower than that above on the December 2018 calibration.

Figure 2: Choice of PI discount rate – June 2019 assumptions



The simulated returns in the June 2019 calibration set are lower than the simulated returns in December 2018 calibration set – reflecting the updated market conditions.

As such, and relative to Figure 1 above, the resulting PIDR for a given likelihood of sufficient compensation is lower.

4.4 Clearly, a lower PIDR rate leads to a higher chance of the claimant being sufficiently compensated (and equally a lower chance of being under-compensated). For example, if we were to set the PIDR with reference to these baseline assumptions, using financial assumptions as at June 2019 (as shown in Figure 2):

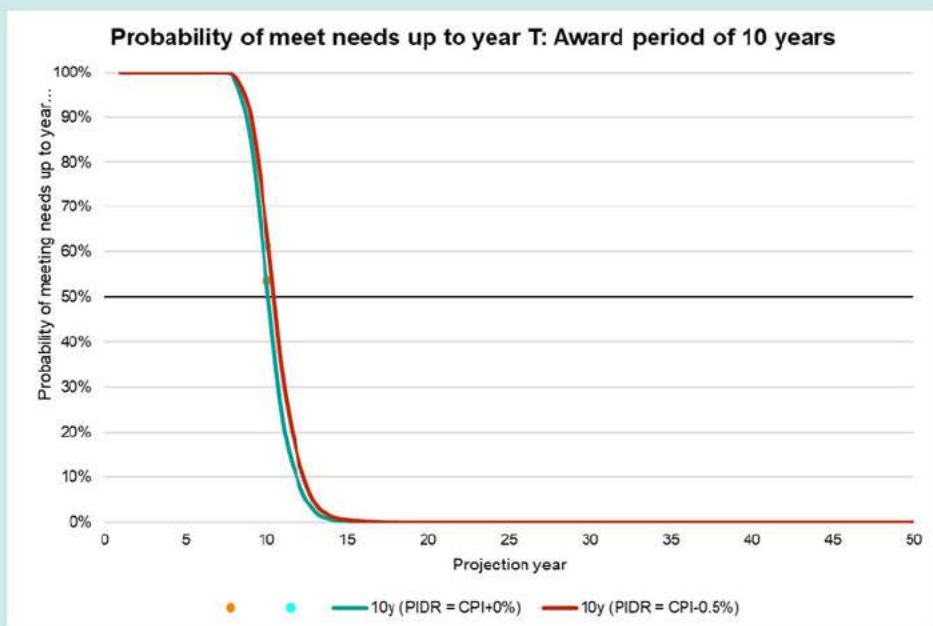
- If we want to set the PIDR rate so that there is a 50% chance of being sufficiently compensated, then the resulting PI discount rate would be around CPI+0% pa.
- If we set the PIDR rate to CPI-0.25% pa instead, there is a 60% chance of the claimant being sufficiently compensated.

Mortality/longevity risk

4.5 We now look at the single rate results where we do consider mortality/longevity risk in our analysis – which reflects the risk that a claimant might have to meet needs over a longer or shorter period than was assumed in determining their settlement. Such risks were not explicitly considered in the E&W report. The Treasury asked to see this analysis as in practice, claimants will be exposed to risks of living longer than expected which may significantly impact on claimant outcomes.

4.6 The graphs in Figure 3 show the likelihood of claimants being able to meet needs that stretch over different time periods (shown on the x-axis). The two different charts show claimants with different life expectancies of 10 (top chart) and 43 years (bottom chart). On each chart, there are two lines; one if the PIDR was set to CPI+0% pa and one when we set PIDR equals CPI-0.5% pa. The dots illustrate the life expectancies for each claimant group.

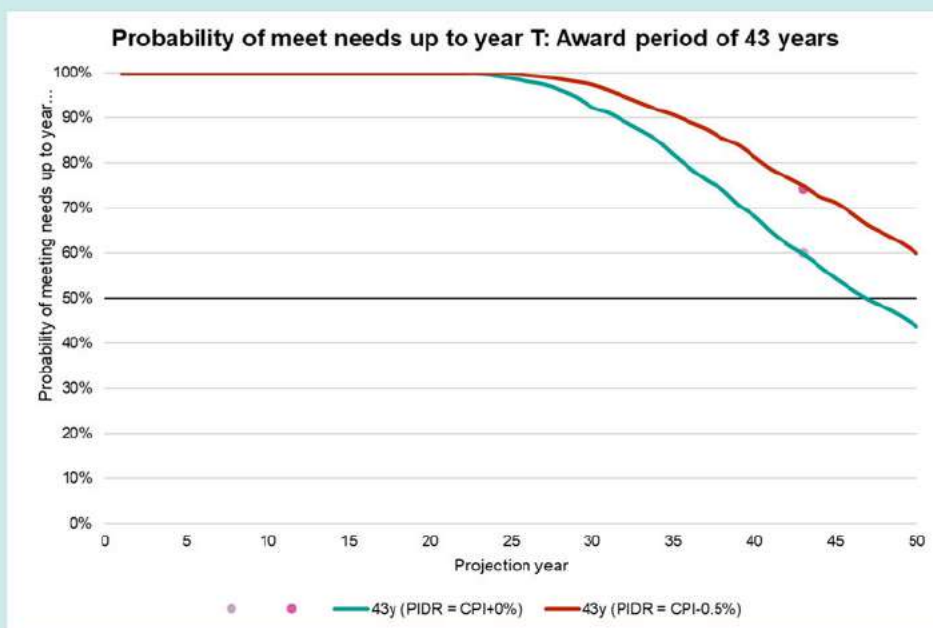
Figure 3: Probability to meet needs up to year T for PIDR=0% versus PIDR=-0.5% (December 2018 financial assumptions)



The line shows the probability of a claimant being able to meet needs over different periods. In this chart the claimant has a life expectancy of 10 years and has been given a settlement to reflect this.

If the only lives for 5 years then it is almost certain that they will be able to meet their needs (as the line is near 100% on the y-axis).

However, if they live for 15 years then it is almost certain that they will not be able to meet needs beyond this point (as the line is near 0% on the y-axis).



In this chart the claimant has a life expectancy of 43 years and has been given a settlement to reflect this.

If they live for 30 years then there is a 90-95% chance of them being able to meet all their needs, depending on how the PIDR is set.

If they live for 50 years then there is a 45-60% chance of them being able to meet their needs, depending on how the PIDR is set.

- 4.7 For the mortality analysis above, we have used the model simulation results underlying the E&W report. However, we expect that the findings will remain similar for the IoM based on the updated June 2019 financial conditions.
- 4.8 For a claimant with a relatively short 10-year life expectancy, we see that the risk profile of the claimant living longer than expected and hence not meeting their needs from an awarded amount is very similar regardless of the set PIDR of either CPI+0% pa or CPI-0.25% pa. For instance, should a claimant with a 10-year life expectancy survive for 15 years it is almost certain that the claimant will not have enough funds to meet all their needs for both PIDR values set.

- 4.9 For the claimant groups with longer life expectancies, choosing the PIDR has more of an impact on the likelihood of the claimant meeting their needs. In particular and as for the case where we only focus on the investment risk, setting a lower PIDR increases the likelihood of a claimant meeting the required needs – since they are awarded a larger settlement. For instance, should a claimant with a 43-year life expectancy actually survive for 50 years, there is a c45% and c60% chance that the claimant will meet their needs when the PIDR is set to CPI+0% pa and CPI-0.5% pa respectively.
- 4.10 There is both a chance that the claimant exceeds their life expectancy and that they die before reaching their life expectancy. As such and based on the analysis in Figure 3 above, if we were to allow for mortality risk in the analysis of claimant outcomes, we might expect to have a wider range of possible outcomes. In other words, allowing for mortality/longevity risk makes it more likely that the claimant faces extreme under-compensation (if they live longer) or that they have been given a much larger settlement than was necessary (if they die earlier).
- 4.11 However, given that the mortality/longevity risk is not directly correlated to the investment risks that the claimant faces, we would not expect this to significantly shift the claimant outcomes. In other words, we would not expect that including mortality/longevity risk in the consideration means that the average level of under- or over-compensation would be materially different.
- 4.12 In summary:
- For the representative claimant (settlement period of 43 years), the mortality risk is a significant risk that will materially influence whether the claimant is sufficiently compensated. There may be some instances where the investment risk that a claimant faces might offset the longevity risk, as in some scenarios, favourable investment returns might be enough to support the needs of a claimant that lives longer than expected.
 - Setting the PIDR at a lower rate does increase the size of the settlement and reduces the chances of the claimant being unable to meet their needs because of either poor investment return or living longer than expected. However, given that we would expect mortality risk to stretch the distribution of outcomes (and not shift it), the analysis presented in Figures 1 and 2 is still likely to be broadly appropriate for informing a decision on the PIDR for the representative claimant.
 - For claimants with shorter life expectancy, the longevity risk (of living longer than expected) is likely to far exceed the investment risk they face in investing their settlement. Given this, and the fact that the discount rate has a smaller impact over shorter award periods, the choice of PIDR is unlikely to have a large bearing on whether such claimants are sufficiently compensated.

5. Dual rate: methods

Introduction and rationale

- 5.1 The single rate analysis in the previous section was presented on the assumption that there would be a single PI discount rate applicable to all settlements. The analysis is based on a representative claimant investing over 43 years. Although not shown above, it was shown in the E&W analysis that this results in those claimants with a shorter investment horizon being proportionately more likely to experience under-compensation than the representative claimant. This is because generally speaking investment returns are lower over the short term and so it is more likely that claimants can't meet their needs. Although this is a feature, the degree of any possible under-compensation tends to be lower at shorter durations as there is less time for material investment under performance to occur and the discounting has a smaller impact.
- 5.2 A possible way to reduce this disparity would be to use a PI discount rate based on the duration of the award. This is because a higher PI discount rate can be used for longer settlements where expected returns are currently higher, and a lower PI discount rate can be used for shorter settlements where returns are currently expected to be lower. One way is to adopt the dual rate approach.
- 5.3 The use of dual PI discount rates would reduce disparities in the risk of over- or under-compensation between claimants with different periods of damages. As such the main advantage of using dual rates is that it might be considered as a means of providing "fairer" compensation for claimants investing over different periods.
- 5.4 A further advantage may be in terms of the stability of the PI discount rate. Analysis of a single rate is heavily dependent on views on future investment returns that are calibrated to current market conditions. Clearly, one would expect the investment returns and hence PI discount rate to change under different economic conditions. Whilst a similar logic will apply to the short-term rate under a dual rate approach, we would expect that the long-term rate under this approach would be much more stable, because longer-term investment expectations are likely to be subject to less frequent revisions.
- 5.5 The main disadvantages of using multiple PI discount rate are:
- a dual rate system is more complex and hence might be harder to understand
 - there may be an increased risk of complaints or challenge as a result of what may be seen as an arbitrary selection of component parameters for a dual rate approach
 - whilst it is possible to produce actuarial tables based on multiple rates, there would be added complexity and new tables may be required
- 5.6 Since the adoption of a dual PI discount rate would represent a major change to the current system, it would be prudent to assess the impact and practicality of this approach including considerations as to whether a dual rate would be harder to understand or implement and any costs associated with transitioning processes.

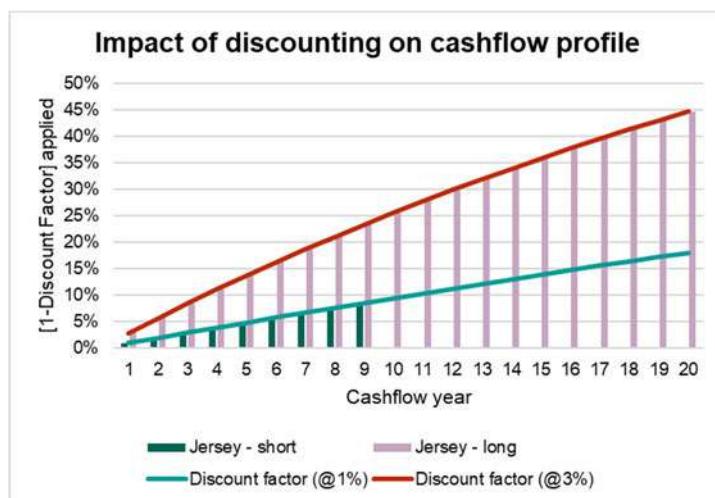
Dual rate methodologies

- 5.7 Setting dual PI discount rates requires decisions on three factors: the rate to apply in the short term, the rate to apply in the long term and the rules for determining which of the two rates apply at any particular duration i.e. the "switching point" where either the short-term or/and the long-term rates are applied.

5.8 There are many ways in which dual discount rates can be applied, two possible methods are the approaches that we believe to be adopted in Jersey and Ontario. To illustrate the difference between the two methods, we assume 1% pa short-term rate, 3% pa long-term rate and switching point at 10 years for the following explanation:

- In the Jersey method, the PI discount rate to be used simply depends on the total period of damages being met. In this instance, if the total period stretched beyond the switching point, then all damages would be discounted at the long-term rate. Otherwise all the damages would be discounted at the short-term rate. For example, a claimant with a 9-year award would have all of their damages discounted at the short-term rate (1% pa), whereas a claimant with a 10-year award would have all their damages discounted at the long-term rate (3% pa). To further illustrate this example, the exhibit below shows the discount factor applied for each cashflow year for a 9-year award and a 20-year award.

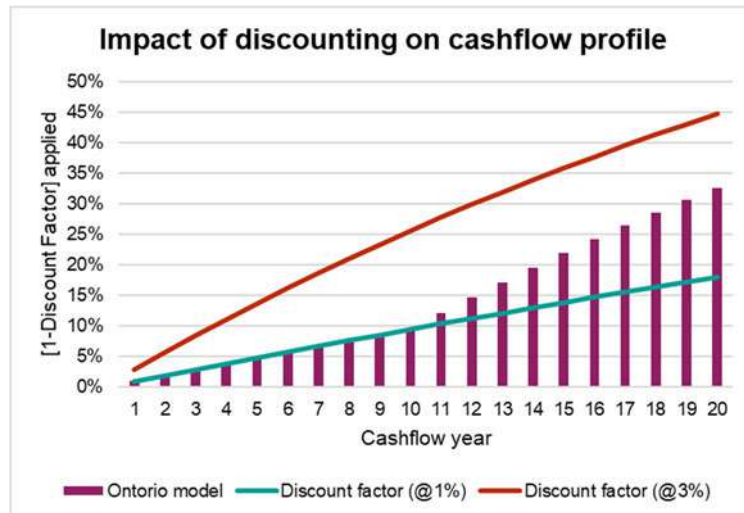
Figure 4: Impact of discounting: Jersey method



The claimant meeting a 20-year damage period has all their cashflows discounted at a much higher rate – including the cashflows in the first 9 years, which for the claimant with a 9-year damage period are discounted at a much lower rate.

- In the Ontario method, all periods before the switching point are discounted at the short-term PI discount rate and any cashflows beyond this discounted further at the long-term rate, for each year after the switching point. For example, the claimant with a 11-year award would have the first 10 years of their damages discounted at the short-term rate and then the cashflow in the final 11th year discounted for 10 years at the short-term rate and one year at the long-term rate as shown in the exhibit below.

Figure 5: Impact of discounting: Ontario method



5.9 We believe the Ontario method is most appropriate as:

- it reduces “cliff edges” in terms of its impact on awards size for claimants across different length of awards and hence might reduce any possibility of behavioural biases,
- it better reflects the difference in investment returns for those investing over the long and short term.

For these reasons, the Ontario method was assumed in our E&W analysis for the Lord Chancellor.

5.10 However, we note that the Ontario method requires a customised “expanded” Ogden table which may be more complicated to implement and require consultation with IoM Courts. Conversely, the current Ogden table can be used to adopt the Jersey method.

5.11 When analysing possible dual rates, we have assumed that long-term and switching assumptions are the same as those we recommend for E&W analysis, since available investment portfolio universe similar to that of E&W.

6. Dual rate: analysis

Choice of PIDR – dual rates

- 6.1 We now look at the dual rate results where we do not consider mortality/longevity risk in our analysis. This is similar to the case considered in the E&W report.
- 6.2 Table 1 below is copied from our advice to the Lord Chancellor and compares the chance at various levels for a representative claimant with a 43-year award being sufficiently compensated using the single rate and the Ontario dual rate approaches. The results are based on financial assumptions as at December 2018.

Table 1: likelihood of claimant meeting needs under single and dual PI discount rates (December 2018 financial assumptions)

| PI discount rate basis | Award period (years) | Single PI discount rate | | Dual PI discount rate | |
|--|----------------------|-------------------------|---------------------------|-----------------------|---------------------------|
| | | ... all needs | ... at least 90% of needs | ... all needs | ... at least 90% of needs |
| Broadly “50/50”: Single rate = CPI+0.25% pa Dual rate = CPI-0.75% pa, CPI+1.5% pa thereafter | 10 | 27% | 71% | 47% | 86% |
| | 43 | 51% | 65% | 52% | 66% |
| | 50 | 65% | 75% | 62% | 73% |
| Broadly “60/40”: Single rate = CPI+0% pa Dual rate = CPI-1.25% pa, CPI+1.5% pa thereafter | 10 | 32% | 75% | 59% | 91% |
| | 43 | 59% | 72% | 60% | 73% |
| | 50 | 72% | 80% | 68% | 78% |
| Broadly “70/30”: Single rate = CPI-0.5% pa Dual rate = CPI-1.75% pa, CPI+1.5% pa thereafter | 10 | 41% | 83% | 69% | 94% |
| | 43 | 73% | 83% | 68% | 79% |
| | 50 | 81% | 87% | 75% | 82% |

- 6.3 For example, considering the row broadly “60:40” means there is a 60% chance of claimants being sufficiently compensated and that this might be achieved under as follows:
- For the single rate approach, this means setting the PIDR to CPI+0.0% pa.
 - For the dual rate approach, this means setting the short-term PIDR to CPI-1.25% pa, assuming that a CPI+1.5% pa applies as the long-term PIDR and a switching point at year 15.
- 6.4 Table 2 below updates this analysis based on financial assumptions as at June 2019. As outlined in the Section 3, at a high level, the resultant modelled PIDR based on the June 2019 calibration is around 0.25% pa lower than that above on the December 2018 calibration under a single PIDR regime. However, the impact is more severe in under a dual PIDR regime – because there is a larger impact on projected returns in the short term.

Table 2: likelihood of claimant meeting needs under single and dual PI discount rates (June 2019 financial assumptions)

| | | Single PI discount rate | | Dual PI discount rate | |
|--|----------------------|--------------------------|---------------------------|-----------------------|---------------------------|
| | | Likelihood of meeting... | | | |
| PI discount rate basis | Award period (years) | ...all needs | ... at least 90% of needs | ...all needs | ... at least 90% of needs |
| Broadly “50/50”: Single rate = CPI+0.0% pa Dual rate = CPI-1.25% pa, CPI+1.5% pa thereafter | 43 | 51% | 65% | 52% | 66% |
| Broadly “60/40”: Single rate = CPI-0.25% pa Dual rate = CPI-1.75% pa, CPI+1.5% pa thereafter | 43 | 58% | 71% | 60% | 73% |
| Broadly “70/30”: Single rate = CPI-0.75% pa Dual rate = CPI-2.5% pa, CPI+1.5% pa thereafter | 43 | 72% | 82% | 72% | 82% |

6.5 Table 1 demonstrates how using dual PI discount rates may reduce potential disparities in the risk of over- or under-compensation between claimants with different periods of damages. This is because a higher PI discount rate can be used for longer settlements where expected returns are currently higher, and a lower PI discount rate can be used for shorter settlements where returns are currently expected to be lower. Although not shown in Table 2, such a feature still prevails. As such, using dual rates might be considered as a means of providing fairer compensation for claimants investing over different periods.

7. Summary of results: setting the rate

7.1 The table below pulls together the analysis from the previous sections and shows the discount rates that might be set under:

- Different levels of confidence of the claimant being able to meet their needs
- Different PIDR structures (single vs dual rates)
- Different economic assumptions

Table 3: likelihood of claimant meeting needs under single and dual PI discount rates

| Decision basis / likelihood of enough compensation | Single PI discount rate | | Dual PI discount rate | |
|--|-------------------------|--------------|----------------------------|---------------------------|
| | Dec 18 | Jun 19 | Dec 18 | Jun 19 |
| Broadly “50/50”: The representative claimant has 50/50 chance of receiving enough compensation to meet their needs | CPI+0.25% pa | CPI+0% pa | CPI-0.75% pa for 15 years | CPI-1.25% pa for 15 years |
| | | | CPI+1.5% pa after 15 years | |
| Broadly “60/40”: The representative claimant has 60% chance of receiving enough compensation to meet their needs | CPI+0% pa | CPI-0.25% pa | CPI-1.25% pa for 15 years | CPI-1.75% pa for 15 years |
| | | | CPI+1.5% pa after 15 years | |
| Broadly “70/30”: The representative claimant has 70% chance of receiving enough compensation to meet their needs | CPI-0.5% pa | CPI-0.75% pa | CPI-1.75% pa for 15 years | CPI-2.5% pa for 15 years |
| | | | CPI+1.5% pa after 15 years | |

7.2 As set out above, determining an appropriate PIDR will depend on factors including:

- The legislative approach;
- The assumptions made in the determination;
- The policy approach adapted to set the rate – for example in terms of how to strike a balance between the desire to give claimants fair compensation and manage the overall cost

7.3 For instance, if the IoM Treasury were to set a single PIDR based on the table above:

- Setting the PIDR towards the bottom of the range of rates shown (for example CPI-0.75% pa) might be considered as being consistent with:
 - A legislative approach that assumes that claimants invest in a lower risk portfolio; and/or
 - A more pessimistic view of future asset returns (for example, as was the case at June 2019); and/or
 - Including larger margins for prudence that, all other things equal, increase the chances of the claimant being compensated.

- Setting the PIDR towards top of the range of rates shown (for example CPI+0.25% pa) might be considered as being consistent with:
 - A legislative approach that assumes that claimants invest in a higher risk portfolio; and/or
 - A more optimistic view of future asset returns (for example, as was the case at December 2018); and/or
 - Including smaller margins for prudence that, all other things equal, reduce the chances of the claimant being compensated.

7.4 In practice, the PIDR is often applied through the use of “Ogden tables”³ which specify multipliers to convert damages into a capitalised value of future losses. We note that the current version of the Ogden tables include factors for PI discount rates of 0.5% intervals with rates for -0.75% and -0.25% also shown. Some of the rates illustrated in the table above are not currently covered by the current Ogden tables – for example CPI+0.25% or dual PI discount rates. As such so these would be required to be updated.

³ <https://www.gov.uk/government/publications/ogden-tables-actuarial-compensation-tables-for-injury-and-death>

8. Sensitivity analysis

- 8.1 The analysis shown so far is based on several assumptions. There are plausible alternative views for all of the factors affecting the investment profile, which would inevitably alter the PI discount rate chosen.
- 8.2 The table below re-caps on the key factors that influence the investment returns that a claimant might earn and hence the choice of PI discount rate. This table is found the E&W report that contains further details of the sensitivities.

Table 4: Summary of sensitivities

| Factor | Impact on claimant investment returns |
|--|---------------------------------------|
| Assumed claimant profile: the analysis assumes that the claimant needs to meet damages over the next 43 years. In practice, claimants might need to meet damages over shorter or longer periods depending on their life expectancy and needs. | Around -1% to +0.25% pa |
| Assumed portfolio: no consensus was reached from the Call for Evidence on how claimants invest. Assuming that claimants invest in different portfolios will have an impact on the returns that they would expect to achieve. | +/- 0.5% pa |
| Damage inflation: no evidence was collected from the Call for Evidence on how claimants' needs inflate. Broadly we would expect this to fall somewhere between general consumer prices (i.e. CPI) and earnings. Alternative views might be to assume damages inflated in line entirely with CPI or earnings. | +/- 1% pa |
| Tax and expenses: the analysis assumes taxes and expenses of 0.75% pa for consistency with my modelling approach. We would recommend that were any significantly different views on expenses taken that the simulated returns are also reviewed to ensure consistency. However, 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. | +/- 0.25% pa |
| Views on expected returns: future returns on investment are uncertain and alternative views are plausible. Views on returns are calibrated to conditions as at December 2018 or June 2019, however the PI discount rate that will be set will be in force for 5 years, by which time investment conditions are expected to be more favourable. | +/- 0.5% pa |
| Dual PI discount rates - long-term rate: it is possible that alternative long-term rates could be set, other than CPI+1.5% pa. Assuming that we focus on the impact on the representative claimant, reducing the long-term rate by 0.5% pa broadly requires increasing the short-term rate by 0.5% pa to maintain equivalence | |
| Dual PI discount rates – switching point: it is possible that alternative switching points could be set, other than 15 years. Assuming that we focus on the impact on the representative claimant, increasing the switching point by 5 years would require increasing the short-term rate by 0.5% pa to maintain equivalence | |

- 8.3 As the key assumptions used to produce this IoM report is similar to those for the E&W report, the impact of sensitivities would be expected to be of a similar direction and degree.

9. General impact

- 9.1 In addition to the analysis outlined in previous sections, the impact of setting a higher (lower) PIDR will have wider impacts. Such other considerations have not been considered further in this report but are likely to include:
- A higher (lower) PIDR is expected to reduce (increase) overall cost pressures for example on private car insurance premiums and the cost to taxpayers from public claims against the state.
 - Claimants may find Period Payment Orders (PPOs) relatively more (less) attractive due to the smaller (bigger) settlement award size that results from a lower (higher) PIDR.
 - Claimants may alter the level of investment risk and/or alter drawdowns on settlements depending on the size of the settlement – for example, a smaller award may encourage claimants to adopt more investment risk in order to make it more likely that they can meet their needs.
 - All else being equal, setting a higher (lower) PIDR means it is less (more) likely that claimant will be able to meet his needs and hence more (less) likely that he will fall back on state support.

10. Caveats and limitations

- 9.2 As for our analysis in England and Wales we have not explicitly considered the impact of PPO and/or other socio-economic factors on claimant behaviour.
- 9.3 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.
- 9.4 This report has been prepared for the use of the IoM Treasury and must not be reproduced, distributed or communicated in whole or in part to any other person without GAD's prior written permission.
- 9.5 Other than the IoM Treasury, 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.
- 9.6 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.

Appendix A: Assumptions

The analysis presented in this note and in the E&W analysis based on a number of assumptions. The rationale for these assumptions was described in further detail in the E&W report, however the table below provides a high-level overview.

Table 5: summary of assumptions

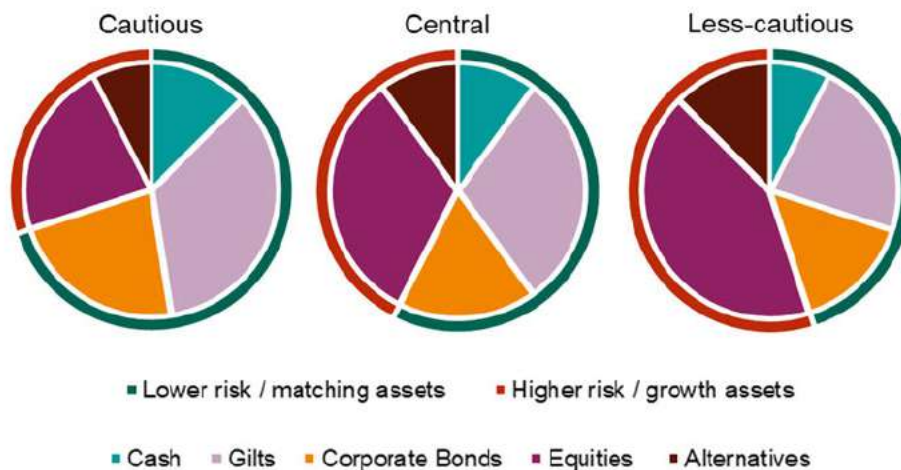
| Factor | Assumption for a representative claimant |
|-----------------------------|---|
| Investment period | Investment period of 43 years |
| Investment approach | Central portfolio assuming 42.5% allocation to growth assets |
| Tax and expenses | -0.75% pa |
| Damage inflation | CPI+1% pa representing a mix of CPI and earnings inflation |
| Economic assumptions | Projections based on simulations from two third party providers, calibrated to conditions as at December 2018 and June 2019 |

Portfolio assumptions

Similar to setting the E&W PIDR, the “low risk” portfolios considered involved those that involve more risk than a very low level of risk but less risk than would ordinarily be accepted by a prudent and properly advised individual investor who has different financial aims.

Table 6: Low-risk portfolio allocation

| Allocation | Cautious | Central | Less-cautious |
|------------------------------|----------|---------|---------------|
| Lower risk / matching Assets | 70% | 57.5% | 45% |
| Cash | 12.5% | 10.0% | 7.5% |
| Gilts | 35.0% | 30.0% | 22.5% |
| Corporate bonds | 22.5% | 17.5% | 15.0% |
| Higher risk / growth assets | 30% | 42.5% | 55% |
| Equities | 22.5% | 32.5% | 42.5% |
| Alternatives | 7.5% | 10.0% | 12.5% |



9.7 We believe that a portfolio with a 42.5% allocation to growth assets, the average of the cautious and less-cautious low-risk allocations, is a plausible representative low risk portfolio that a representative claimant might invest in.

Appendix B: Economic assumptions

9.8 The exhibit below shows the key economic assumptions that were used in our analysis. At a high level, the impact of different financial assumptions between December 2018 to June 2019 reduced the resultant modelled PIDR by c-02.5%.

Table 7: Economic assumptions

As at June 2019

| Rate of inflation over the | 5 years | 10 years | 15 years | 20 years | 30 years | 40 years | 50 years |
|----------------------------|---------|----------|----------|----------|----------|----------|----------|
| CPI | 1.9% | 2.0% | 2.0% | 1.9% | 1.9% | 1.9% | 1.9% |

| Median money weighted | 5 years | 10 years | 15 years | 20 years | 30 years | 40 years | 50 years |
|-------------------------|---------|----------|----------|----------|----------|----------|----------|
| Nominal gilts | -3.3% | -2.9% | -2.5% | -2.1% | -1.4% | -0.8% | -0.5% |
| Index-linked gilts | -2.7% | -3.5% | -3.1% | -2.6% | -1.7% | -1.1% | -0.7% |
| Investment grade credit | -1.4% | -1.5% | -1.2% | -0.8% | -0.2% | 0.2% | 0.6% |
| UK equities | 1.8% | 2.3% | 2.6% | 2.7% | 2.8% | 2.9% | 3.0% |
| Overseas equities | 2.0% | 2.5% | 2.8% | 2.9% | 2.9% | 3.1% | 3.2% |
| Cash | -1.2% | -0.9% | -0.6% | -0.4% | -0.1% | 0.2% | 0.3% |

As at December 2018

| Rate of inflation over the | 5 years | 10 years | 15 years | 20 years | 30 years | 40 years | 50 years |
|----------------------------|---------|----------|----------|----------|----------|----------|----------|
| CPI | 2.0% | 1.9% | 2.0% | 1.9% | 1.9% | 1.9% | 1.9% |

| Median money weighted | 5 years | 10 years | 15 years | 20 years | 30 years | 40 years | 50 years |
|-------------------------|---------|----------|----------|----------|----------|----------|----------|
| Nominal gilts | -2.8% | -2.2% | -1.9% | -1.5% | -0.9% | -0.4% | -0.1% |
| Index-linked gilts | -3.3% | -3.2% | -2.7% | -2.2% | -1.3% | -0.8% | -0.4% |
| Investment grade credit | -0.1% | -0.4% | -0.2% | 0.0% | 0.4% | 0.8% | 1.1% |
| UK equities | 2.2% | 2.6% | 2.8% | 2.9% | 3.0% | 3.0% | 3.1% |
| Overseas equities | 2.6% | 2.9% | 3.0% | 3.1% | 3.2% | 3.3% | 3.4% |
| Cash | -1.2% | -0.9% | -0.6% | -0.4% | 0.0% | 0.2% | 0.4% |