

Actuarial Tables

With explanatory notes for use in

Personal Injury and Fatal Accident Cases

Eighth edition (updated)

(updated August 2022 in light of the change in the Northern Ireland discount rate from -1.75% to -1.5%)



Members of the Working Party Responsible for Eighth Edition

Chairman: William Latimer-Sayer QC

Harry Trusted, Barrister	Secretary to the Ogden Working Party
Tamar Burton, Barrister	Assistant Secretary to the Ogden Working Party
Cara Guthrie, Barrister	Former Assistant Secretary to the Ogden Working Party
Adrian Gallop, FIA	Government Actuary's Department
Paul Nixon, FIA	Government Actuary's Department
Shahram Sharghy, Barrister	Association of Personal Injury Lawyers representative
John Pollock, FFA	Institute and Faculty of Actuaries representative
Andrew Smith QC	Faculty of Advocates representative
Alistair Kinley	Forum of Insurance Lawyers representative
Julian Chamberlayne	Forum of Complex Injury Solicitors, chairman and representative
Dermot Fee QC	General Council of the Bar of Northern Ireland representative
John Mead	NHS Resolution, Technical Claims Director and representative
Richard Methuen QC	Personal Injuries Bar Association representative
Simon Levene, Barrister	Professional Negligence Bar Association representative
Stephen Webber	Society of Clinical Injury Lawyers, chairman and representative
Kim Leslie	The Law Society of Scotland representative
Richard Cropper, DipPFS	Independent financial adviser, invited by Chairman
Chris Daykin, FIA	Actuary, invited by Chairman
Maurice Faull, FCA	Forensic accountant, invited by Chairman
Hugh Gregory, FCA	Forensic accountant, invited by Chairman
Jon Ramsey	Re-insurance claims manager at Munich Re, invited by Chairman
John Saunders	Director of Technical and Large Loss at Direct Line Group, invited by Chairman
Andrew Underwood, Solicitor	Solicitor, invited by Chairman
Professor Victoria Wass	Labour economist, invited by Chairman
Martin White, FIA	Actuary, invited by Chairman

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Prepared by an Inter-disciplinary Working Party of Actuaries, Lawyers, Insurers, Re-Insurers, Academics, Forensic Accountants and other interested parties

Eighth edition (updated)

(updated August 2022 in light of the change in the Northern Ireland discount rate from -1.75% to -1.5%)

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Foreword by the Government Actuary

- 1. Assessing the appropriate amount of damages to pay in personal injury and fatal accident cases is a complex issue which often requires lawyers to work together with actuaries and other experts in order to reach the widely recognised objective of achieving fair levels of compensation to those affected.
- 2. Actuaries are experts in the evaluation of financial risk and were well represented, including the Government Actuary and the Institute and the Faculty of Actuaries, alongside representatives from the legal profession when a working group was first established in 1984. This group published a set of actuarial tables and explanatory notes to assist the Courts in determining appropriate multipliers for use in assessing lump sum awards for damages to be paid in compensation for financial losses or expenses (such as care costs) directly caused by personal injury or death.
- 3. These tables have become known as the Ogden Tables, and the working group known as the Ogden Working Party, both named after Sir Michael Ogden QC who instigated the publication of the tables and chaired the original working party. The tables have become widely recognised as the appropriate basis on which to calculate the loss of future earning capacity, and we have now reached the publication of the eighth edition.
- 4. The original 1984 tables provided multipliers based on retirement ages of 65 for males and 60 for females and did not take account of any contingencies other than mortality. Since then, further editions of the tables and notes have been published providing multipliers for an increasing range of retirement ages based on updated mortality assumptions and providing factors to allow for contingencies other than mortality. There have also been changes in the discount rates tabulated. Over time, the explanatory notes have been expanded and examples provided to assist practitioners. The methods set out in the notes offer a reasonable balance between accuracy and simplicity of application.
- 5. The Government Actuary currently has a statutory role in the process of setting the personal injury discount rate, in each of England & Wales, Scotland and Northern Ireland. Additionally, the Government Actuary's Department (GAD) has been represented on the Ogden Working Party since its inception and has been commissioned to prepare the tables of multipliers and other factors in all the previous editions of the Ogden Tables. I am very pleased that this involvement has continued, and that we are able to present this new edition of the tables.

July 2020

Martin Clarke, FIA Government Actuary

Chairman's Introduction to the 8th Edition of the Ogden Tables

"When it comes to the explanatory notes we must make sure that they are readily comprehensible. We must assume the most stupid circuit judge in the country and before him are the two most stupid advocates. All three of them must be able to understand what we are saying".

Sir Michael Ogden, QC, on his explanatory notes to the First Edition of the Ogden Tables.¹

- 1. Supposedly, good things come to those who wait. It's been nearly a decade since the last edition of the Ogden Tables was published in 2011. A lot has happened since then. We have had three prime ministers, two changes to the discount rate in England and Wales, one Brexit referendum and now a global pandemic.
- 2. I am extremely grateful to the dedicated, diligent and distinguished members of the Ogden Working Party (OWP) for their combined efforts in the production of these tables. The explanatory notes have been completely re-written. Never content to rest on our laurels, the OWP has striven to prepare tables and accompanying guidance to make the quantification of personal injury claims ever more accurate, efficient and user-friendly.
- 3. Since the last edition, the OWP has evolved. Sadly, an august former member, Harvey McGregor QC, has passed away. Several others have retired. One former member, Professor Andrew Burrows QC, has been appointed to the Supreme Court and we wish him well with his judicial career. A number of new members have joined, representing the interests of FOCIS, SCIL, general insurers and re-insurers at numerous meetings ably and efficiently organised by the new assistant secretary, Tamar Burton. Stalwart members of the group, such as Chris Daykin and Adrian Gallop, continue to make an enormous contribution to the production of the Tables and the accompanying explanatory notes, which would be inconceivable to produce without their input.

Application of the Tables and different discount rates

- 4. These tables are designed to assist those concerned with calculating lump sum damages for future losses in personal injury and fatal accident cases in the UK.
- 5. The methodology is long-established: multipliers are applied to the present-day value of a future annual loss (net of tax in the case of a loss of earnings and pension) with the aim of producing a lump sum equivalent to the capitalised value of the future losses². In essence, the multiplier is the figure by which an annual loss is multiplied in order to calculate a capitalised sum, taking into account accelerated receipt, mortality risks and, in relation to claims for loss of earnings and pension, discounts for contingencies other than mortality. Multipliers are calculated by reference to an annual assumed interest rate after tax and inflation, known as the discount rate.
- 6. Previously, the discount rate was set by reference to the yields on Index Linked Government Stock. However, following a lengthy consultation process in England and Wales and in Scotland, we now have new statutory discount rates, set by secondary legislation. As explained in Section A, different discount rates now apply in each of the three separate UK jurisdictions. At the time of writing, the applicable discount rates range from -0.75% in Scotland to -0.25% in England and Wales, and -1.5% in Northern

¹ Memoirs of Sir Michael Ogden, QC, 'Variety is the Spice of Legal Life', p.182; *The Book Guild*, 2002.

² This methodology was endorsed in the leading House of Lords authority *Wells v Wells* [1999] 1 AC 345.

Ireland³. When using the Tables care must be taken to ensure that the correct discount rate is applied for the appropriate jurisdiction at the relevant time.

Mortality data

- 7. Projections of future mortality rates are usually produced on a two-yearly basis by the ONS as part of the production of national population projections for the United Kingdom and its constituent countries. Multipliers published in the 7th edition of the Ogden Tables were calculated using mortality rates from the 2008-based projections; the 8th edition provides multipliers based on mortality rates from the most recent, 2018-based, projections (published at the end of 2019).
- 8. Somewhat surprisingly, given the previous upward trend in projected life expectancy data, the expectations of life (and hence the multipliers derived from them at all discount rates and ages) in this edition of the Tables are lower than in the 7th edition of the Tables, notwithstanding the 10 year difference in the data. This reflects both the lower decreases in mortality than previously projected between 2008 and 2018 and more pessimistic assumptions adopted by the ONS regarding the future rates of improvement of mortality at some ages over the next few years, but especially at older ages.
- 9. For younger claimants, the approximate reduction in life expectancy between the 7th and 8th editions of the Tables is about one year for men and two years for women. This reflects a difference in overall predicted life expectancy of 1-2%. However, for older claimants, the difference in predicted life expectancy can be as much as 8-9%.

Changes to the Tables and explanatory notes

- 10. The main updates and changes in the 8th edition of the Ogden Tables are as follows:
 - Section A has been fully updated. In particular, the section on life expectancy has been expanded, and there is new guidance and new examples regarding the interpolation of multipliers and calculating split multipliers for variable losses.
 - Section B has been extensively revised and there is new guidance on when and how to depart from the suggested Table A to D reduction factors in appropriate cases.
 - There is a new Section C regarding the application of the Tables to pension loss claims together with two examples.
 - Following the Supreme Court's decision in *Knauer v Ministry of Justice* [2016] UKSC 9, Section D regarding the application of the Tables to Fatal Accident Act claims has been re-written and simplified, with a number of new examples.
 - A new Section E deals with the indexation of loss of earnings periodical payment orders (PPOs), the application of the suggested Table A to D reduction factors and how to update for different earnings-based measures of inflation.
 - Four new tables are provided for men and women for loss of earnings to a retirement age of 68 and pension losses from the same age.
 - Four new tables are provided for men and women for loss of earnings to a retirement age of 80 and pension losses from the same age.
 - There are new Additional Tables at discount rates of -0.25%, -0.75%, -1.5% and 0%.

³ The Department of Justice for Northern Ireland increased the discount rate from -1.75% to -1.5% with effect from 22 March 2022.

11. A few of the more significant changes are highlighted below.

Additional Tables

- 12. Perhaps the most significant development in the 8th edition is the provision of several new tables. The Additional Tables allow for the calculation of multipliers from any age at trial to any future age (up to age 125). They were initially suggested by William Chapman (barrister at 7 Bedford Row). These Additional Tables will be published only on the Government Actuary's Department website in Excel format. These are provided for men and women at discount rates of -1.5%, -0.75%, -0.25% and 0%.
- 13. The key advantage of the Additional Tables is that they allow for accurate interpolation and calculation of split multipliers, especially for retirement ages that are not contained within the main Ogden Tables. Practitioners may find the Additional Tables quicker and easier to use, especially when calculating split multipliers. It should be noted that the multipliers derived from the Additional Tables are more accurate and reliable – and should be treated as definitive – than other previous methods of interpolation such as using the apportionment method.

Contingencies other than mortality

- 14. Section B has been completely over-hauled by Professor Wass and a small sub-group of Working Party members including myself, Andrew Underwood and Shahram Sharghy. Importantly, the specific Ogden definition of disability is clarified this requires both the claimant to be disabled under the more restrictive Disability Discrimination Act 1995 (rather than the Equality Act 2010) and for the disability to affect either the type or amount of work that the claimant can do. Guidance is provided regarding the circumstances where it might be appropriate to adjust the suggested Table A to D reduction factors, and how to calculate the size of any such adjustment. The phrase "ready reckoner" has been removed.
- 15. The Table A to D reduction factors, used for discounting loss of earnings and pension loss multipliers for contingencies other than mortality, continue to be calculated using the original research conducted by Professors Richard Verrall, Zoltan Butt and Victoria Wass based upon the Labour Force Survey data from 1998-2003. At present, this is the best data we have. Unfortunately, the experts from Cass Business School do not have capacity to update their research at this time, although it is hoped that, if the necessary funding is secured, this is something that can be commissioned for a subsequent edition of the Tables.

Pension Loss

16. Maurice Faull led a small sub-group of forensic accountants and actuaries, including Chris Daykin and John Pollock, who drafted new guidance set out in Section C to assist with the calculation of pension loss in straightforward cases. Two practical examples have been provided showing the methodology for using the Ogden Tables and Additional Tables to calculate such claims.

Fatal Accidents Act Guidance

17. Julian Chamberlayne led a small sub-group of committee members including Richard Methuen QC, Harry Trusted and myself who streamlined the explanatory notes for Section D and the application of the Tables to claims brought under the Fatal Accidents Act 1976 (as amended). Examples have been adroitly drafted by Maurice Faull demonstrating the new methodology including use of the Additional Tables.

Loss of Earnings PPO Guidance

18. In a new Section E, Richard Cropper, Professor Wass and Harry Trusted have provided succinct guidance and a suggested formula to use when uprating periodical payments for loss of earnings taking into account post-injury residual earning capacity in a different role.

Tribute to Previous Chairman

19. Before signing off, I would like to pay tribute to Robin de Wilde QC who chaired the Ogden Working Party from 2004 to 2017. He oversaw the publication of four editions of the Tables, which is no mean feat. He deftly steered the committee, whose members naturally come from very different backgrounds and have varying interests and viewpoints, with compassion, warmth and good humour. Every Chairperson will face his or her own challenges. Robin met his with grace and a majestic calmness, always promoting free and open debate on the most intricate and challenging of issues.

Concluding Remarks

- 20. When we started work on the 8th edition, few, if any, could have predicted recent events.
- 21. At the time of writing, the UK remains under lockdown and the future remains uncertain. The restrictions are slowly easing. However, there is no doubt that the long-term and far-reaching impact of Covid-19 on life expectancy, employment prospects and the economy will need to be considered in future editions of these Tables.
- 22. In the meantime, we're keen to continue improving the Tables and would welcome any feedback, good, bad or indifferent, especially regarding the new Additional Tables.
- 23. I hope the 8th edition was worth the wait.

July 2020

William Latimer-Sayer QC

(updated August 2022 in light of the change in the Northern Ireland discount rate from -1.75% to -1.5%)

Explanatory Notes to the Eighth Edition

Section A: General

(a) Purpose of the Ogden Tables

1. The Ogden Tables have been prepared by the Government Actuary's Department (GAD). They provide an aid for those assessing lump sum damages for future pecuniary loss in personal injury and fatal accident cases.

(b) Application of the Ogden Tables

- 2. The Ogden Tables set out multipliers. These multipliers enable the user to assess the present capital value of future annual loss (net of tax) or annual expense calculated on the basis of various assumptions which are explained below. Accordingly, to find the present capital value of a given annual loss or expense (the multiplicand), it is necessary to select the appropriate table, find the appropriate multiplier and then multiply the multiplicand by that figure.
- 3. The Ogden Tables may be used to obtain multipliers to calculate the following:
 - Claims for lifetime losses;
 - Claims for periods of loss (especially loss of earnings) until retirement age;
 - Claims for losses (especially pension loss) from retirement age;
 - Claims for other pecuniary losses for fixed periods of time;
 - Claims for losses deferred for fixed periods of time;
 - Claims for variable losses, where the loss changes;
 - Claims for dependency brought under the Fatal Accidents Act.
- 4. There are 36 separate Ogden Tables which make up the main Ogden Tables, and a number of sets of Additional Tables. Tables 1 to 34 of the main Ogden Tables deal with annual loss or annual expense extending over three different periods of time (for life, until retirement and post-retirement). In each case there are separate tables for men and women. The last two tables, Tables 35 and 36, assist with assessing losses in respect of deferred and fixed periods of time (the multipliers are the same for men and women, as these two tables make no allowance for mortality). The main Ogden Tables are arranged as follows:
 - Tables 1 and 2 provide multipliers where the loss or expense is assumed to begin immediately (i.e. as at the date of trial or assessment) and to continue for the rest of the claimant's life.
 - Tables 3 to 18 provide multipliers where the loss or expense is assumed to begin immediately (i.e. as at the date of trial or assessment) but to continue only until the claimant's retirement age or earlier death.
 - Tables 19 to 34 provide multipliers where it is assumed that the loss or expense will not begin until the claimant reaches retirement age but will then continue for the whole of the rest of his or her life.
 - Tables 35 and 36 provide discount factors and multipliers for fixed periods of time, referred to as "term certain".

(c) The Tables which do and do not take mortality into account

- 5. Tables 1 to 34 take mortality into account (in accordance with the assumptions under the next sub-heading). In other words, Tables 1 to 2 take account of the age to which the claimant is expected to live; Tables 3 to 18 take account of the chance that the claimant may not live until retirement age; and Tables 19 to 34 make due allowance for the chance that the claimant may not live to reach the age of retirement and thereafter take account of typical life expectancy.
- 6. Tables 35 and 36 do not take mortality into account. It is assumed that the loss will continue to be deferred for the relevant period (Table 35) or continue for the entirety of the fixed term (Table 36).

(d) Mortality assumptions, impaired life expectancy and calculation of multipliers

- 7. The Tables are based on a reasonable estimate of the future mortality likely to be experienced by average members of the population alive today and are based on projected mortality rates for the United Kingdom as a whole. The Office for National Statistics (ONS) publishes population projections on a regular basis (usually bi-annually) which include estimates of the extent of future changes in mortality. Tables 1 to 34 show the multipliers which result from the application of projected mortality rates which were derived from the past and projected period and cohort life tables, 2018-based, UK: 1981 to 2068, which were published by the ONS in December 2019⁴.
- 8. The Tables are based upon average or typical male and female life expectancy, which it is assumed claimants will have unless proved otherwise. The Tables do not assume that the claimant dies after a period equating to the expectation of life, but take account of the possibilities that the claimant will live for different periods, e.g. die soon or live to be very old. The mortality assumptions relate to the general population of the United Kingdom as a whole. Therefore no further increase or reduction is required for mortality alone, unless there is clear evidence in an individual case that the claimant is "atypical" and can be expected to experience a significantly shorter or longer than average lifespan, to an extent greater than would be encompassed by reasonable variations resulting from place of residence, lifestyle, educational level, occupation and general health status.
- 9. If it is determined that the claimant's life expectancy is atypical and that the standard average life expectancy data does not apply, the court starts with a clean sheet and a bespoke calculation needs to be performed. The court tends to view the assessment of life expectancy as essentially a medical issue⁵. However, that exercise may require medical, statistical, actuarial or other expert evidence.
- 10. Whilst statistical evidence is a useful starting point and it may be necessary to adduce statistical or actuarial evidence (especially in cases involving multiple or overlapping reasons for impaired or enhanced life expectancy), the normal or primary route through which statistical evidence is put before the court is through medical experts.
- 11. There may be a variety of reasons why an individual's life expectancy is atypical. The most obvious reason will be a reduction in life expectancy caused by the injuries which are the subject of the claim. However, claimants may also have an atypical life expectancy due to pre-injury or post-injury factors that would have applied whether or not they suffered the injury in question.

⁴ Further details of the 2018-based population projections can be found on the ONS website at: <u>https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/bulletins/past</u> <u>andprojecteddatafromtheperiodandcohortlifetables/1981to2068</u>

⁵ *B* (*a child*) *v RVI* [2002] PIQR Q137, per Tuckey LJ at para 20, and Sir Anthony Evans at para 39.

- 12. Whilst there is no definition of what constitutes atypical, the courts have generally been reluctant to admit expert evidence to argue for a different life expectancy solely on the basis of lifestyle factors, since the average in the Tables includes smokers, non-smokers, drinkers, teetotallers, people who are over-weight and people who have an ideal BMI etc⁶.
- 13. When a claimant's life expectancy is atypical and a bespoke life expectancy assessment is required, the court should take into account not only the consequences of the injury but also all pre- and post-injury positive and negative factors relevant to the individual claimant, including, but not confined to, the claimant's medical history; genetic and hereditary factors; geographical location; educational, professional or vocational status; lifestyle factors such as smoking, drinking and weight (whether of ideal BMI or obese); and whether the claimant is likely to receive the appropriate level and quality of care, accommodation, aids and equipment and other support needed.
- 14. Having determined that the claimant's life expectancy is atypical, then the court has to determine the appropriate multiplier to be applied for calculating future losses by using either Tables 1 or 2 (that contain an adjustment for mortality) or Table 36 (that contains no adjustment for mortality).
- 15. In some cases, the court will determine that the reduction in a claimant's life expectancy is equivalent to adding a certain number of years to his or her current age, or to treating the individual as having a specific age different from his or her actual age. A common example of this is the development of epilepsy following a traumatic brain injury which reduces a claimant's life expectancy by a few years compared to the average. In such a case, Table 1 or 2⁷ may be used to calculate the claimant's approximate lifetime multiplier by deeming the claimant to be older than his or her actual age by the same number of years by which his or her life expectancy has been reduced. For example, the lifetime multiplier for a claimant who suffers a reduction in life expectancy of five years due to developing epilepsy as a result of a brain injury can be estimated by using the multiplier which would otherwise apply to a person five years older than the claimant's chronological age⁸. However, when using this method, consideration needs to be given to the applicability of the other Ogden Tables (especially for loss of earnings) and pension). In particular, if the claimant's working life is not affected by reason of the reduction in life expectancy, the loss of earnings multiplier can be derived from Tables 3 to 18 in the usual way. However, when calculating multipliers from retirement age, such as loss of pension, the relevant multipliers can be calculated by treating the claimant as being 5 years older for the purposes of Tables 19 to 34 or by using the method set out below which involves deducting the loss of earnings multiplier from the (adjusted) life expectancy multiplier derived from Table 1 or 2. Where the adjustment is not so straightforward, the advice of an actuary should be sought.

⁶ See further *Edwards v Martin* [2010] EWHC 570 (QB) and *Dodds v Arif and Aviva Insurance* [2019] EWHC 1512 (QB).

 ⁷ Cases in which the court has used Table 1 include *Tinsley v Sarkar* [2005] EWHC 192 (QB); *Crofts v Murton* [2009] EWHC 3538 (QB); *Smith v LC Window Fashions Ltd* [2009] EWHC 1532 (QB); and *Edwards v Martin* [2010] EWHC 570 (QB).

⁸ Medical experts often express their opinion as "the claimant is likely to live X years less than the average". Actuarially, however, treating someone as being X years older is not the same as deducting X years from the life expectancy for an average person of the claimant's current age. The life expectancy of someone X years older is likely to be a slightly different figure; and where the deduction to life expectancy is significant, it may be sensible to seek actuarial advice.

- 16. In other cases the court may make a finding that a claimant has a given life expectancy based upon his or her mortality risks as a whole and that finding will have involved a more extensive and refined exercise which examines all of the claimant's mortality risks and therefore renders it inappropriate to regard him or her as one of the class who was subject to the statistical mortality risks for which Tables 1 or 2 provide. In such a case the relevant fixed term multiplier should be derived from Table 36⁹ or the advice of an actuary should be sought.
- 17. At present, when the discount rate is negative in each jurisdiction, the use of Table 36 will understate the applicable multiplier. However, the level of understatement is negligible when the discount rate is close to zero as it is in England and Wales at the moment. In the future, if the discount rate were to reduce to a more significant negative number or to increase to a significant positive number, using fixed term multipliers from Table 36 is likely to result in technically inaccurate multipliers because this does not allow for the distribution of deaths around the expected length of life. In such circumstances, the preferable methodology for calculating actuarially accurate multipliers is set out in paragraph 20 of the Explanatory Notes to the 6th edition of the Ogden Tables¹⁰.

(e) Selection of the appropriate table

- 18. To find the appropriate figure for the present value of a particular loss or expense, the user must first select the relevant Table that relates to the period of loss or expense for which the individual claimant is to be compensated and to the sex of the claimant, or, where appropriate, the dependants of the deceased.
- 19. If, for some reason, the facts in a particular case do not correspond with the assumptions on which one of the Tables is based (e.g. it is known that the claimant will have a different retiring age from that assumed in the Tables), then the Tables can be used if an appropriate allowance is made for this difference by way of interpolation: see Section A (f) below.
- 20. It should be noted that the Additional Tables provided by GAD for this 8th edition will allow for a greater range of multipliers to be calculated without requiring interpolation.

(f) Interpolation

21. It is often necessary to calculate specific multipliers which are not contained in the main Ogden Tables. For example, it may be necessary to calculate a lifetime multiplier or loss of earnings multiplier for the exact age of a person at trial, which is not a whole number. Alternatively, it may be necessary to calculate a loss of earnings multiplier to a retirement age which is not provided for in the main Ogden Tables. Such multipliers may be calculated by the process of interpolation, usually by interpolating between different columns in the same Tables or by interpolating between multipliers from two different Tables. The four main methods used for interpolation of multipliers are as follows:

⁹ Cases in which the courts have used Table 28, now Table 36, include B (a child) v RVI [2002] PIQR Q137; Sarwar v Ali [2007] EWHC 274 (QB); Burton v Kingsbury [2007] EWHC 2091 (QB); Whiten v St George's Healthcare NHS Trust [2011] EWHC 2066 (QB); Reaney v University Hospital of North Staffordshire NHS Trust [2014] EWHC 3016 (QB); and Manna v Central Manchester University Hospitals NHS Foundation Trust [2015] EWHC9 (QB).

¹⁰ Although note that the courts have generally been reluctant to adopt the impaired lives approach suggested at paragraph 20 of the explanatory notes to the 6th edition of the Ogden Tables even when the discount rate was +2.5% as it was considered to be inconsistent with the approach of the Court of Appeal in *B (a child) v RVI* [2002] PIQR Q137: see further *Whiten v St George's Healthcare NHS Trust* [2011] EWHC 2066 (QB); *Reaney v University Hospital of North Staffordshire NHS Trust* [2014] EWHC 3016 (QB); *Manna v Central Manchester University Hospitals NHS Foundation Trust* [2015] EWHC9 (QB).

- Using a computer programme.
- Manually interpolating using the methods set out in the following paragraph and under "Different retirement ages".
- Using the Additional Tables to calculate loss of earnings or pension loss multipliers involving retirement ages which are not provided for in the main Ogden Tables.
- Using alternative tables such as Table A1 in *Facts & Figures* for calculating multipliers in respect of different retirement ages not provided for in the main Ogden Tables.
- 22. If interpolating manually, the method described below under "Different retirement ages" is the most accurate. However, when undertaking simple interpolation between two multipliers or two Tables, there is an alternative simpler approach which produces very similar results which are approximate to the more exact figure. This is illustrated in the following two examples.

Example 1 – simple interpolation between two integers at -0.25%

23. A male claimant is aged 21.75 as at the date of trial. The lifetime multiplier for a 21-year-old male at -0.25% is 71.17 (X). The lifetime multiplier for a 22-year-old male is 69.89 (Y). The interpolated multiplier for a male aged 21.75 can be calculated as X – [(X – Y) x 0.75] or Y + [(X – Y) x 0.25]. In either case the result is 70.21.

Example 2 – simple interpolation between two retirement ages at -0.25%

24. A female claimant aged 45 at trial and her state retirement age is 67. The multiplier from Table 10 to a retirement age of 65 at -0.25% is 20.07 (X). The multiplier from Table 12 to a retirement age of 68 at -0.25% is 23.03 (Y). Since 67 is 2/3's of the way between 65 and 68, the interpolated loss of earnings multiplier for a female retiring at age 67, can be estimated as $X + [(Y - X) \times 2/3]$ or $Y - [(Y - X) \times 1/3]$. Both approaches produce the same result of 22.04.

(g) The Additional Tables

- 25. When there is a need to calculate multipliers between two ages, the Additional Tables to the 8th edition of the Ogden Tables (which can be downloaded from the GAD website¹¹) provide a convenient way of identifying multipliers at selected rates of discount that can be used to capitalise multiplicands payable from any age at the date of trial to any future age up to age 125 (i.e. for life). These multipliers have been calculated using the same mortality rates and other assumptions underlying the main Ogden Tables in the 8th edition, namely the projected mortality rates underlying the 2018-based principal population projection for the United Kingdom and assuming a date of trial in 2022.
- 26. Where multipliers need to be calculated starting or ending at ages which are nonintegers, one of the above methods must still be used for interpolating the exact multipliers. Likewise, one of the above methods must still be used to interpolate multipliers at a discount rates not provided by the Additional Tables.
- 27. Where there is a need to interpolate multipliers derived from Tables 1 to 34 and there are discrepancies in the results obtained using different interpolation methods, using the Additional Tables will produce the most accurate and reliable multipliers.

¹¹ https://www.gov.uk/government/publications/ogden-tables-actuarial-compensation-tables-for-injury-and-death.

(h) The discount rate

- 28. The basis of the multipliers set out in the Tables is that the lump sum will be invested and yield income (but that over the period in question the claimant will gradually reduce the capital sum, so that at the end of the period it is exhausted). Accordingly, an essential factor in arriving at the right figure is the choice of the appropriate rate of return, known as the discount rate. However, the applicable discount rate (represented by individual columns in each table running from -2% to 2½% [and to 3% in the standalone tables]), depends upon the jurisdiction where the damages are being assessed. Multipliers for discount rates between tabulated rates can be obtained by interpolation. If multipliers are required for discount rates outside the tabulated range the advice of an actuary should be sought or a suitable computer programme used.
- 29. The table below summarises the currently applicable discount rates, effective legislation and relevant review periods in the UK¹².

Jurisdiction	Rate	Effective Legislation	Review	
England & Wales	-0.25% (from 5 August 2019)	Civil Liability Act 2018 – rate determined by the Lord Chancellor and the Damages (Personal Injury) Order 2019 ¹³	Rate set by Lord Chancellor – reviewed at least every 5 years ¹⁴	
Scotland	-0.75% (from 27 September 2019)	Damages (Investment Returns and Periodical Payments) (Scotland) Act 2019 – rate determined by the Government Actuary ¹⁵	Rate set by the Government Actuary ¹⁶ – reviewed at least every 5 years	
Northern Ireland	-1.5% (from 22 March 2022)	Damages (Return on Investment) Act (Northern Ireland) 2022 ¹⁷	Rate set by the Government Actuary ¹⁷ – reviewed at least every 5 years	

30. The figures in the 0% column show the multiplier without any discount for interest and provide the expectations of life (Tables 1 and 2) or the expected period over which a person would have provided a dependency (up to retirement age Tables 3 to 18 or from pension age Tables 19 to 34). These are particularly helpful when calculating multipliers in respect of claims brought under the Fatal Accidents Act 1976 (see Section D).

¹² Other discount rates apply in non-UK parts of the British Isles such as Guernsey and Jersey.

¹³ SI 2019 No 1126.

¹⁴ To help him or her set the assumed rate of return (i.e. the applicable discount rate), at the first review (carried out in 2019) the Lord Chancellor was required to consult with the Treasury and the Government Actuary; at all future reviews, the Lord Chancellor must consult with the Treasury and an expert panel consisting of the Government Actuary (who is the chair of the panel), an actuary, a member with experience of managing investments, an economist and a specialist in consumer affairs relating to investments.

¹⁵ See further *The Personal Injury Discount Rate: Review and determination of the rate in Scotland by the Government Actuary* dated 27 September 2019 available from: <u>https://www.gov.uk/government/publications/the-personal-injury-discount-rate-review-and-determination-of-the-rate-in-scotland-by-the-government-actuary</u>

In Scotland the discount rate is set by the official "rate-assessor". This is the Government Actuary or a person appointed in place of the Government Actuary by regulations made by Scottish Ministers.
https://www.logialation.com/uk/aia/2022/1/contents

¹⁷ <u>https://www.legislation.gov.uk/nia/2022/1/contents</u>

31. Section 1(2) of the Damages Act 1996 makes provision for the courts to make variations to the discount rate if any party to the proceedings shows that it is more appropriate in the case in question. However, this power is limited to exceptional cases involving special circumstances¹⁸. Section 1(2) will therefore only be exercised in comparatively few cases¹⁹, and indeed, at the time of writing there have been no reported cases in which the court has been persuaded to invoke the power under this section to apply a different discount rate, although a number of cases have been settled making such assumptions, for example where the claimant or dependants are not resident in the UK²⁰.

(i) Different retirement ages

32. Separate Ogden Tables are provided for retirement ages of 50, 55, 60, 65, 68²¹, 70, 75 and 80. The Additional Tables provided by GAD can be used to calculate accurate multipliers outside or between these ages. In addition, where the claimant's actual retiring age would have been between two of the retirement ages for which main Ogden Tables are provided, the multiplier can be calculated by interpolation of the main Ogden Tables for retirement age immediately above and below the actual retirement age, keeping the period to retirement age the same.

Example 3 – more accurate interpolation between two retirement ages at +2.5%

- 33. Take for example a woman of 42 who would have retired at 58. Her loss of earnings multiplier can be considered as being in-between the multipliers for a woman of 39 with a retirement age of 55 and a woman of 44 with a retirement age of 60. The most accurate method for interpolation is as follows:
 - (1) Determine between which retirement ages, for which Tables are provided, the claimant's actual retirement age *R* lies. Let the lower of these ages be *A* and the higher be *B*.
 - (2) Determine how many years must be subtracted from the claimant's actual retirement age to get to A and subtract that period from the claimant's age. If the claimant's age is X, the result of this calculation is (X + A R).
 - (3) Look up this new reduced age in the Table corresponding to retirement age *A* at the appropriate rate of return. Let the resulting multiplier be *M*.
 - (4) Determine how many years must be added to the claimant's actual retirement age to get to *B* and add that period to the claimant's age. The result of this calculation is (X + B R).
 - (5) Look up this new increased age in the Table corresponding to retirement age *B* at the appropriate rate of return. Let the resulting multiplier be *N*.
 - (6) Interpolate between *M* and *N*. In other words, calculate:

 $(B - R) \times M + (R - A) \times N$

and divide the result by [(B - R) + (R - A)], (or equivalently [B - A]).

¹⁸ Warriner v Warriner [2002] EWCA Civ 81, [2002] 1 WLR 1703 and Cooke & Others v United Bristol Health Care & Others [2003] EWCA Civ 1370, [2004] 1 WLR 251

¹⁹ *Warriner v Warriner* [2002] EWCA Civ 81 per Dyson LJ at para 35.

²⁰ Other discount rates have also been adopted in non-UK common law jurisdictions which also use the Ogden Tables, for example Guernsey in the case of *Helmot v Simon* [2012] UKPC 5.

²¹ Under the current law, the State Pension age is due to increase to age 68 between 2044 and 2046 (although this may be brought forwards following a recent government review). To check the state retirement age of a particular claimant, there is a helpful calculator at: <u>https://www.gov.uk/state-pension-age</u>.

- 34. In the example given in the preceding paragraph, the steps to interpolate the appropriate multiplier are set out below.
 - (1) *R* is 58, *A* is 55 and *B* is 60.
 - (2) Subtracting 3 years from the claimant's age gives 39.
 - (3) Looking up age 39 in Table 6 (for retirement age 55) gives 13.11 (*M*) at a rate of return of +2.5%.
 - (4) Adding 2 years to the claimant's age gives 44.
 - (5) Looking up age 44 in Table 8 (for retirement age 60) gives 13.05 (*N*) at a rate of return of +2.5%.
 - (6) Interpolate between M and N applying the above formula: 2 x 13.11 + 3 x 13.05 and dividing by (60-58) + (58–55) [equals 5] gives 13.07 as the multiplier.

(j) Calculating losses from retirement

- 35. When the loss or expense to be valued is that from the date of retirement to death, and the claimant's date of retirement differs from that assumed in the main Ogden Tables, the Additional Tables may be used to calculate the appropriate multiplier.
- 36. Alternatively, to calculate the multiplier using the main Ogden Tables, a different approach is necessary involving the following three steps:
 - (1) Assume that there is a present loss which will continue for the rest of the claimant's life and from Table 1 or 2 establish the value of that loss or expense over the whole period from the date of assessment until the claimant's death.
 - (2) Establish the value of such loss or expense over the period from the date of assessment until the claimant's expected date of retirement following the procedure explained in Section A (i) above.
 - (3) Subtract the second figure from the first. The balance remaining represents the present value of the claimant's loss or expense between retirement and death.

(k) Younger ages

- 37. Tables 1 and 2, which concern pecuniary loss for life, and Tables 19 to 34, which concern loss of pension from retirement age, have been extended down to age 0. In some circumstances the multiplier at age 0 is slightly lower than that at age 1; this arises because of the relatively high incidence of deaths immediately after birth.
- 38. Tables for multipliers for loss of earnings (Tables 3 to 18) have not been extended below age 16. In order to determine the multiplier for loss of earnings for someone who has not yet started work, it is first necessary to determine an assumed age at which the claimant would have commenced work and to find the appropriate multiplier for that age from Tables 3 to 18, according to the assumed retirement age. This multiplier should then be multiplied by the discount or deferment factor from Table 35 which corresponds to the prevailing discount rate in the relevant jurisdiction and the period from the date of the trial to the date on which it is assumed that the claimant would have started work.
- 39. A similar approach can be used for determining a multiplier for pecuniary loss for life where the loss is assumed to commence in a number of years from the date of the trial. For simplicity the factors in Table 35 relate purely to the impact of compound interest and ignore mortality. At ages below 30 this is a reasonable approximation but, at higher ages, and where the losses are significant, it may be appropriate to allow explicitly for mortality and the advice of an actuary should be sought.

(I) Contingencies other than mortality

40. Tables 1 to 34 make reasonable provision for mortality risk i.e. the levels of mortality which members of the population of the United Kingdom alive today may typically expect to experience in future. However, these Tables do not take account of any other risks or vicissitudes of life, such as the possibility that the claimant would have had interruptions in employment due to periods out for reasons including ill-health, childcare and redundancy. Section B suggests ways in which allowance may be made to the multipliers for loss of earnings, to allow for risks other than mortality.

(m) Fixed periods

41. In cases where pecuniary loss is to be valued for a fixed period, the multipliers in Table 36 may be used. These make no allowance for mortality or any other contingency but assume that regular frequent payments (e.g. weekly or monthly) will continue throughout the period. These figures should in principle be adjusted if the periodicity of payment is less frequent, especially if the payments in question are annually in advance or in arrears.

(n) Variable future losses or expenses

- 42. The Tables do not provide an immediate answer when the annual future loss or expense is likely to change at given points in time in the future (other than increasing with inflation). The most common examples will be where:
 - (a) The claimant's lost earnings would have increased on a sliding scale or changed due to promotion; or
 - (b) The claimant's future care needs are likely to change in the future, perhaps because it is anticipated that a family carer will not be able to continue to provide help or because deterioration of the claimant's condition is expected.
- 43. In such situations it is usually necessary to split the overall multiplier, whether for working life or whole of life, into segments, and then to apply those smaller segmented multipliers to the multiplicand appropriate for each period.
- 44. Splitting a Table 36 multiplier is relatively straightforward. It is usually easier to use a computer programme or the Additional Tables to split multipliers from Tables 1 to 34. However, split multipliers can also be calculated manually as set out in Example 6 below.

Example 4 – splitting Table 36 multipliers at -0.25%

- 45. Where the claimant's life expectancy is impaired and the claimant's whole life multiplier is derived using a fixed term multiplier from Table 36, it is common practice to derive the multipliers for each period of loss from the same table.
- 46. Take, for example, an English male aged 20 years at the date of settlement/trial who requires personal care and assistance for life. He has a reduced life expectancy to age 70. Significant changes in his care regime are anticipated at age 30 and again at age 50.
- 47. The multiplicands for care costs are set out in the following table.

Period	Age	Annual care costs
1.	From age 20 to 30	£30,000 per annum
2.	From age 30 to 50	£60,000 per annum
3.	From age 50 for life	£80,000 per annum

48. The whole life multiplier from age 20 to 70 for a fixed term of 50 years derived from Table 36 at a discount rate of -0.25% is 53.26. The split multipliers for each period of loss can be calculated as follows: the multiplier for the first 10 year period (20-30) is the multiplier for a term certain of 10 years derived from Table 36, namely 10.13; for the next period of 20 years (30-50) the Table 36 multiplier is 21.03 (being the fixed term multiplier of 30 years of 31.16 minus the multiplier for a fixed term of 10 years of 10.13); then, the multiplier for the final period of loss (50-70) is the balance of the full multiplier i.e. 22.10 (being the term certain multiplier of 53.26 minus the fixed term multiplier for 30 years of 31.16).

<u>Age</u> (years)	<u>Table 36</u> Split multipliers	<u>Care costs</u> <u>£ a year</u>	<u>Total</u> <u>£</u>
20 – 30	10.13	30,000	303,900
30 – 50	21.03	60,000	1,261,800
50 – 70	22.10	80,000	1,768,000
Totals	53.26		3,333,700

Example 5 – splitting Table 1 multipliers using the Additional Tables at -0.25%

- 49. Where the claimant has a normal life expectancy, the whole life multiplier is derived from Table 1 for men or Table 2 for women. The easiest and most accurate way to calculate split multipliers for variable periods of loss derived from Tables 1 to 34 is to use the Additional Tables or a computer programme based on the Additional Tables.
- 50. Using the same facts and multiplicands as Example 4 above but with the normal life expectancy, the split multipliers for each period at a discount rate of -0.25% can be derived from the Additional Tables as follows. The whole life multiplier for a man aged 20 at a discount rate of -0.25% is 72.46. For the first period from age 20 to 30, the multiplier is 10.11. For the second period from age 30 to 50, the multiplier is 20.75 (being the multiplier from age 20 to 50 of 30.86 minus the multiplier from age 20 to 30 of 10.11). The multiplier for the final period from age 50 for life is 41.60 (being the whole life multiplier of 72.46 minus the multiplier from age 20 to 50 of 30.86).
- 51. The total claim for care over the claimant's lifetime is £4,876,300, as set out in the following table.

<u>Age</u> (years)	<u>Table 1</u> Split multipliers	<u>Care costs</u> <u>£ a year</u>	<u>Total</u> <u>£</u>
20 – 30	10.11	30,000	303,300
30 – 50	20.75	60,000	1,245,000
50 till death	41.60	80,000	3,328,000
Totals	72.46		4,876,300

Example 6 – splitting Table 1 multipliers using the apportionment method at -0.25%

52. An alternative way to estimate split multipliers for variable periods of loss derived from Tables 1 to 34 is to use the "apportionment method". This method involves apportioning the multiplier that needs to be split by reference to percentages of the fixed term multiplier for the same period derived from Table 36. The apportionment method, which was set out in paras 23 to 24 of the explanatory notes to the 6th edition of the Tables, is

less accurate than using the Additional Tables, however, an example of its use is set out below in the event that it is not possible to access the Additional Tables.

- 53. Using the same facts as in the above examples (with a normal life expectancy), the Table 1 whole life multiplier of 72.46 can be split manually using the main Ogden Tables at a discount rate of -0.25% as follows:
 - (1) The life expectation will be 66.36 years (from the 0% column of Table 1) and the multiplier for that period taking into account mortality risks (from the -0.25% column of Table 1) will be 72.46.
 - (2) The multiplier for a term certain of 66.36 years (ignoring mortality risks) from Table 36 at -0.25% lies between 71.76 (for 66 years) and 72.95 (for 67 years) and is calculated thus:

 $[(67 - 66.36) \times 71.76] + [(66.36 - 66) \times 72.95] = 72.19^{22}.$

- (3) The above Table 36 multiplier of 72.19 for a full period of 72.46 years should be split into separate smaller Table 36 fixed term multipliers representing each period of loss. So, the multiplier for the first 10 year period (20-30) is represented by a multiplier for a term certain of 10 years derived from Table 36, namely 10.13; for the next period of 20 years (30-50) the Table 36 multiplier is represented by a multiplier of 21.03 (being the fixed term multiplier of 30 years of 31.16 minus the multiplier for a fixed term of 10 years of 10.13); then, the final period of loss (from 50 to death) is represented by the balance of the full multiplier i.e. 41.03 (being the term certain multiplier of 72.19 minus the fixed term multiplier for 30 years of 31.16).
- (4) Each of those smaller segmented multipliers can be shown as a percentage or fraction of the whole: so, for the first 10 years the segmented multiplier of 10.13 is 14.032% of the whole figure of 72.19, and so on for each segment of the life period.
- (5) The life multiplier from Table 1 can now be split up in the way in which the Table 36 multiplier was treated above and in identical proportions: thus the first 10 year period is now represented by a multiplier of 10.17 which is calculated by taking 14.032% of 72.46.
- (6) The figures (rounded at each step of the calculation) are set out in tabular form below and give a total lump sum award of £4,866,100:

<u>Age</u> (years)	<u>Table 36</u> (66.36 years) <u>Split</u> <u>multipliers</u>	<u>% Split</u> (of Table 36 <u>figure)</u>	<u>Table 1</u> (multiplier allowing for mortality)	<u>Care costs</u> <u>£ a year</u>	<u>Total</u> £
20 - 30	10.13	14.032%	10.17	30,000	305,100
30 - 50	21.03	29.131%	21.11	60,000	1,266,600
50 till death	41.03	56.836%	41.18	80,000	3,294,400
Totals	72.19 (no mortality discount)	100.00%	72.46 life multiplier		4,866,100

²² Using the simpler interpolation method referred to in Section A (f), the calculation is the same i.e. $71.76 + [(72.95 - 71.76) \times 0.36] = 72.19$.

Section B: Contingencies other than Mortality

(a) Introduction

- 54. As stated in Section A, Tables 3 to 18 of the main Ogden Tables for calculating loss of earnings take no account of risks other than mortality. Likewise, loss of earnings multipliers derived from the Additional Tables make no allowance for risks other than mortality. This section shows how the multipliers in these Tables may be reduced to take account of risks other than mortality by applying reduction factors in Tables A to D.
- 55. Tables of reduction factors to be applied to the existing multipliers were first introduced in the 2nd edition of the Ogden Tables. These factors were based on work commissioned by the Institute of Actuaries and carried out by Professor S Haberman and Mrs D S F Bloomfield²³. Although there was some debate within the actuarial profession about the details of the work, and in particular about the scope for developing it further, the findings were broadly accepted and were adopted by the Government Actuary and the other actuaries who were members of the Ogden Working Party when the 2nd edition of the Tables was published and remained unchanged until the 6th edition.
- 56. Some related work was published in 2002 by Lewis, McNabb and Wass²⁴. For the publication of the 6th edition of the Ogden Tables, the Ogden Working Party was involved in further research into the impact of contingencies other than mortality carried out by Professor Richard Verrall, Professor Steven Haberman and Mr Zoltan Butt of City University, London and, in a separate exercise, by Dr Victoria Wass of Cardiff University. Their findings were combined to produce the tables of reduction factors, Tables A to D, given in Section B of the 6th edition.
- 57. The Haberman and Bloomfield paper relied on data from the Labour Force Surveys for 1973, 1977, 1981 and 1985 and English Life Tables No. 14 (1980-82). The Labour Force Survey (LFS) was originally designed to produce a periodic cross-sectional snapshot of the working age population and collects information on an extensive range of socio-economic and labour force characteristics. Since the winter of 1992/3, the LFS has been carried out on a quarterly basis, with respondents being included in the survey over 5 successive quarters. The research of Professor Verrall et al and Dr Wass used panel data from the Labour Force Surveys conducted from 1998 to 2003 to estimate the probabilities of movement of males and females between different employment states, dependent on age, sex, starting employment state and level of disability. These probabilities permit the calculation of the expected periods in employment until retirement age, dependent on the starting employment state, disability status and educational attainment. These working-life expectancies can be compared to the working time to retirement where the person remains in work throughout, to obtain reduction factors which give the expected proportion of time to retirement age which will be spent in employment. The reduction factor is applied to the relevant baseline multiplier from Tables 3 to 18, in order to give a multiplier which takes into account only those periods the claimant would be expected, on average, to be in work. The reduction factors reported in this edition are calculated on the basis of a discount rate of 0%²⁵ compared to 2.5% in the earlier editions.

²³ Work time lost to sickness, unemployment and stoppages: measurement and application (1990), *Journal of the Institute of Actuaries*, 117, 533-595.

²⁴ Methods of calculating damages for loss of future earnings, *Journal of Personal Injury Law*, 2002 No. 2.

²⁵ The data is not available to provide reduction factors at -0.25% or -0.75%. However, any difference is thought to be negligible compared to the available reduction factors calculated at 0%.

- The factors described in subsequent paragraphs are for use in calculating loss of 58. earnings up to retirement age. The research did not investigate the impact of contingencies other than mortality on the value of future pension rights. Some reduction to the multiplier for loss of pension would often be appropriate when a reduction is being applied for loss of earnings. This may be a smaller reduction than in the case of loss of earnings because the ill-health contingency (as opposed to the unemployment contingency) may give rise to significant ill-health retirement pension rights. A bigger reduction may be necessary in cases where there is significant doubt whether pension rights would have continued to accrue (to the extent not already allowed for in the postretirement multiplier) or in cases where there may be doubt over the ability of the pension fund to pay promised benefits. In the case of a defined contribution pension scheme, loss of pension rights may be allowed for simply by increasing the future earnings loss (adjusted for contingencies other than mortality) by the percentage of earnings which the employer contributions to the scheme represent. For further details and an example, see under the subheading "Assessing Pension Losses" in Section C of the explanatory notes.
- 59. The methodology of applying the Table A to D reduction factors described below is the suggested method for dealing with contingencies other than mortality and is applicable in most circumstances. The methodology provides for the separate valuation of pre- and post-injury earnings, where the latter accounts for anticipated residual earnings in cases where the claimant is considered capable of working after the injury, whether on an employed or self-employed basis. This will in the majority of cases enable a more accurate assessment to be made of the mitigation of loss. However, there may be some cases when the Smith v Manchester²⁶ or Blamire²⁷ approach remains applicable or otherwise where a precise mathematical approach is inapplicable²⁸. For example, there may be no real alternative to a Smith v Manchester or Blamire award where there is insufficient evidence or too many imponderables for the judge to be able to make the findings necessary to support the conventional multiplicand/multiplier approach²⁹. But, merely because there are uncertainties about the future does not of itself justify a departure from the well-established multiplicand/multiplier method and judges should therefore be slow to resort to the broad-brush *Blamire* approach, unless they really have no alternative³⁰.
- The reduction factor approach which follows is for guidance and is not prescriptive. 60. However, the Table A to D reduction factors should generally be used unless there is a good reason to disapply or to adjust them. The suggested reduction factors adjust the baseline multiplier to reflect the average pre- and post-injury contingencies according to the employment risks associated with the age, sex, employment status, disability status and educational attainment of the claimant when calculating awards for loss of earnings and for any mitigation of this loss in respect of potential future post-injury earnings. This method of calculation, based as it is on three broadly defined characteristics, will not capture all the factors which might be expected to affect the claimant's future earnings. Neither is the average for a broad category likely to capture the detail of individual circumstances and characteristics. First, employment history is based on employment status at the time of trial or assessment and does not include details of the claimant's career up to that date. Secondly, educational achievement is measured as three broad groups which are an imperfect proxy for individual human capital and skill level. Thirdly, it can be difficult to place a value on the possible mitigating income when considering

²⁶ Smith v Manchester Corporation (1974) 17 KIR 1.

²⁷ Blamire v South Cumbria Health Authority [1993] PIQR Q1.

²⁸ See Billett v MOD [2015] EWCA Civ 773; [2016] PIQR Q1 at para 99; and Ward v Allies and Morrison Architects [2012] EWCA Civ 1287; [2013] PIQR Q1 which considered similar wording from the 6th edition of the guidance notes.

²⁹ See *Irani v Duchon* [2019] EWCA Civ 1846, per Hamblen LJ at para 22.

³⁰ See *Bullock v Atlas Ward Structures Ltd* [2008] EWCA Civ 194, per Lord Keene at para 21.

the potential range of impairments and their effect on post-work capability, even within the Ogden definition of disability set out below. For these reasons it may be appropriate in certain circumstances to depart from the published reduction factors in Tables A to D by increasing or reducing the reduction factor to better account for the individual characteristics of the claimant. Some of the circumstances which warrant departure and a methodology to determine the scale of the departure are described below. The examples at the end of this section illustrate the strict application of the reduction factors and also the circumstances and method for making a departure.

- 61. The reduction factors have not been updated using more recent data from the LFS. They remain based on the data from 1998-2003. Since the introduction of the Equality Act 2010, there have been major changes in the interpretation of disability which has involved a lowering of the threshold of the disability status classification. This is ongoing and is particularly evident in data collected from 2013 onwards. As the definition of disability gets wider and as awareness and acceptance increase, its prevalence rate in the working-age population increases. This is because more people think of themselves as disabled and self-report disability when questioned in surveys. As the prevalence rate increases, the difference in employment risks between disabled and non-disabled people gets narrower. This is not because people with a specific impairment, for example a visual impairment, suffer less employment disadvantage but rather because people with a lower severity of impairment or activity limitation increasingly classify themselves as disabled rather than non-disabled. The employment chances among this bigger group are higher than for those under the narrower definition of disability. While the expanding definition of disability precludes a consistent measure of the disability employment gap, it is advisable to rely upon older data based on a more stable definition of disability and a definition that more closely matches the needs of the Ogden Tables.
- 62. Whilst the underlying data remain the same, there are three differences to the suggested reduction factors in the 8th edition of the Tables and the way they are calculated. These are as follows:
 - (a) Re-calculation of the reduction factors at a discount rate of 0% to reflect the reduction in the personal injury discount rate³¹;
 - (b) Re-labelling of the education classification to Level 1 (below GCSE level qualification, no qualification or other qualification); Level 2 (A level or equivalent, GCSE or equivalent); Level 3 (higher degree, degree and equivalent, higher education qualification below degree level); and
 - (c) Allocation of new qualifications and newly graded qualifications within a relabelled three-way education classification.
- 63. Guidance is provided below regarding when it might be appropriate to consider departing from the strict application of the reduction factors and how to estimate the scale of that departure.

(b) The deduction for contingencies other than mortality

- 64. Under this method, multipliers for loss of earnings obtained from Tables 3 to 18, or, alternatively derived from the Additional Tables, are multiplied by reduction factors to allow for the risk of periods of non-employment.
- 65. The research by Professor Verrall *et al* and Dr Wass referred to above demonstrated that the key issues affecting a person's future working life are age, sex, employment status, disability status and educational attainment.
- 66. The definitions of employed/not employed, disabled/not disabled and educational

³¹ In England, Wales and Scotland.

attainment used in this analysis and which should be used for determining which reduction factors to apply to the baseline multipliers to allow for contingencies other than mortality are as follows.

(c) Definition of Employed

67. "*Employed*": In respect of Tables A and C – those who were employed, selfemployed or on a government training scheme as at the time of injury.

In respect of Tables B and D – those who are employed, self-employed or on a government training scheme as at the date of assessment / trial.

"*Not employed*": All others (including those temporarily out of work, full-time students and unpaid family workers).

(d) Ogden Definition of Disability

68. It is important to note that the definition of disability used in the Ogden Tables is not the same as that used in the Equality Act 2010. The Ogden definition of disability is based upon the definition of disability set out in the Disability Discrimination Act (DDA) 1995 (supported by the accompanying guidance notes). This is because this is the definition that applied at the time of the underlying LFS research which underpins the suggested Table A to D reduction factors. In addition to meeting the DDA 1995 definition of disability, the impairment must also be work-affecting by either limiting the kind or amount of work the claimant is able to do. The Ogden definition of disability is defined as follows.

"Disabled person": A person is classified as being disabled if **all three** of the following conditions in relation to ill-health or disability are met:

- (i) The person has an illness or a disability which has or is expected to last for over a year or is a progressive illness; and
- (ii) The DDA1995 definition is satisfied in that the impact of the disability has a substantial³² adverse effect on the person's ability to carry out normal day-to-day activities³³; and
- (iii) The effects of impairment limit either the kind **or** the amount of paid work he/she can do.

"Not disabled": All others

69. Disability is therefore defined as an impairment that has a substantial adverse effect on a respondent's ability to carry out normal day-to-day activities. Both 'normal' and 'substantial' require interpretation. Normal day-to-day activities are those which are carried out by most people on a daily basis and which include those carried out at work. The meaning of the word 'substantial' has changed over time in both law and common understanding such that the threshold whereby an activity-limitation qualifies as 'substantial' (and therefore amounts to a disability) was lower in 2019 than it was when the data were collected. This is reflected in a higher disability prevalence rate in the working-age population which was around 12% in 1998 and is around 19% in 2019,

³² Para 3.2 of the DDA Code of Practice defined substantial as being more than minor or trivial.

³³ The reduction factors are based on data from 1998-2003 when disability status was defined by the DDA 1995. Under Schedule 1, para 4 of the DDA, an impairment was taken to affect the ability of the person concerned to carry out normal day-to-day activities only if it affects one of the following: (a) mobility; (b) manual dexterity; (c) physical coordination; (d) continence; (e) ability to lift, carry or otherwise move everyday objects; (f) speech, hearing or eyesight; (g) memory or ability to concentrate, learn or understand; or (h) perception of the risk of physical danger

reflecting an increased reporting of qualifying activity-limiting impairments rather than an increase in the number or severity of such impairments.³⁴ The issue of severity of disability within the reduction factors underpinned the disagreement in the case of *Billett* $v MOD^{35}$ litigated in 2014 and 2015. Mr Billett was disabled under the looser Equality Act 2010 definition but arguably he was not disabled under the tighter Ogden definition of disability because his impairment was not sufficiently limiting relative to the criteria set out below³⁶.

70. Criteria (i) to (iii) above, which determine disability status, were self-reported. The guidance notes on the meaning of substantial from the DDA 1995 were available to survey respondents to assist them to self-classify. The guidance notes were not intended to be inclusive or exhaustive and it is not clear to what extent respondents referred to them. The guidance notes were dropped from the Equality Act 2010 and from the LFS survey question in 2013 because they were considered to be overly restrictive in the definition of disability. The guidance notes are reproduced here but should be used with the above caveats in mind.

Mobility - for example, unable to travel short journeys as a passenger in a car, unable to walk other than at a slow pace or with jerky movements, difficulty in negotiating stairs, unable to use one or more forms of public transport, unable to go out of doors unaccompanied.

Manual dexterity - for example, loss of functioning in one or both hands, inability to use a knife and fork at the same time, or difficulty in pressing buttons on a keyboard

Physical co-ordination - for example, the inability to feed or dress oneself; or to pour liquid from one vessel to another except with unusual slowness or concentration.

Problems with bowel/bladder control - for example, frequent or regular loss of control of the bladder or bowel. Occasional bedwetting is not considered a disability.

Ability to lift, carry or otherwise move everyday objects (for example, books, kettles, light furniture) - for example, inability to pick up a weight with one hand but not the other, or to carry a tray steadily.

Speech - for example, unable to communicate (clearly) orally with others, taking significantly longer to say things. A minor stutter, difficulty in speaking in front of an audience, or inability to speak a foreign language would not be considered impairments.

Hearing - for example, not being able to hear without the use of a hearing aid, the inability to understand speech under normal conditions or over the telephone.

Eyesight - for example, while wearing spectacles or contact lenses - being unable to pass the standard driving eyesight test, total inability to distinguish colours (excluding ordinary red/green colour blindness), or inability to read newsprint.

Memory or ability to concentrate, learn or understand - for example, intermittent loss of consciousness or confused behaviour, inability to remember names of family or friends, unable to write a cheque without assistance, or an inability to follow a recipe.

 ³⁴ These prevalence rates are DDA and Equality Act 2010 definitions of disability and not the Ogden Tables definition. They are reported by ONS in Table A08:
(https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/labourmarketstatusofdisabledpeoplea08). The prevalence rate on the Ogden tables definition has increased from 11.3% to 13.5% (Jones, M. and Wass, V. J. (2013). "Understanding changing disability-related employment gaps in Britain", 1998-2011. Work Employment and Society 27(6), pp. 982-1003 updated to 2019 using LFS April-June 2019).

³⁵ *Billett v MOD* [2015] EWCA Civ 773; [2016] PIQR Q1.

³⁶ See further Wass V (2015) "Billett v Ministry of Defence: A second bite", Journal of Personal Injury Law, 4 pp. 243-245; and Wass V (2015) "Billett v Ministry of Defence and the meaning of disability in the Ogden Tables", Journal of Personal Injury Law, 1 pp. 37-41.

Perception of risk of physical danger - for example, reckless behaviour putting oneself or others at risk, mobility to cross the road safely. This excludes (significant) fear of heights or underestimating risk of dangerous hobbies.

(e) Highest educational qualification

- 71. Highest educational qualification is used here as a proxy for human capital/skill level, so that those in professional occupations such as law, accountancy, nursing etc who do not have a degree ought to be treated as if they do have one.
- 72. Three levels of educational attainment are defined for the purposes of Tables A to D as follows:
 - Level 3 Higher degree, degree or equivalent, higher education qualification below degree level
 - Level 2 A level or equivalent (at least one at pass level E), GCSE or equivalent (at least one at pass level A* to C/9 to 4)
 - Level 1 Low level qualifications below GCSE, no qualifications and other qualifications
- 73. The following table gives a more detailed breakdown of the allocation of various types of educational qualification to each of the three categories above and is based on the allocations used in the most recent LFS.

(f) Categories of highest educational attainment³⁷

Level 3 Higher degree, degree or equivalent, higher education qualification below degree level

Higher degree; NVQ level 5; Level 8 Diploma; Level 8 Certificate; Level 7 Diploma; Level 7 Certificate; Level 8 Award; First degree/foundation degree; Other degree; NVQ level 4; Level 6 Diploma; Level 6; Level 7 Award; Diploma in higher education; Level 5 Diploma; Level 5 Certificate; Level 6 Award; HNC/HND/BTEC higher etc; Teaching D further education; Teaching D secondary education; Teaching D primary education; Teaching D foundation stage; Teaching D level not stated; Nursing etc; RSA higher diploma; Other higher education below degree.

Level 2 GCSE A level or equivalent, GCSE grade A* to C, 9 to 4 or equivalent

Level 4 Diploma; Level 4 Certificate; Level 5 Award; NVQ level 3; Advanced/Progression (14-19) Diploma; Level 3 Diploma; Advanced Welsh Baccalaureate; International Baccalaureate; Scottish Baccalaureate; GNVQ/GSVQ advanced; A-level or equivalent; RSA advanced diploma; OND/ONC/BTEC/SCOTVEC National etc; City & Guilds Advanced Craft/Part 1; Scottish 6 year certificate/CSYS; SCE higher or equivalent; Access qualifications; AS-level or equivalent; Trade apprenticeship; Level 3 Certificate; Level 4 Award; NVQ level 2 or equivalent; Intermediate Welsh Baccalaureate; GNVQ/GSVQ intermediate; RSA diploma; City & Guilds Craft/Part 2; BTEC/SCOTVEC First or General diploma etc; Higher (14-19) Diploma; Level 2 Diploma; Level 2 Certificate; Scottish National Level 5; O-level, GCSE grade A*-C, 9-4, or equivalent; Level 3 Award.

³⁷

Source: Certificate Labour Force Survey User Guide – Volume 3: Details of LFS variables 2019, Highest Qualification, pp 303 -305. <u>https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologie</u> <u>s/labourforcesurveyuserguidance</u>

Level 1 Low level qualifications below GCSE, no or other qualification

NVQ level 1 or equivalent; Foundation Welsh Baccalaureate; GNVQ/GSVQ foundation level; Foundation (14-19) Diploma; Level 1 Diploma; Scottish National Level 4; CSE below grade 1, GCSE below grade C; BTEC/SCOTVEC First or General certificate; SCOTVEC modules; RSA other, Scottish Nationals Level 3; Scottish Nationals below Level 3; City & Guilds foundation/Part 1; Level 1 Certificate; Level 2 Award; YT/YTP certificate; Key skills qualification; Basic skills qualification; Entry level qualification; Entry level Diploma; Entry level Certificate; Level 1 Award; Entry level Award; Other qualification; No qualifications.

- 74. The research also considered the extent to which a person's future working life expectancy is affected by individual circumstances such as occupation and industrial sector, geographical region and education. The researchers concluded that the most significant consideration was the highest level of education achieved by the claimant and that, if this was allowed for, the effect of the other factors was relatively small. As a result, the Ogden Working Party decided to publish reduction factors which allow for employment status, disability status and educational attainment only. This was a change from the 6th edition of the Ogden Tables compared to previous editions where adjustments were made for types of occupation and for geographical region.
- 75. A separate assessment is made for (a) the value of earnings the claimant would have received if the injury had not been suffered and (b) the value of the claimant's earnings (if any) taking account of the injuries sustained. The risk of non-employment is significantly higher post-injury where there has been an activity-limiting impairment. The loss is arrived at by deducting (b) from (a).
- 76. In order to calculate the claimant's loss of earnings had the injury not been suffered, the claimant's employment status and disability status need to be determined as at the date of the injury (or the onset of symptoms resulting in a loss of earnings) giving rise to the claim, so that the correct reduction factor can be selected. For the calculation of future loss of earnings (based on actual pre-injury earnings and also future employment prospects), Tables A and C should be used for claimants who were not disabled at the time of the accident, and Tables B and D should be used for those with a pre-existing disability. In all these tables the three left hand columns are for those who were employed at the time of the accident and the three right hand columns are for those who were not.
- 77. In order to calculate the value of the actual earnings that a claimant is likely to receive in the future (i.e. after settlement or trial), the employment status and the disability status need to be determined as at the date of settlement or trial. For claimants who meet the Ogden definition of disability defined above at that point in time, Tables B and D should be used. The three left hand columns will apply in respect of claimants actually in employment at the date of settlement or trial and the three right hand columns will apply in respect of those who remain unemployed at that point in time.
- 78. The factors in Tables A to D allow for the interruption of employment for bringing up children and caring for other dependents.
- 79. In the case of those who, at the date of the injury, have not yet reached the age at which it is likely they would have started work, the relevant factor will be chosen based on a number of assessments of the claimant's likely employment had the injury not occurred. The relevant reduction factor from the tables needs to be selected on the basis of the level of education the claimant would have been expected to attain, the age at which it is likely the claimant would have become employed or not. The overall multiplier will also have to be discounted for early receipt by applying the appropriate discount factor

from Table 35 to reflect the number of years between the claimant's age at the date of trial and the age at which it is likely that he/she would have started work.

- 80. In the case of those who at the date of trial have not completed their education/skills acquisition, the relevant education level will be chosen on an assessment of the claimant's likely highest qualification that he/she is likely to have achieved (pre-injury) and is now likely to be achieved (post-injury). It is for this reason that the reduction factors are not available before an individual is old enough to have achieved them, namely aged 16-19 for a degree.
- 81. In the case of those who, as a result of injury can no longer work in an area which makes use of their qualifications, these qualifications may need to be ignored (see below).
- 82. Tables A to D include reduction factors up to age 54 only. For older ages the reduction factors tend to increase towards 1 at retirement age for those who are employed and fall towards 0 for those who are not employed. Where the claimant is older than 54, it is anticipated that the likely future course of employment status will be particularly dependent on individual circumstances, so that the use of factors based on averages would not be appropriate. Hence reduction factors are not provided for these older ages.

		Employed			Non-employed		
Age at							
trial	Level 3	Level 2	Level 1	Level 3	Level 2	Level 1	
16-19		0.89	0.86		0.87	0.83	
20-24	0.91	0.91	0.87	0.88	0.88	0.84	
25-29	0.91	0.91	0.88	0.88	0.87	0.83	
30-34	0.90	0.90	0.88	0.87	0.86	0.82	
35-39	0.88	0.89	0.87	0.85	0.84	0.81	
40-44	0.86	0.87	0.86	0.82	0.81	0.79	
45-49	0.83	0.85	0.85	0.77	0.77	0.75	
50	0.81	0.83	0.84	0.72	0.73	0.71	
51	0.80	0.82	0.83	0.69	0.70	0.69	
52	0.78	0.81	0.83	0.67	0.67	0.67	
53	0.77	0.80	0.82	0.64	0.64	0.64	
54	0.76	0.79	0.81	0.60	0.60	0.60	

Table A Loss of earnings to pension age 65: Males – Not disabled

Table B Loss of earnings to pension age 65: Males – Disabled

		Employed			Non-employed		
Age at							
trial	Level 3	Level 2	Level 1	Level 3	Level 2	Level 1	
16-19		0.50	0.29		0.47	0.25	
20-24	0.54	0.50	0.34	0.50	0.45	0.24	
25-29	0.57	0.50	0.37	0.38	0.40	0.23	
30-34	0.57	0.46	0.35	0.39	0.32	0.22	
35-39	0.55	0.43	0.35	0.40	0.25	0.19	
40-44	0.55	0.43	0.35	0.34	0.21	0.15	
45-49	0.53	0.44	0.36	0.27	0.17	0.11	
50	0.52	0.46	0.38	0.25	0.16	0.09	
51	0.52	0.46	0.38	0.24	0.15	0.09	
52	0.52	0.46	0.39	0.23	0.13	0.08	
53	0.53	0.46	0.40	0.22	0.13	0.07	
54	0.54	0.47	0.41	0.20	0.12	0.06	

		Employed			Non-employed		
Age at trial	l evel 3	l evel 2	l evel 1	Level 3	l evel 2	l evel 1	
16-19	201010	0.81	0.66	201010	0.78	0.63	
20-24	0.88	0.82	0.69	0.86	0.78	0.63	
25-29	0.88	0.83	0.72	0.84	0.77	0.64	
30-34	0.88	0.84	0.75	0.82	0.77	0.65	
35-39	0.88	0.86	0.77	0.81	0.76	0.65	
40-44	0.88	0.85	0.79	0.79	0.73	0.62	
45-49	0.87	0.84	0.80	0.73	0.65	0.53	
50	0.85	0.83	0.80	0.65	0.55	0.44	
51	0.84	0.83	0.80	0.62	0.51	0.40	
52	0.83	0.83	0.80	0.57	0.46	0.36	
53	0.82	0.83	0.81	0.51	0.40	0.32	
54	0.82	0.83	0.81	0.45	0.34	0.28	

Table C Loss of earnings to pension age 60: Females – Not disabled

Table D Loss of earnings to pension age 60: Females – Disabled

		Employed			Non-employed		
Age at							
trial	Level 3	Level 2	Level 1	Level 3	Level 2	Level 1	
16-19		0.39	0.22		0.34	0.18	
20-24	0.60	0.40	0.22	0.55	0.31	0.16	
25-29	0.59	0.42	0.23	0.49	0.31	0.16	
30-34	0.59	0.42	0.27	0.44	0.31	0.15	
35-39	0.59	0.44	0.31	0.41	0.28	0.14	
40-44	0.58	0.48	0.34	0.35	0.24	0.13	
45-49	0.58	0.51	0.40	0.26	0.19	0.11	
50	0.59	0.54	0.45	0.21	0.15	0.10	
51	0.59	0.56	0.47	0.19	0.14	0.09	
52	0.60	0.58	0.50	0.18	0.12	0.08	
53	0.61	0.61	0.53	0.17	0.11	0.07	
54	0.62	0.64	0.57	0.15	0.09	0.06	

(g) Departures from a strict application

- 83. Adjustments to the reduction factors since they were introduced in the 6th edition (2007) have proved to be difficult and controversial. It is in the nature of assessing damages that a single estimate based on a group average will be inaccurate for an individual claimant and a certain degree of inaccuracy must be accepted.
- 84. There will be many reasons to argue for a departure, but it is important that the departure is made with the following three cautions in mind:
 - (i) Reduction factors are based upon group averages which are statistically verifiable;
 - (ii) The average is a <u>central</u> estimate and there will be a distribution of observations either side; and

- (ii) In the data, most departures will be modest because observations will cluster closely around the central estimate.
- 85. The need to depart from a strict application of the reduction factors might arise from characteristics which are relevant to the future loss of earnings but which are not included in the set of characteristics which determine the published estimate, namely age, sex, employment status, highest educational achievement and disability status or because the included characteristics are too broadly defined so that the average does not reasonably represent the claimant.
- 86. Characteristics included in the reduction factors are measured at the average, so for example a claimant who dropped out of the education system before reaching their potential highest qualification for positive reasons (such as an offer of employment) might be better represented by a higher educational category. Similarly, claimants whose qualifications are close to the border, for example they may just meet the threshold for a category (for example they are in the GCSE qualification category because they have a single GCSE at the minimum grade for a pass) might be better represented by a lower educational category. However, a full category change may not be required, in which case interpolation between the suggested reduction factors for adjacent categories would facilitate a partial change of category. In such a case the parties may wish to take advice on an adjustment based on outcomes from a more detailed classification.
- 87. Employment status is measured at the date of injury and at the date of settlement. A claimant who changed employment status around either of these dates, for example through recruitment to a new position or suffering a job loss from a previous position, perhaps a position of long duration, may require a departure. Claimants who are established in employment in an expanding niche market or in a thriving family firm will face lower than average employment risks for their group. Likewise, claimants who are in temporary work, who have had a chequered employment history or who are restricted by injury to employment in a declining occupation or skill set will face higher than average employment risks for their group.
- 88. Where injury precludes use of an educational qualification or skill, a claimant may be better represented by a lower qualification group. For example, a nurse who is now restricted to a basic clerical role would no longer have the employment risks of a graduate. Alternatively, a nurse who was able to transfer to a sedentary role using her nursing skills, for example working as a General Practice nurse or providing telephone or online medical advice, would probably continue to face similar graduate level employment risks.
- 89. Disability is perhaps the characteristic where at least one of the parties (sometimes both and in opposite directions) is most likely to seek a departure from a strict application of the reduction factors. Disability is measured as either disabled or not disabled and both categories include different levels of severity of impairment and activity-limitation. The defining characteristics are subjective and context specific. There is often a misconception that impairment and activity-limitation must be severe or at least moderately severe to qualify as a disability. The best available evidence on the severity of impairment which underlies disability in the data used to estimate the reduction factors is reported in Berthoud (2006)³⁸ and discussed in Wass (2008)³⁹ and Latimer-Sayer and

³⁸ Berthoud R (2006) "The employment rates of disabled people", Department for Work and Pensions, Research Paper No 298.

³⁹ Wass V (2008) "Discretion in the Application of the New Ogden Six Multipliers: The case of *Connor v Bradman*", *Journal of Personal Injury Law*, 2 pp. 155-164.

Wass $(2013)^{40}$. On a severity scale of 1 to 10 in a sample collected in the Health and Disability Survey 1996-7 and with a disability prevalence rate that matches that found in the data underlying the reduction factors (12%), the median level of severity is 4, 43% lie in the range 1 to 3 (mild), 44% lie in the range 4 to 7 (moderate) and 13% score in the range 7 to 10 (severe). The message here is that the norm for severity is not severe: it is at the mild end of the mild to moderate category. In the circumstances, as long as the claimant meets the above Ogden definition of disability, a departure on the basis of a perceived mild impairment / activity-limitation might not be appropriate (see further under Section B (d) above).

- When considering whether it is appropriate to depart from the suggested Table A to D 90. reduction factors, it is important to consider how the degree of residual disability may have a different effect on residual earnings depending upon its relevance to the claimant's likely field of work. In this regard there is a distinction between impairment and disability. For example, a lower limb amputation may have less effect on a sedentary worker's earnings than on the earnings of a manual worker. Likewise, cognitive problems may prevent someone from continuing to work in a professional or 'knowledge' capacity where the same problems may not prevent continuing employment in job roles with low cognitive demands. In this context, disability is defined in relation to work and is specific to the skills that are required in a particular job and also to the outstanding effects of the impairment where barriers have not been overcome. Disability is more closely related to employment outcomes than is impairment. So, whilst occupation is irrelevant to impairment (an amputation is the same regardless of the occupation), it is crucial to disability. Disability is the better predictor of employment prospects than the impairment itself and close regard must be given to the effects of the claimant's impairments on his or her future intended occupation.
- 91. Where a departure is considered to be appropriate, it could be in either direction and it would normally be expected to be modest. Interpolation using a mid-point between the disabled and non-disabled reduction factors is not advised⁴¹. Disability results in substantial employment disadvantage and therefore applying a mid-point between the pre- and post-injury reduction factors will normally be too great a departure. Professor Victoria Wass, a co-author of the reduction factors, has published advice on when and how to consider an adjustment on the basis of severity of disability⁴². This advice involves using the reduction factors for different employment or educational categories as a guide to the size of the departure rather than the difference between disability categories.
- 92. All departures will be case-specific. In some cases, it may be difficult to determine the scale of the departure and it may be helpful to consult expert opinion. Expert opinion may also be required to advise upon how the suggested reduction factors should be applied and/or adjusted when the claimant was already disabled at the time of the injury which forms the subject of the claim.

(h) Distinction between Wage Effect and Disability Effect

- 93. It should be noted that injury causing disability (as defined above) has two separate and distinct effects:
 - (i) The first, known as the wage effect, is the reduction in earnings caused by injury, which may result from changing role, working less hours or missing out on

Latimer-Sayer, W. and Wass, V. (2013) "Ask the Expert: William Latimer-Sayer asks Victoria Wass some questions about the practical application of the Ogden Reduction Factors", Journal of Personal Injury Law, 1, 35-44.

⁴¹ See further Wass V (2008) "Discretion in the Application of the New Ogden Six Multipliers: The case of Connor v Bradman", *Journal of Personal Injury Law*, 2 pp. 155-164.

⁴² See footnotes 40, 41 and 42 above.

promotions. This effect is usually captured by using a different multiplicand for pre- and post-injury net annual earnings, reflecting the change or expected change as a consequence of the injury.

- (ii) The second, known as the employment effect, is the impact of the person's disability on their long-term employment prospects. In particular, disability is known to increase job search periods, cause longer periods out of work and is associated with a greater risk of early retirement. Tables A to D seek to capture the disadvantage that the second effect, i.e. a claimant's disability, has on employment prospects.
- 94. It is a mistake to conflate these two separate and distinct effects⁴³. A lower post-injury multiplicand to account for a reduction in earnings following injury does not make any allowance for reduced employment prospects. Assuming that the claimant meets the Ogden definition of disability, then the application of the disability-adjusted reduction factor is also required. There is extensive literature on the impact of both effects of disability, with the employment effect being the most important⁴⁴.

(i) Different pension ages

- 95. The factors in Tables A to D assume retirement at age 65 for males and age 60 for females. It is not possible to calculate expected working lifetimes, assuming alternative retirement ages from the LFS data, since the employment data in the LFS were collected only for the working age population, assumed aged between 16 and 64 for males and between 16 and 59 for females. Where the retirement age is different from age 65 for males or age 60 for females, it is suggested that this should be ignored and the reduction factor and the adjustments thereto be taken from the above tables for the age of the claimant as at the date of trial with no adjustment i.e. assume that the retirement age is age 65 for males and age 60 for females. However, if the retirement age is close to the age at the date of trial, then it may be more appropriate to take into account the circumstances of the individual case.
- 96. It should be noted that the reduction factors in Tables A to D are based on data for the period 1998 to 2003. Whilst the reduction factors and adjustments allow for the age-specific probabilities of moving into, or out of, employment over a future working lifetime, based on data for the period 1998 to 2003, the methodology assumes that these probabilities remain constant over time; there is no allowance for changes in these age-specific probabilities in future cohorts. Future changes in the probabilities of moving into, and out of, employment are especially difficult to predict. It is also assumed that there will be no change in disability status or educational achievement after the date of the accident.

(j) Early Retirement

97. It should be noted that the lower reduction factors for disabled people in Tables B and D already include an allowance for retiring earlier than the assumed retirements of 65 (for men) and 60 (for women). Sometimes medical evidence will suggest that a claimant who may be able to return to work following injury will now need to retire earlier as a result of the injury than he or she otherwise would have done in the absence of the injury. Since some allowance has already been made in the Table B and D reduction

⁴³ As occurred in the case of *Clarke v Maltby* [2010] EWHC 1201 (QB): see further the commentary in Latimer-Sayer, W. and Wass, V. (2012) Ogden Reduction Factor adjustments since *Conner v Bradman*: Part 1 *Journal of Personal Injury Law*, 2012, No 4, pp 219-230.

⁴⁴ The disability employment gap in 2019 was 29 percentage points whereas the disability pay gap is between 10% and 20%. Both are based on the Equality Act 2010 definition of disability: https://www.disabilityatwork.co.uk/

factors to reflect the average increased risk of early retirement post-injury, adopting a base multiplier to calculate residual earnings with an earlier retirement age than the base multiplier used to calculate but for the injury earnings may amount to a double discount.

(k) Summary

- 98. In summary to perform a loss of earnings calculation applying the methodology set out in this section, the process is as follows:
 - (1) Choose the table relating to the appropriate sex of the claimant and retirement age. Where the claimant's retirement age differs from that assumed in Tables 1 to 34, the Additional Tables can be used to calculate the appropriate multiplier or the procedure set out under the "interpolation" and "Different retirement ages" subheadings of Section A of the explanatory notes should be followed.
 - (2) Choose the appropriate discount rate column (currently -0.25% in England and Wales; -0.75% in Scotland; and -1.5% in Northern Ireland).
 - (3) In that column find the appropriate figure for the claimant's age at trial ("the basic multiplier").
 - (4) When calculating loss of earnings, Tables 3 to 18 or the Additional Tables should be used when a multiplier/multiplicand approach is appropriate. If it is, the basic multiplier should be adjusted to take account of contingencies other than mortality. These contingencies include the claimant's employment and disability status and educational qualifications. The basic multiplier should be multiplied by the appropriate figure taken from Tables A to D to give the employment risks adjusted multiplier. If there is a good reason to depart from the suggested reduction factor, it may be necessary at this stage to modify the resulting figure further to allow for circumstances specific to the claimant.
 - (5) Multiply the net annual loss (the multiplicand) by the employment risks adjusted multiplier to arrive at a figure which represents the capitalised value of the future loss of earnings.
 - (6) If the claimant has a residual earning capacity, allowance should be made for any post-accident vulnerability on the labour market: the following paragraphs show the suggested way of doing this, although there may still be cases where a *Smith v Manchester* award is appropriate.

Where it is appropriate to do so, repeat steps 1 to 5 above, replacing the preinjury employment and disability status with the post-injury employment and disability status in step 4 and replacing the net annual loss by the assumed new level of net earnings at step 5. It will only be necessary to reconsider the claimant's educational attainments if these have changed between the accident and the date of trial or settlement.

The result will represent the capitalised value of the claimant's likely postaccident earnings

(7) Deduct the sum yielded by step 6 from that yielded by step 5 to obtain the net amount of loss of earnings allowing for residual earning capacity. Where the above methodology is used there will usually be no need for a separate *Smith v Manchester* award.
(I) Worked Examples of Discounts for Contingencies Using Tables A to D Reduction Factors

99. The following are examples of the use of the Ogden Tables and Tables A to D in illustrative personal injury cases with simplified assumptions.

Example 7 – loss of earnings to a retirement age of 68 using Table 12 at -0.25%

- 100. The claimant is a Welsh female aged 35 at the date of the trial who brings her claim in Cardiff. She has three A levels, but not a degree, and was in employment at the date of the accident at a salary of £25,000 a year net of tax. She was not disabled (as defined in Section B) before the accident. As a result of her injuries, she is now disabled and has lost her job but has found part-time employment at a salary of £5,000 a year net of tax. She expected to retire at age 68 pre-accident and still intends to retire at this age, if she can, following her injuries. Her future loss of earnings is assessed as shown below.
 - (1) Look up Table 12 for loss of earnings to pension age 68 for females.
 - (2) At present, the discount rate for those living in England and Wales is -0.25%.
 - (3) Table 12 shows that, on the basis of a -0.25% rate of return, the multiplier for a female aged 35 is 33.59.
 - (4) Now take account of risks other than mortality: allowing for the claimant being employed, having achieved A-levels and not being disabled at the date of trial, Table C (Level 2) indicates 33.59 should be multiplied by a reduction factor of 0.86, resulting in a revised multiplier of 28.89.
 - (5) The claimant's expected earnings in the absence of the accident are therefore £722,250 (£25,000 x 28.89).
 - (6) Allow for mitigation of loss of earnings in respect of post-injury residual earnings. As before, Table 12 shows that, using a discount rate of -0.25%, the multiplier for a female aged 35 is 33.59.
 - (7) Now take account of risks other than mortality: allowing for the claimant being employed, having achieved A-levels and being disabled at the date of trial, Table D (Level 2) would require 33.59 to be multiplied by a reduction factor of 0.44, resulting in a revised multiplier of 14.78.
 - (8) The amount of mitigation for post-injury earnings is therefore £73,900 (£5,000 x 14.78).
 - (9) Overall, the claimant's future loss of earnings after allowing for her anticipated residual earnings capacity is £722,250 minus £73,900, giving a total of £648,350.

Example 8 – loss of earnings to a retirement age of 65 using Table 9 at -0.75%

- 101. The claimant is a 48-year-old Scottish male at the date of the trial. He pursues his claim in Glasgow. He has no educational qualifications. He was employed at the time of the accident earning £20,000 annually net of tax. He intended to retire at age 65. He was not disabled before the accident. As a result of his injuries, he is now disabled and has lost his job. The multiplicand for costs of care is deemed to be £50,000 a year. He is unemployed at the date of trial but has been assessed as capable of finding work with possible future earnings of £5,000 a year net of tax up to normal retirement age. His loss of earnings to retirement age of 65 is assessed as set out below.
 - (1) Look up Table 9 for loss of earnings to pension age 65 for males.
 - (2) At present, the appropriate discount rate for claims brought in Scotland is -0.75%.

- (3) Table 9 shows that, using a discount rate of -0.75%, the multiplier for a male aged 48 is 17.55.
- (4) Now to take account of risks other than mortality: allowing for the claimant being employed, not disabled and having no educational qualifications at the date of trial, Table A (Level 1) would require 17.55 to be multiplied by a reduction factor of 0.85, resulting in a revised multiplier of 14.92.
- (5) Therefore, the subtotal of the claimant's expected earnings in the absence of his injuries is £298,400 (£20,000 x 14.92).
- (6) Allowing for mitigation of loss of earnings in respect of anticipated post-injury residual earnings: as before, Table 9 shows that, on the basis of a -0.75% discount rate, the multiplier for a male aged 48 is 17.55.
- (7) Taking account of risks other than mortality in respect of residual earnings capacity: allowing for the claimant being unemployed and disabled with no educational qualifications at the date of trial, Table B (Level 1) would require 17.55 to be multiplied by a reduction factor of 0.11, resulting in a revised multiplier of 1.93.
- (8) Therefore, the subtotal for mitigation in respect of post-injury residual earnings is $\pounds 9,650$ ($\pounds 5,000 \times 1.93$).
- (9) Hence, the claimant's total award for future loss of earnings after allowing for his anticipated residual earnings is: $\pounds 298,400 \pounds 9,650 = \pounds 288,750$.
- 102. The damages for cost of care are assessed as follows:
 - (1) Look up Table 1 for the lifetime multiplier for a male aged 48.
 - (2) The appropriate discount rate is -0.75%.
 - (3) Table 1 shows that, on the basis of a -0.75% rate of return, the multiplier at age 48 is 42.75.
 - (4) No adjustment is made for risks other than mortality.
 - (5) The damages for cost of care are assessed at $\pounds 2,137,500$ ($\pounds 50,000 \times 42.75$).

Example 9 – loss of earnings to a retirement age of 70 using Table 14 at -0.25%

- 103. The claimant is female, aged 14 at the date of the trial. She lives in Milton Keynes and brings proceedings in England. She is expected to achieve a degree and to be in employment thereafter on an average salary, in current terms, of £30,000 a year net of tax. She was not disabled before the accident. As a result of her injuries, she is now disabled she is still expected to achieve a degree and to be in employment, but with an average annual salary for part-time work in current terms of £15,000 net of tax. She will be aged 21 when she completes her degree. She expected to retire at age 70 before the accident and hopes to still be able to retire at the same age notwithstanding her injuries. Using the main Ogden Tables⁴⁵, her future loss of earnings claim is assessed as set out below.
 - (1) Look up Table 14 for loss of earnings to pension age 70 for females.
 - (2) At present, the discount rate for those living in England and Wales is -0.25%.

⁴⁵ The applicable multiplier can also be calculated using the Additional Tables. The pre-injury multiplier for age 14 at trial starting from age 21 in 7 years' time at -0.25% is 59.10 minus 7.06 i.e. $52.04 \times 0.88 = 45.80$. The post-injury multiplier is $52.04 \times 0.6 = 31.22$. These compare to the pre and post injury multipliers in this example of 45.76 and 31.20 respectively. Whilst the multiplier derived from the Additional Tables is more accurate, access to the Additional Tables may not always be possible and they are not available for all discount rates.

- (3) Table 14 shows that, on the basis of a -0.25% rate of return, the multiplier for a female aged 21 is 51.10.
- (4) Now take account of risks other than mortality: allowing for the claimant at age 21 assessed as achieving a degree, being employed and not disabled, Table C (Level 3) would require 51.10 to be multiplied by a reduction factor of 0.88. However, since the loss does not arise until age 21, a discount factor must be applied for accelerated receipt. The appropriate Table 35 discount factor for 7 years early receipt at a discount rate of -0.25% is 1.0177. Therefore, the adjusted multiplier is calculated as follows: 51.10 x 0.88 x 1.0177 = 45.76.
- (5) The subtotal for the claimant's expected earnings but for her injury is £1,372,800 (£30,000 x 45.76).
- (6) Allow for mitigation of loss of earnings in respect of post-injury earnings: as before, Table 14 shows that, on the basis of a -0.25% discount rate, the multiplier for a female graduate aged 21 is 51.10.
- (7) Taking account of risks other than mortality: allowing for the claimant at age 21 assessed as achieving a degree, being employed and disabled, Table D (Level 3) indicates that the base multiplier of 51.10 should be multiplied by a reduction factor of 0.60. However, again, since the loss does not arise until age 21, a discount factor must be applied for accelerated receipt. The appropriate Table 35 discount factor for 7 years early receipt at a discount rate of -0.25% is 1.0177. Therefore, the adjusted multiplier is 51.10 x 0.60 x 1.0177 = 31.20.
- (8) Therefore, the subtotal in respect of anticipated residual earnings is \pounds 468,000 (\pounds 15,000 x 31.20).
- (9) Hence the total award for future loss of earnings after allowing for mitigation in respect of anticipated residual earnings is: $\pounds 1,372,800 \pounds 468,000 = \pounds 904,800$.

Example 10 – loss of earnings to a retirement age of 67 using Additional Tables at -0.25%

- 104. The claimant is male, aged 55 at the date of the trial. He lives in London and pursues his claim in England. He has achieved O-levels. He was unemployed at the time of the accident. His potential pre-retirement multiplicand has been assessed at £15,000 a year net of tax. He was disabled before the accident. As a result of his injuries, he has been assessed as having no future prospect of employment. His future loss of earnings to retirement age of 67 is shown as follows.
 - (1) Select the appropriate discount rate: at present, the discount rate for those living in England and Wales is -0.25%.
 - (2) Using the Additional Tables for Males at a discount rate of minus 0.25%, the appropriate multiplier for loss of earnings from age 55 to 67 is 11.75, derived by scrolling across from the age 55 row in the first column until age 67⁴⁶.
 - (3) Take account of risks other than mortality: allowing for the claimant being unemployed, disabled and having achieved O-levels at the date of trial, Table B (Level 2) indicates that 11.75 should be multiplied by a reduction factor of 0.12, resulting in a revised multiplier of 1.41.

⁴⁶ Using the Additional Tables is the most accurate way of deriving multipliers involving non-standard retirement ages which do not have a specific table in the Ogden Tables. However, the loss of earnings multiplier to age 67 can be estimated by using one of the interpolation methods and Tables 9 and 11 of the numbered Ogden Tables: see further Section A (h) "different retirement ages". The age-adjusted interpolation method gives an estimate as follows: [(11.82 [Table 9] x 1) + (11.70 [Table 11] x 2)] / 3 = 11.74. The simple interpolation method gives an estimate as follows: [(9.84 [Table 9] x 1) + (12.69 [Table 11] x 2] / 3 = 11.74. The more precise multiplier derived from the Additional Tables is 11.75.

- (5) Pre-injury damages for loss of earnings are assessed as £21,150 (£15,000 x 1.41).
- (6) As the claimant has been assessed as having no realistic prospect of future employment following his injury, no credit needs to be given in respect of post-injury residual earnings.
- (7) Therefore, the claimant's award for loss of earnings is £21,150.

Example 11 – variable earnings with split multiplier using the Additional Tables at -0.75%

- 105. The claimant is female, a graduate with a degree, aged 25 at date of settlement / trial. She suffers a road traffic accident resulting in catastrophic injuries. But for her injuries, her probable career progression, in the absence of injury, would have provided her with salary increases at ages 30, 35 and 40. Thereafter she would have continued earning at the same level to age 60, when she would have stepped down from full-time work to work part-time until 70. Post-accident, by reason of her injuries, there is no realistic prospect of her returning to paid employment. She is living in Edinburgh and pursues her claim for personal injuries in Scotland, where at present the discount rate is -0.75%.
- 106. The working life multiplier from age 25 to 70, is derived from the Females -0.75% table by reading across from the age 25 row in the first column until age 70. This gives a working life multiplier of 52.33^{47} . The working life multiplier needs to be discounted for contingencies other than mortality. Using the column for a female, not disabled, with degree level education, the applicable reduction factor from Table C (Level 3) is 0.88. The adjusted working life multiplier is therefore $52.33 \times 0.88 = 46.05$. The multiplicands for lost future age earnings are set out in the following table.

Period	Annual Net Earnings
From age 25 to 30	£20,000 a year
From age 30 to 35	£25,000 a year
From age 35 to 40	£35,000 a year
From age 40 to 60	£40,000 a year
From age 60 to 70	£20,000 a year

107. The split multipliers for each period at a discount rate of -0.75% can be calculated as follows. For the first period from age 25 to 30, the multiplier is 5.09. For the second period from age 30 to 35, the multiplier is 5.28 (being the multiplier from age 25 to 35 of 10.37 minus the multiplier from age 25 to 30 of 5.09). For the third period from age 35 to 40, the multiplier is 5.47 (being the multiplier from age 25 to 40 of 15.84 minus the multiplier from age 25 to 35 of 10.37). For the fourth period from age 40 to 60, the multiplier is 23.72 (being the multiplier from age 25 to 60 of 39.56 minus the multiplier from age 25 to 40 of 15.84). The multiplier for the final period from age 60 to 70 is 12.77 (being the whole working life multiplier of 52.33 minus the multiplier from age 25 to 60 of 39.56). Each of these multipliers needs to be multiplied by the Table C reduction factor of 0.88 (Level 3).

⁴⁷ This is the same as the multiplier for a 25-year-old woman retiring at 70 derived from Table 14 at a discount rate of -0.75%.

108.	The total claim for loss of earnings over the claimant's working lifetime is £1,433,800
	as set out in the following table.

<u>Age</u> (vears)	Table 14	<u>Final</u> multiplier	<u>Annual</u> earnings	Total
	<u>multipliers</u>	<u>(x 0.88)</u>	£ a year	<u>£</u>
25 – 30	5.09	4.48	20,000	89,600
30 – 35	5.28	4.65	25,000	116,250
35 – 40	5.47	4.81	35,000	168,350
40 - 60	23.72	20.87	40,000	834,800
60 – 70	12.77	11.24	20,000	224,800
Totals	52.33	46.05		1,433,800

Example 12 – variable earnings with split multiplier using the apportionment method at -0.75%

- 109. An alternative way to estimate split multipliers for variable periods of loss derived from Tables 1 to 34 is to use the "apportionment method". This method involves apportioning the multiplier that needs to be split by reference to percentages of the fixed term multiplier for the same period derived from Table 36. The apportionment method, which was set out in paras 23 to 24 of the explanatory notes to the 6th edition of the Tables, is less accurate than using the Additional Tables, however, an example of its use is set out below in the event that it is not possible to access the Additional Tables.
- 110. Using the same facts as in Example 11 above, the working life multiplier can be split manually using the main Ogden Tables at a discount rate of -0.75% and the apportionment method as follows:
 - (1) The working-life will be 45 years and the multiplier from Table 14 for that period taking into account mortality risks but without any discounts for any other contingencies is 52.33.
 - (2) The Table 14 working life multiplier needs to be discounted for contingencies other than mortality. Using the column for a female, not disabled, with degree level education, the applicable reduction factor from Table C (Level 3) is 0.88.
 - (3) The adjusted working life multiplier is therefore $52.33 \times 0.88 = 46.05$.
 - (4) The multiplier for a term certain of 45 years (Table 36) is 53.56.
 - (5) The fixed term multiplier from Table 36 for 45 years should be split using Table 36 multipliers for the partial periods making up the whole working life period of 45 years. So, the first 5 year period is represented by a multiplier for a term certain of 5 years, namely 5.10; the next 5 years is represented by a multiplier of 5.29 (being the multiplier for a term certain of 10 years, namely 10.39 minus the multiplier for a term certain of 5 years, namely 5.10); the next 5 years of 10 years of 15.88 minus the fixed term multiplier for 10 years of 10.39); the next 20 years by 24.16 (being the fixed term multiplier for 35 years of 40.04 minus the fixed term multiplier for 15 years of 13.52 (bring the difference between the Table 36 multiplier for the whole period of 53.56 minus the fixed term multiplier for 35 years of 40.04).
 - (6) Each of those smaller segmented multipliers can be shown as a percentage or fraction of the whole: so, for the first 5 years the segmented multiplier of 5.10 is

9.52% of the multiplier for the whole period of 53.56, and so on for each segment of the 45 year period.

- (7) The working life multiplier from Table 14 can now be split up in identical proportions to the way in which the Table 36 multiplier has been treated above: thus the first 5 year period is now represented by a multiplier of 4.38, which is calculated by taking 9.52% of 46.05. Each segmented multiplier is calculated in the same way.
- (8) The multiplicand for each segment of working life is now multiplied by the appropriate segmented multiplier to calculate the loss for that period. The sum total of those losses represents the full sum for loss of future earnings but for the injuries.

<u>Ages</u>	<u>Period</u> (years)	<u>Table</u> <u>36</u>	<u>%</u> Split	<u>Table</u> <u>14</u>	<u>Net</u> <u>Annual</u>	<u>Total</u>
					<u>Earnings</u> £	<u>£</u>
25 – 30	5	5.10	9.52	4.38	20,000	87,600
30 – 35	5	5.29	9.88	4.55	25,000	113,750
35 – 40	5	5.49	10.25	4.72	35,000	165,200
40-60	20	24.16	45.11	20.77	40,000	830,800
60-70	10	13.52	25.24	11.62	20,000	232,400
Totals:	45 years	53.56	100.0	46.05		1,429,750

(9) The lump sum award as set out in tabular form below totals £1,429,750.

NB the figures in the above table have been rounded at each step of the calculation so the totals shown are not necessarily the sum of the individual multipliers in the columns

Section C: Quantification of Pension Loss

(a) Introduction

- 111. Where there is a claim for loss of earnings, pension losses now frequently also arise, given the required auto-enrolment of employees into, as a minimum, a Workplace Pension (explained later in this section). The quantification of pension loss is, however, a complex matter, as there is both a variety of types of occupational pension provision and a substantial variation in the level of employer contribution within each type of scheme.
- 112. There are two types of pension scheme: Defined Benefit schemes (where the pension benefit is defined at retirement, usually by level of earnings before retirement and length of service) and Defined Contribution schemes (where only the contributions into the scheme are defined). In the private sector there are very few Defined Benefit schemes still accruing new pension benefits, having largely been replaced by Defined Contribution schemes.
- 113. Defined Benefit schemes historically provided a pension of a fraction of final pay for each year of service, with either an automatic tax-free lump sum or one available by commutation⁴⁸. In the public sector these arrangements have mostly been replaced by career average schemes⁴⁹ where members accrue a fraction of pay each year, which is revalued to retirement age and becomes payable as a pension from that time. The public sector contains a number of different schemes with varying rates of accrual and rates of revaluation. Care should be taken to source the member's entitlements as he or she may have benefits in more than one arrangement with the same employer, although normally there will not be any loss in respect of service accrued in periods prior to the injury in a previous scheme. In the broadest of terms pension loss in Defined Benefit schemes is assessed by first calculating the expected net of tax pension from retirement age had the accident not happened and from this deducting the net of tax pension he or she will now receive from retirement age. To this multiplicand will be applied a multiplier from Tables 19 to 34, suitably discounted for contingencies other than mortality. An adjustment may then be needed to allow for contingent spouse's benefits. If the member has not been awarded an ill-health pension and the issue of promotion does not arise, the loss can be assessed by valuing the additional pension that would have been earned but for the accident.
- 114. Most Defined Benefit schemes also offer a continuing pension to a surviving spouse or civil partner. None of the Ogden Tables are suitable for valuing survivorship benefits on the future death of the claimant, although an approximation can be made using the simplified methodology for fatal accident claims. An alternative approximation is to follow the method adopted by the trial judge in *Auty and others v National Coal Board* [1985] 1 WLR 784, which is to calculate the multiplier for life of the surviving spouse or civil partner, deduct from that the multiplier for life of the claimant, apply the percentage for survivor pension benefits (usually 50% or two-thirds) and add that to the annual pension loss multiplier. If pension loss is a significant element of an award, consideration should be given to taking advice from an actuary or suitably qualified forensic accountant.
- 115. Defined Contribution pension schemes are now the main type of pension provision in the private sector. Member and employer contributions accumulate and grow in an individual fund, without taxation on the returns. On retirement the resulting fund is used, according to the individual's choice (subject to HM Revenue & Customs constraints), to provide either an ongoing source of taxable income or a reduced level of ongoing taxable income and a tax-free lump sum, through annuity purchase or more commonly flexible

⁴⁸ The acceptance of a reduced level of annual pension in exchange for a lump sum.

⁴⁹ Career Average Revalued Earnings ('CARE') schemes.

drawdown, or, in certain circumstances, a lump sum only. Tax may be payable on all or part of the lump sum if it exceeds the level permitted by HMRC.

116. Defined Contribution pensions do not generally include any continuing benefit to a surviving spouse or civil partner, although many employers do provide separate life insurance cover with a lump sum payable on the death of the employee, at least up to retirement age.

(b) Automatic Enrolment

- 117. By virtue of the Pensions Act 2008, every employer in the UK must now put certain staff into a workplace pension scheme and contribute towards it. This is called 'automatic enrolment'. This can be done through a pension scheme already in place if it meets appropriate standards, or by the employer choosing a master trust to join in order to fulfil the auto-enrolment requirements. All employers are required to auto-enrol their employees earning over £10,000 a year into a Workplace Pension if they are aged between 22 and State pension age, and must make pension contributions on, as a minimum⁵⁰, 'Qualifying Earnings'. Qualifying Earnings are the band of earnings between the Lower Earnings Limit (£6,240 in 2020/21) and the Upper Earnings Limit (£50,000 in 2020/21)⁵¹.
- 118. Statutory auto-enrolment workplace pensions are Defined Contribution schemes, under which from 6 April 2019⁵² (ongoing until any new rate is announced):
 - The employer must contribute a minimum⁵³ of 3% of Qualifying Earnings;
 - The employee must contribute a minimum of 5% of Qualifying Earnings;
 - The employee contributions are paid from gross earnings but are eligible for Income Tax relief at the employee's marginal rate;
 - Employers and/or employees may opt to contribute at a higher level than the minimum required under auto-enrolment, and
 - Employees may opt out, but the employer is obliged to contribute for as long as the employee chooses to remain a member by not opting out.
- 119. Where members contribute to the pension scheme, which is usually the case, care should be taken to ensure consistency with any associated loss of earnings calculation. If the loss of earnings calculation has been based on the member's net income after pension contribution deductions, then his or her contributions must be included in the pension loss assessment. Similar consistency is needed in the choice of retirement age and any assumed promotion or increments in pay.

(c) Case Law and Applicable Principles

- 120. The leading case regarding the assessment of pension loss is *Auty and others v National Coal Board* [1985] 1 WLR 784. Other cases of interest include:
 - Parry v Cleaver [1970] AC 1 confirming that any immediately payable ill-health pension award is only offset against the pre-injury pension in the period after normal retirement age;

⁵⁰ Some employer schemes pay contributions on total earnings, not just Qualifying Earnings.

⁵¹ These Limits change each tax year and are readily available on the Internet or in publications such as *Facts & Figures*.

⁵² For the rates which applied before 6 April 2019 consult the Pensions Advisory Service (<u>https://www.pensionsadvisoryservice.org.uk</u>), *Facts & Figures* or a pensions specialist.

⁵³ Some employers, particularly larger employers, pay in excess of the minimum level of contribution obligated by statute: see further data available from the ONS, such as the Occupational Pension Schemes Survey, UK: 2018 (published on 20 June 2019).

- Longden v National Coal Corporation [1997] UKHL 52; [1998] AC 653 which addressed the treatment of lump sum awards on ill-health retirement;
- Page v Sheerness Steel Company Ltd [1999] 1 AC 345 which considered the discount for contingencies other than mortality in a pension loss claim;
- Pidduck v Eastern Scottish Omnibus Ltd [1990] 1 WLR 993 regarding a widow's pension entitlement following the death of her husband, and
- Brown v MOD [2006] PIQR Q9; EWCA Civ 546 on how to deal with the prospects of promotion.
- 121. Where pension loss is complex, the amounts involved are material in the context of the claim for loss of earnings/benefits/pension as a whole or when dealing with pensions when assessing loss of dependency/support in fatal accident cases, advice should be sought from an actuary or forensic accountant with appropriate experience. The following examples, however, illustrate the broad principles involved.

(d) Worked Examples

Example 13 – auto-enrolment pension using Table 12 of the main Ogden Tables at -0.25%

- 122. The claimant is female, aged 35, degree-educated, lived in England (so a -0.25% discount rate is appropriate) and up to the date of the accident was earning £40,000 gross per annum. She is a member of a Workplace (auto-enrolment) Pension scheme, with minimum statutory contributions. Since the accident the claimant has moved to a part-time role with the same company earning £20,000 gross per annum and is considered 'disabled'. A simplistic⁵⁴ calculation of her loss of pension is to treat the lost employer pension contributions as a tax-free benefit during the period of expected employment.
 - (1) The 'but for' employer pension contributions are $(\pounds 40,000 \pounds 6,240) \times 3\% = \pounds 1,013$ p.a.
 - (2) The residual employer pension contributions are $(\pounds 20,000 \pounds 6,240) \times 3\% = \pounds 413$ p.a.
 - (3) The multiplier for valuing contributions to her State Pension Age of 68 is 33.59 (Table 12) and allowing for other contingencies this reduces to 33.59 x 0.88 (Table C, Employed, Level 3) = 29.56 in the 'but for' calculation and 33.59 x 0.59 (Table D, Employed, Level 3) = 19.82 in the credit for residual pension calculation.
 - (4) The approximate pension loss is then $(\pounds 1,013 \times 29.56) (\pounds 413 \times 19.82) = \pounds 21,759$.
 - (5) The expected employee contributions should <u>not</u> be deducted in the loss of earnings calculations, if this method is adopted⁵⁵.

⁵⁴ This method is considered simplistic by many pension experts as: (i) it does not value the actual loss suffered by the claimant (which will be her reduced pension from retirement and her reduced lump sum at retirement); (ii) it takes no account of the tax benefits of pension contributions; (iii) it takes no account of any higher pension fund management charges that may be incurred post-accident (potentially on the whole of the fund, not just on postaccident contributions), and (iv) it takes no account of expected real (i.e. above inflation) pension fund growth, so tends to understate (perhaps significantly) the value of the claim. However, this was the method put forward (without expert pension assistance) by the claimant in *Manna v Central Manchester University Hospitals NHS Foundation Trust* [2015] EWHC 2279 (QB) and was accepted by the Judge and no appeal was raised on that element of the award in the Court of Appeal.

⁵⁵ Some practitioners claim the basic rate tax relief on the employee contributions (i.e. 1%, being 20% of 5%) as an additional loss, but that may not be a valid loss because after trial or settlement a claimant may invest those additional gross earnings in a stakeholder pension (and up to £3,600 per annum even without any income) and gain similar basic rate tax relief.

Example 14 – Local Government Pension Scheme using the Additional Tables at -0.25%

- 123. The claimant is male and before the accident was a member of the Local Government Pension Scheme accruing a pension of 1/49th of pay each year he worked to be payable from age 67, his State Pension Age. He is aged 50 at the date of the trial and left employment 3 years ago without an ill-health award. He earned £30,000 p.a., had a degree, lived in England (so a -0.25% discount rate is appropriate) and was not disabled at the time of the accident. He is not married. He will not work again. Differences between the revaluation rate and CPI or RPI are ignored in this example, which assumes the future rate of inflation implicit in the statutory discount rate.
 - (1) There are 3 past lost years of service and 17 future lost years of service. The total lost service can be estimated as follows: 17 x 0.81 (Table A, Employed, Level 3)⁵⁶ + 3 = 16.77 years.
 - (2) The lost pension is then $16.77 \times \pounds 30,000 \div 49 = \pounds 10,267$ p.a. in today's terms.
 - (3) On retirement the claimant could exchange part of his pension for a lump sum at a rate of 12:1. Assuming a 15% commutation rate gives a lost taxable pension of 0.85 x £10,267 = £8,727 p.a. and a lost tax-free lump sum of (£10,267 - £8,727) x 12 = £18,480, both in today's terms.
 - (4) The multiplier for valuing pension payable from age 67 is derived from the Additional Tables. For a 50-year-old male at a -0.25% discount rate the multiplier for life is 36.24 and the multiplier to age 67 is 16.71. By subtraction the multiplier from age 67 is 19.53.
 - (5) Assuming tax at 20% on the lost annual pension gives an approximate pension loss of $(0.8 \times \pounds 8,727 \times 19.53) + (\pounds 18,480 \times 1.0435) = \pounds 155,635$.
 - (6) The expected employee contributions (net of tax relief) should be deducted in the loss of earnings calculations.

⁵⁶ In this example the Table A contingency factor has been adopted and applied to the future service, as no ill-health pension benefits are assumed. An alternative method is to apply the discount for contingencies other than mortality to the loss of future pension benefits in accordance with the decision of the House of Lords in *Page v Sheerness Steel Company Ltd* [1999] 1 AC 345, where a 10% discount was applied, effectively equating to a discount for contingencies of 0.294% for each year of future loss of service. However, such an approach may require adjustment where the claimant is disabled post-injury, so that a higher discount for contingencies should be applied to the residual pension than the 'but for the injury' pension.

Section D: Application of Tables to Dependency Claims Resulting From Fatal Accidents / Incidents

(a) Introduction

- 124. For several decades following *Cookson v Knowles* [1979] AC 556 the approach of the courts in England was to assess the multiplier for dependency claims as at the date of death.
- 125. That approach was criticised by the Law Commission in their Report 263 (*Claims for Wrongful Death*). The Law Commission recommended that multipliers should be assessed as at the date of trial and that the multipliers derived from the Ogden Tables should only take effect from the date of trial.
- 126. The Working Party, then under the Chairmanship of the late Sir Michael Ogden QC, considered that the Law Commission's criticism was valid. In the Fourth Edition of the Tables published in August 2000, the Working Party set out guidance in Section D of the Explanatory Notes on how damages should be calculated in such cases. That recommended approach was adopted in Scotland by the Damages (Scotland) Act 2011.
- 127. Finally, in 2016 the Supreme Court corrected this anomaly for the remainder of the UK. *Cookson v Knowles* was overruled by *Knauer v Ministry of Justice* [2016] UKSC 9 in which the recommended approach was approved. All English, Welsh and Northern Irish courts must now apply multipliers calculated from the date of trial when assessing the value of future dependency claims brought under the Fatal Accidents Act 1976 (as amended).

(b) The law of dependency claims

- 128. Under the Fatal Accidents Act 1976⁵⁷ (as amended) (the "FAA") the loss is that of the dependants, i.e. those who relied upon the deceased for support. They may claim that part of the deceased's income (whether earnings⁵⁸, unearned income or state benefits) and/or pension that the deceased would have spent on them⁵⁹. They may also claim the loss of the services such as DIY, domestic/household or childcare which the deceased would have benefited. The position of each dependant, and each head of dependency for each dependant, may need to be considered separately.
- 129. For pre-trial losses, the actual loss to the date of trial⁶⁰ is calculated (taking into account any expected increases in losses, for example, by way of salary increases or increases in the level of services provided). Interest is added. Post-trial losses are calculated as at the date of trial⁶¹. For each head of future dependency for each dependant the court

 ⁵⁷ The FAA is the relevant statute for claims brought in England and Wales. In Scotland the relevant act is the Damages (Scotland) Act 2011 and in Northern Ireland it is the Fatal Accidents (Northern Ireland) Order 1977.
 ⁵⁸ Including the cost of replacing the deceased's skills and contribution to a business: see *Williams v Welsh Ambulance Services NHS Trust* [2008] EWCA Civ 81

⁵⁹ The rule of thumb for couples with one or more dependent children is that the court will adopt as a starting point the assumption that 25% is spent individually by each of the partners, 25% collectively on the children, and 25% on joint expenses (house etc). As the joint expenditure is part of the dependency, this gives 75% as the combined dependency of a partner and one of more dependent children. Where there are no children or they have ceased to be dependent, the corresponding proportions become one-thirds, giving 66.67% as the combined dependency of a partner with no dependent children. Alternatively, a bespoke calculation of the actual amounts spent by the deceased can be undertaken. See further *Harris v Empress Motors* [1984] 1 WLR 212 and *Coward v Comex Houlder Diving Ltd* [1988] EWCA Civ 18. Note the position is codified in Scotland under s7 of the Damages (Scotland) Act 2011.

 ⁶⁰ For cases being prepared for a settlement meeting or mediation that is a long way in advance of any trial date it may be appropriate to calculate the losses as if the date of that meeting/mediation were the notional trial date.
 ⁶¹ Knauen y Ministry of Justice [2016] UKSC 0

⁶¹ *Knauer v Ministry of Justice* [2016] UKSC 9.

determines a multiplicand.

130. A multiplier for the period of post-trial dependency is applied to the multiplicand to arrive at an overall lump sum for each head of dependency.

(c) The simplified approach

- 131. Whereas in personal injury cases the problem to be solved is that of setting a value on an income stream during the potential life of one person (the claimant), the situation is generally more complicated in fatal accident cases. Here the compensation is intended to reflect the value of an income stream during the lifetime of one or more dependants of the deceased (or the expected period for which the dependants would have expected to receive the dependency, if shorter) but limited according to the expectation of how long the deceased would have been able to provide the financial support, had he or she not sustained fatal injuries.
- 132. Firstly, there should be compensation for the period between the date of the death and the date of trial. Secondly, in principle, the compensation for post-trial dependency should be based on the present value at the date of the trial of the dependency during the expected future joint lifetime of the deceased and the dependant or claimant, subject to any limitations on the period of dependency and any expected future changes in the level of dependency, notably for the post-retirement period. Both pre- and post-trial periods are subject to an adjustment for the small risk of the deceased having died pre-trial in any event.
- 133. A set of actuarial tables to make such calculations accurately would require tables similar to Tables 1 to 34 but for each combination of ages as at the date of the trial of the deceased and the dependant to whom compensation is to be paid. The Working Party since the Fourth Edition have concluded that this would not meet the criterion of simplicity of application which was a central objective of these tables and recommends that, in complex cases, or cases where the accuracy of the multiplier is of critical importance and material to the resulting amount of compensation, the expert advice of an actuary should be sought. However, for the majority of cases, a certain amount of approximation will be appropriate, bearing in mind the need for a simple and streamlined process, and taking into consideration the other uncertainties in the determination of an appropriate level of compensation. The following paragraphs describe a methodology based on the principles endorsed by the Supreme Court in *Knauer v Ministry of Justice*, which uses Tables 1 to 34 and will yield reasonably accurate outcomes for most cases.

(d) Calculating the dependency for the period from the fatal incident to the date of trial

- 134. The period of pre-trial dependency is the period from the commencement of the dependency loss up to the date of trial. The dependency loss will normally run from the date of the incident causing the fatal injuries. However, sometimes this date may be later, for example when there is more than a brief period between the date of the incident and the date of death and the deceased continues to be paid by his employer until he passes away⁶². Account must also be taken of any likely reduction in dependency prior to the date of assessment or trial. For example, the claim for earnings dependency on behalf of a child would be reduced if the dependent child had been expected to become fully financially independent before the trial date.
- 135. A discount may be made for the risk that the deceased might have died anyway, in the

⁶² Where the estate sustains losses between the date of the fatal incident and the date of death, these may be claimed under the Law Reform (Miscellaneous Provisions) Act 1934.

period between the date of death and the date at which the trial takes place. In many cases this adjustment will be small and may in some cases, notably if the deceased was under 40, may be regarded as negligible⁶³. An adjustment becomes more necessary the longer the period from the date of death to the date of trial and the older the deceased at the date of death. As an illustration of the order of magnitude of the adjustment, Table E⁶⁴ shows some factors by which the pre-trial damages should be discounted for different ages of the deceased and for different periods from the date of death to the date of the trial.

TABLE E

Factor by which pre-trial damages should be discounted to allow for the risk that the deceased would not in any case have survived to provide the dependency for the full period to the date of trial or cessation of dependency, if earlier.

	Age of Period from date of death to date of trial or date of cessation of											
deceased at dependency, if earlier (years)												
date of death Male deceased												
1 2 3 4 5 6 7 8	9	10										
Below 40 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1	1.00	1.00										
40 1.00 1.00 1.00 1.00 1.00 0.99 0.99	0.99	0.99										
45 1.00 1.00 1.00 1.00 0.99 0.99 0.99 0.99	0.99	0.99										
50 1.00 1.00 1.00 0.99 0.99 0.99 0.99 0.9	0.98	0.98										
55 1.00 1.00 0.99 0.99 0.99 0.98 0.98 0.98	0.97	0.97										
60 1.00 0.99 0.99 0.98 0.98 0.98 0.97 0.97	0.96	0.95										
65 0.99 0.99 0.98 0.98 0.97 0.96 0.95 0.95	0.94	0.93										
70 0.99 0.98 0.97 0.96 0.95 0.94 0.93 0.92	0.90	0.89										
75 0.98 0.97 0.95 0.94 0.92 0.90 0.88 0.86	0.84	0.82										
80 0.97 0.95 0.92 0.89 0.86 0.83 0.80 0.77	0.74	0.71										
85 0.95 0.91 0.86 0.81 0.77 0.72 0.68 0.64	0.60	0.56										
90 0.92 0.84 0.77 0.70 0.64 0.58 0.53 0.48	0.44	0.40										
Age of Period from date of death to date of trial or date of cessation of deceased at dependency, if earlier (years)												
date of death Female deceased												
date of death Female deceased												
date of deathFemale deceased12345678Delay 1004.004.004.004.004.004.004.00	9	10										
date of death Female deceased 1 2 3 4 5 6 7 8 Below 40 1.00<	9	<u>10</u> 1.00										
date of death Female deceased 1 2 3 4 5 6 7 8 Below 40 1.00<	9 1.00 1.00	10 1.00 0.99										
date of death Female deceased 1 2 3 4 5 6 7 8 Below 40 1.00<	9 1.00 1.00 0.99	10 1.00 0.99 0.99										
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9 1.00 1.00 0.99 0.99 0.98 0.97	10 1.00 0.99 0.99 0.99 0.98 0.97 0.95										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9 1.00 1.00 0.99 0.99 0.98 0.97 0.96 0.93	10 1.00 0.99 0.99 0.99 0.98 0.97 0.95 0.92										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9 1.00 1.00 0.99 0.99 0.98 0.97 0.96 0.93 0.88	10 1.00 0.99 0.99 0.99 0.98 0.97 0.95 0.92 0.87										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9 1.00 1.00 0.99 0.99 0.98 0.97 0.96 0.93 0.88 0.80	10 1.00 0.99 0.99 0.99 0.98 0.97 0.95 0.92 0.87 0.77										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9 1.00 1.00 0.99 0.99 0.98 0.97 0.96 0.93 0.88 0.80 0.65	10 1.00 0.99 0.99 0.99 0.98 0.97 0.95 0.92 0.87 0.77 0.62										

⁶³ The Supreme Court in *Knauer* indicated this type of discount would usually be modest but there will be rare cases in which a larger discount would be appropriate.

⁶⁴ Note Tables E and F are based on an assumption of a date of death of 2020, which is likely to prove reasonably accurate (with any difference being circa 0.01 or less) for most fatal incident cases reaching trial between 2020 and 2025.

136. Interest should then be added to the date of trial on the same basis as for special damages.

(e) Types of post-trial dependency

- 137. There are 3 main classes of dependency (earnings, pension and services) which result in at least 5 common types of dependency claims:
 - (1) Loss of earnings to retirement age.
 - (2) Loss of earnings for a shorter period (e.g. because the dependency or earnings would have changed or ended).
 - (3) Loss of pension for life of the deceased (or the dependant, if shorter).
 - (4) Loss of services for life of the deceased (or the dependant, if shorter).
 - (5) Loss of services for a shorter period than the life of the deceased or dependant.
- 138. Each type of dependency will require separate calculation using a different multiplier. However, the methodology is very similar and so this guidance should be followed for each dependency that requires calculation.

(f) Calculating the duration of dependency

- 139. The first step in calculating the multiplier is to work out the duration of the dependency. This may be limited by the deceased or by the dependant, factoring in any likely limiting factors due to health or life expectancy. Normal life expectancy can be derived using the 0% column in Tables 1 or 2, depending on gender, unless medical expert evidence proves either has an impaired life expectancy.
- 140. There are two periods to be determined:
 - (i) The expected period from the date of the trial for which the deceased would have <u>provided</u> the dependency in question.
 - (ii) The expected period from the date of the trial for which the dependant(s) would have <u>received</u> the dependency.
- 141. The <u>shorter</u> of those two periods provides the basis for the multiplier for the dependency. However, see Section D (i) below for the approach when there are a number of dependants to a single type of loss.

(g) Discounting for Contingencies

- 142. Next, consider what, if any, discount should be made for contingencies. Avoid double discounting with any assumptions already made when defining the period of loss, other adjustments and the underlying UK-wide mortality predictions that are within Tables 1 to 34. Also, consider the scale and duration of the contingency especially if it is not equally applicable throughout the period (e.g. deterioration in arthritis leading to a 50% risk of being unable to continue to provide services but only for the last 5 years of a 20 year period). Contingencies usually fall into the following five categories, although in many claims only the first and/or second will apply, as the others are much less common:
 - (1) Factors relating to the deceased's earnings. The starting point for the adjustment factor should be the figures contained in Tables as further explained in Section B above.

(2) A deduction, if appropriate⁶⁵, for the risk that the deceased might have died anyway before the date of trial. Table F⁶⁶ shows factors by which the multiplier, determined as above, should be adjusted for different ages of the deceased and for different periods from the date of death following the fatal incident to the date of trial.

TABLE F

Factor by which post-trial damages should be multiplied to allow for the risk that the deceased would not in any case have survived to the date of trial in order to provide any post-trial dependency.

Age of deceased at	Period from date of death to date of trial (years)									
date of death					wale d	eceas	ea			
	1	2	3	4	5	6	7	8	9	10
Below 40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
40	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98	0.98	0.98
45	1.00	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.98	0.97
50	1.00	0.99	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96
55	1.00	0.99	0.99	0.98	0.97	0.97	0.96	0.95	0.94	0.93
60	0.99	0.98	0.98	0.97	0.96	0.95	0.94	0.92	0.91	0.90
65	0.99	0.98	0.96	0.95	0.93	0.92	0.90	0.88	0.86	0.84
70	0.98	0.96	0.94	0.92	0.90	0.87	0.84	0.81	0.78	0.75
75	0.97	0.94	0.90	0.87	0.83	0.79	0.75	0.70	0.65	0.60
80	0.95	0.89	0.84	0.78	0.72	0.65	0.59	0.52	0.46	0.40
85	0.91	0.81	0.72	0.63	0.54	0.46	0.38	0.31	0.24	0.19
90	0.84	0.69	0.56	0.44	0.33	0.25	0.18	0.13	0.09	0.06
Age of	Pe	riod fro	m date	e of dea	ath to d	late of	trial (ye	ears)		
deceased at				Fem	ale de	ceased	ł			
date of death	1									
	1	2	3	4	5	6	7	8	9	10
Below 40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
40	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.99
45	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.98	0.98
50	1.00	1.00	0.99	0.99	0.99	0.99	0.98	0.98	0.98	0.97
55	1.00	0.99	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96
60	1.00	0.99	0.98	0.98	0.97	0.96	0.96	0.95	0.94	0.93
65	0.99	0.98	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.89
70	0.99	0.97	0.96	0.94	0.93	0.91	0.89	0.87	0.84	0.82
75	0.98	0.96	0.93	0.90	0.88	0.84	0.81	0.77	0.73	0.69
80	0.96	0.92	0.88	0.83	0.78	0.73	0.67	0.61	0.55	0.49
05	0.00									
60	0.93	0.85	0.77	0.69	0.61	0.53	0.46	0.38	0.31	0.25

⁶⁵ As with Table E above, this reduction will usually be negligible if the deceased was under 40 unless a very long period had elapsed between death and trial.

⁶⁶ The simplest way to conceptualise the difference between Table E factors and Table F factors is that the latter represent point to point survival ratios, of a fixed number of years from the date of death, whereas Table E factors are applied to a total figure which has been calculated for pre-trial damages and they therefore represent effectively the average survival period from the date to which an element of damages relates up to the date of trial. Roughly speaking this is half as long an effective period of survival.

- (3) Rarely, it may be appropriate to make a further adjustment for atypical health or mortality risks of the deceased or the dependant. See the further guidance in Section A and in the preamble to this paragraph.
- (4) An adjustment for contingencies in respect of the damages for the period of dependency on a pension <u>after</u> retirement age will often be less than that required for pre-retirement earnings dependency for the reasons set out in Section B under the subheading "(a) Introduction".
- (5) Factors relating to the relationship of the deceased and the dependant; for example, an unmarried couple who were on the point of separation before the deceased died. See also Section 3(4) of the FAA, *Drew v Abassi* (Court of Appeal) 24 May 1995 and *Wheatley v Cunningham* [1992] PIQR Q100.

(h) Calculating the post-trial dependency

- 143. Applying the above principles, the assessment of the loss for each type of dependency involves the following steps (as further illustrated in the worked examples in Section D (j) below):
 - (1) Calculate the annual loss based on the value at the date of the trial.
 - (2) For earnings and pension (but not services) dependencies, apply the appropriate dependency factor to work out the proportion of the loss which the dependant is entitled to.
 - (3) Work out whether the duration of the dependency in question is limited by the deceased or the dependant, as described in Section D (f) above.
 - (4) Translate that figure into a multiplier by using one of the following at the current discount rate:
 - (i) Life-long losses, using Tables 1 or 2 (according to the gender of the deceased or dependant and using age at the date of the trial)
 - (ii) Losses to retirement age, using Tables 3 to 18 (according to the gender of the deceased and the expected age at retirement).
 - (iii) Losses of earnings or services for a fixed lesser period that the deceased would have provided the dependency, using the most applicable of Tables 3 to 18, adjusting if necessary, following the guidance relating to the analogous scenario of different retirement ages in Section A.
 - (iv) Pension losses post-retirement age, using Tables 19 to 34. This is the same as calculating the multiplier for life-long losses and then deducting the multiplier for losses to retirement age derived from Tables 3 to 18.
 - (v) Using Table 36 for losses for fixed periods which cannot otherwise be derived from Tables 1 to 34⁶⁷.
 - (5) Make an adjustment applying Table F, if appropriate, for the risk that the deceased might have died anyway before the date of trial.
 - (6) For earnings losses only, apply an appropriate adjustment to the above figure to reflect earnings related contingencies, ordinarily using the adjustment factor contained in Tables .
 - (7) Consider whether there are proven atypical health or mortality risks, and if so, consider applying a contingency factor for this.

⁶⁷ Alternatively, it may be possible to calculate such multipliers using a computer programme or the Additional Tables.

- (8) For pension losses, consider whether a contingency is required.
- (9) On rare occasions it may be appropriate to make a deduction for factors relating to the dependant's relationship to the deceased.
- (10) The resulting multiplier is then applied to the multiplicand for the post-trial dependency in question.

(i) Multiple dependants

- 144. There will be cases where there are several dependants who have different periods of dependency. For example, one dependant may have a shorter life expectancy than another, or children may be dependent for different periods according to their ages. Sometimes a single multiplicand for the dependency in question is determined, which is to be shared among two or more dependants (for example children), as long as at least <u>one</u> of them is expected to remain alive and dependent. For this approach the multiplier will be calculated utilising the longest of the expected periods for which any dependency might last (for example until the youngest child is no longer dependent).
- 145. Alternatively, if the dependencies are truly independent of each other, separate multiplicands and multipliers should be determined for each dependant. The total amount of dependency damages is then calculated by adding the separate components. In any event calculations of separate multipliers may be required for apportionment of damages between the dependants, even if it does not impact upon the total amount of the damages to be paid by the tortfeasor, notably if there is a claim made on behalf of dependants under the age of 18 or otherwise lacking capacity. Any proposed settlement of such claims will require court approval which will include consideration of the damages payable to each dependant protected by CPR Part 21.

(j) Examples of Fatal Accident Act Claims

Example 15 – FAA claim calculated using the main Ogden Tables 1 to 34 at -0.25%

- 146. The sole financial dependant is a woman, aged 38 at the date of the trial, which is taking place 3 years after the date of a fatal accident, which killed her husband, who at that time was aged 37. The deceased would have been age 40 at the date of trial. The deceased had A levels, was in employment, was not disabled (as defined in Section B) and lived and worked in London at the time of the fatal accident (so a -0.25% discount rate is applicable). There was no evidence suggesting that either the deceased or the dependant had atypical mortality risks nor that their relationship was unstable. The court has determined a multiplicand of £30,000 up to the deceased's normal retirement age of 65 and has decided that post-retirement damages should be payable based on a multiplicand of £12,000. The multipliers in this example are taken from Ogden Tables 1 to 34 (although, as no interpolation is required, identical multipliers would be obtained from the Additional Tables).
- 147. Pre-trial damages are calculated as shown below.
 - (1) Period between fatal accident and trial: 3 years.
 - (2) Adjust for the risk of possible early death (considered negligible as the deceased was under 40): apply an adjustment factor of 1.00 (Ogden Table E for male aged 37 and 3 years).
 - (3) Pre-trial damages: £30,000 x 3 years x 1.00 = £90,000 (plus interest as special damages).
 - (4) Interest at half rate from date of death to date of trial: 3 years at 0.25% a year = 0.75%. $\pounds 90,000 \ge 0.75\% = \pounds 675$.

- 148. Post-trial damages are split between pre- and post-retirement damages. Post-trial preretirement damages are calculated as set out below.
 - (1) Expected period for which the dependant would have been able to receive the dependency (Ogden Table 2 at 0% for female aged 38): 49.73. This is when the deceased would have been aged 89.73 (i.e. 40 years + 49.73 years), so the dependency would be for the entire period to the deceased's retirement age 65.
 - (2) Multiplier for male age 40 retiring at age 65 (Ogden Table 9 at -0.25% rate of return) = 24.97.
 - (3) Adjust for contingencies other than mortality (in accordance with Section B) for an employed male aged 40 with A levels (Level 2) and who was not disabled: apply a reduction factor of 0.87 to give a multiplier of 24.97 x 0.87 = 21.72.
 - (4) Adjust for the risk that the deceased might have died anyway before the date of trial (considered negligible as the deceased was under 40): apply an adjustment factor of 1.00 (Ogden Table F for male aged 37 and 3 years), to give a multiplier of 21.72 x 1.00 = 21.72.
 - (5) The post-trial pre-retirement damages total: $21.72 \times \pounds 30,000 = \pounds 651,600$.

149. Post-trial, post-retirement damages are calculated as set out below.

- (1) Expectation of life of deceased at date of trial (Ogden Table 1 at 0% for male aged 40 at the date of trial): 44.80.
- (2) Expected period for which the dependant would have been able to receive the dependency (Ogden Table 2 at 0% for female aged 38): 49.73.
- (3) Lesser of two periods at (1) and (2) = 44.80 [so based on the life expectancy of the deceased].
- (4) Multiplier from age 65 for a male age 40 (Ogden Table 25 at -0.25% for male aged 40): 22.66.
- (5) Adjust for the risk that the deceased might have died anyway before the date of trial (considered negligible as the deceased was under 40): apply an adjustment factor of 1.00 (Ogden Table F for male aged 37 and 3 years) to give a multiplier of 22.66 x 1.00 = 22.66.
- (6) Post-retirement damages: $\pounds 12,000 \times 22.66 = \pounds 271,920$.
- 150. Total financial dependency is therefore: £90,000 + interest of £675 + £651,600 + £271,920 = £1,014,195.

Example 16 – FAA claim calculated using the main Ogden Tables 1 to 34 at -0.75%

151. The sole dependant is a man, aged 52 at the date of the trial, which is taking place 4 years after the date of the fatal accident, which killed his wife, at that time aged 43, and on whom he was financially dependent. The deceased lived and worked in Edinburgh and would have been aged 47 at the date of trial. She was in employment at the time of the fatal accident, was not disabled and had achieved a Certificate of Sixth Year Studies ('CSYS'). The widower brings his dependency claim in Scotland (so a -0.75% discount rate is appropriate). The court has determined a multiplicand, up to the deceased's normal retirement age of 60, of £50,000 and has decided that post-retirement damages should be payable based on a multiplicand of £30,000. The multipliers in this example use multipliers derived from Ogden Tables 1 to 34 (although, as no interpolation is required, identical multipliers would be obtained from the Additional Tables).

- 152. Pre-trial damages are calculated as shown below.
 - (1) Period between fatal accident and trial: 4 years.
 - (2) Adjust for risk of possible early death: apply an adjustment factor of 1.00 (Ogden Table E for female aged 43 and 4 years).
 - (3) Pre-trial damages: £50,000 x 4 years x 1.00 = £200,000 (plus interest as special damages).
- 153. Post-trial damages are split between pre- and post-retirement damages. Post-trial, preretirement damages are calculated as set out below.
 - (1) Expected period for which the dependant would have been able to receive the dependency (Ogden Table 1 at 0% for male aged 52): 32.52. This is when the deceased would have been aged 79.52 (i.e. 47 years + 32.52 years), so the dependency would be for the entire period to the deceased's age 60.
 - (2) Multiplier for female age 47 retiring at age 60 (Ogden Table 8 at -0.75% rate of return) = 13.47.
 - (3) Adjustment factor for contingencies other than mortality (in accordance with Section B) for an employed female aged 47 with CSYS (Level 2) and who was not disabled = 0.84 to give a multiplier of 13.47 x 0.84 = 11.31.
 - (4) Adjustment factor for the risk that the deceased might have died anyway before the date of trial (Ogden Table F for female aged 43 and 4 years): 0.99 to give a multiplier of 11.31 x 0.99 = 11.20.
 - (5) Post-trial pre-retirement damages total: $\pounds 50,000 \times 11.20 = \pounds 560,000$.
- 154. Post-trial, post-retirement damages are calculated as set out below.
 - (1) Expectation of life of deceased at date of trial (Ogden Table 2 at 0% for female aged 47, the age as at the date of trial): 40.25.
 - (2) Expected period for which the dependant would have been able to receive the dependency (Ogden Table 1 at 0% for male aged 52): 32.52.
 - (3) Lesser of two periods at (1) and (2) = 32.52 [so based on the dependent].
 - (4) Multiplier from age 65 (i.e. when the deceased would have been age 60) for a male age 52 at -0.75% rate of return (Ogden Table 25 at -0.75% for a male aged 52): 24.20.
 - (5) Adjust for the risk that the deceased might have died anyway before the date of trial: apply an adjustment factor of 0.99 (Ogden Table F for female aged 43 and 4 years) to give a multiplier of 24.20 x 0.99 = 23.96.
 - (6) Post-retirement damages total: $\pounds 30,000 \times 23.96 = \pounds 718,800$.
- 155. Total financial dependency is therefore: $\pounds 200,000$ (plus interest) + $\pounds 560,000 + \pounds 718,800 = \pounds 1,478,800$.

Example 17 – FAA claim calculated using the Additional Tables at -0.25%

156. A woman has been killed in a road traffic accident, when she was aged 35. She had three financial dependants, her husband aged 40 and two children aged 15 and 11 at the date of the trial, which is taking place 3 years after the date of the accident. The deceased had a degree, lived and worked in Leeds (so a -0.25% discount rate is applicable). The deceased would have been aged 38 at the date of trial. The court has determined a multiplicand, up to the deceased's normal retirement age of 67 (when the deceased's husband will have reached age 69), of £50,000 when there are dependent children and £40,000 when there are no dependent children (so spouse only) and has

decided that post-retirement damages should be payable based on a multiplicand of $\pounds 20,000$. The court has determined that the younger child would have remained financially dependent until at least age 22 (so 11 years from trial). The multipliers in this example use the Additional Tables, but shown in the footnotes are the multipliers using interpolation of Ogden Tables 1 to 34^{68} .

- 157. Pre-trial damages are calculated as follows:
 - (1) Period between fatal accident and trial: 3 years.
 - (2) Adjust for the risk of possible early death (considered negligible as the deceased was under 40: apply a discount factor of 1.00 (Ogden Table E for female aged 35 and 3 years).
 - (3) Pre-trial damages = 3 x 1.00 x £50,000 = £150,000 (plus interest as special damages).
- 158. Post-trial damages are split between pre- and post-retirement damages. Post-trial, preretirement damages are calculated as set out below.
 - (1) Expected period for which the deceased would have provided the dependency should be based on female aged 38 at the date of trial with retirement age of 67 (for female aged 38 to age 67 at 0%), i.e. 28.34.
 - (2) Expected period for which the male adult dependant would have been able to receive the dependency (in the table for males at 0%, read across the row from age 40 in the first column to age 125 i.e. for life): 44.80.
 - (3) Lesser of two periods at (1) and (2) = 28.34 [so based on the deceased].
 - Multiplier for 11 years (for female age 38 to age 49 at -0.25%): 11.10.
 Multiplier for 29 years (for female age 38 to age 67 at -0.25%): 29.38⁶⁹.
 - (5) Multiplier from age 49 (i.e. 38 + 11) to age 67 for female age 38 is calculated as: Multiplier to age 67 less multiplier to age 49: 29.38 – 11.10 = 18.28.
 - (6) Adjust for contingencies other than mortality: apply a reduction factor of 0.88 reflecting an employed female aged 38 with a degree who was not disabled (Table C, Level 3) to give multipliers of 11.10 x 0.88 = 9.77 and 18.28 x 0.88 = 16.09.
 - (7) Adjust for the risk that the deceased might have died anyway before the date of trial (considered negligible because the deceased was under 40): apply an adjustment factor of 1.00 (Ogden Table F for female aged 35 and 3 years), so multipliers are 9.77 and 16.09, respectively.
 - (8) Post-trial pre-retirement damages total: $(\pounds 50,000 \times 9.77) + (\pounds 40,000 \times 16.09) = \pounds 1,132,100.$
- 159. Post-trial, post-retirement damages are calculated as set out below.
 - Expectation of life of deceased at date of trial (for female aged 38 for life at 0%): 49.73.

⁶⁸ As explained in Section A (f), where there is any difference between multipliers derived by interpolation from Ogden Tables 1 to 34 and multipliers from the Additional Tables, the latter are to be treated as definitive, although in this example, as it happens, there are no differences.

⁶⁹ Multiplier to age 67 years for female age 38 using the age-adjusted interpolation method: first calculate as though deceased was aged 36 and had retirement age of 65 (Ogden Table 10 at -0.25% for female aged 36): 29.49. Then calculate as though deceased was aged 39 and had retirement age of 68 (Ogden Table 12 at -0.25% for female aged 39): 29.32. Interpolate for age 38 with retirement age of 67: $[(1 \times 29.49) + (2 \times 29.32)]/3 = 29.38$. Multiplier to age 67 years for female age 38 using simple interpolation method: 38-year-old female retiring at age 65 (Ogden Table 10 for female age 38 at -0.25%) = 27.37. A 38-year-old female retiring at age 68 (Ogden Table 12 for female age 38 at -0.25%): 30.38. 27.37 + ((30.38 - 27.37) \times 2/3) = 29.38.

- (2) Expected period for which the adult dependant would have been able to receive the dependency (for male aged 40 for life at 0%): 44.80 (no post-retirement dependency for the children).
- (3) Lesser of two periods at (1) and (2) = 44.80 [so based on the adult dependant].
- (4) Multiplier for life for adult dependant (Table for Males at a discount rate of -0.25% for life): 47.63.
- (5) Deduct multiplier for the dependants' pre-retirement damages (for a male aged 40 to age 69 at a discount rate of -0.25%): 28.81^{70} . This gives a multiplier of: 47.63 28.81 = 18.82.
- (6) Adjust for the risk that the deceased might have died anyway before the date of trial (considered negligible because the deceased was under 40): apply an adjustment factor of 1.00 (Ogden Table F for female aged 35 and 3 years), so multiplier is 18.82 x 1.00 = 18.82.
- (7) Post-trial, post-retirement damages total: $\pounds 20,000 \times 18.82 = \pounds 376,400$.
- 160. Total financial dependency is therefore: \pounds 150,000 (plus interest) + \pounds 1,132,100 + \pounds 376,400 = \pounds 1,658,500.

⁷⁰ Multiplier to age 69 years for male age 40 using age-adjusted interpolation method: first calculate as though the male was aged 39 and had retirement age of 68 (Ogden Table 11 at -0.25% for male aged 39): 28.90. Then calculate as though the male was aged 41 and had retirement age of 70 (Ogden Table 13 at -0.25% for male aged 41): 28.71. Interpolate for age 40 with retirement age of $69 = [(1 \times 28.90) + (1 \times 28.71)] / 2 = 28.81$. Using the simple interpolation method gives the same multiplier: the age 40 to age 68 multiplier is 27.86 and age 40 to age 70 is 29.75, so simple interpolation (the midpoint) = 28.81.

Section E: Periodical Payments for Loss of Earnings

- 161. The personal injury discount rate is set by reference to 'real' and 'net' returns; 'real' being relative to price inflation and 'net' being after taxation and investment charges and costs.
- 162. The discount rate in England and Wales, set under the Civil Liability Act 2018, is based on a definition of 'damages inflation' as being the Consumer Prices Index (CPI) plus 1%⁷¹. This is because there is assumed to be⁷², broadly on average across all claimants:
 - (i) an expectation of earnings growth of CPI+2% on half of the future losses; and
 - (ii) an expectation of prices growth of CPI on the other half.
- 163. The discount rate in Scotland, set under the Damages (Investment Returns and Periodical Payments) (Scotland) Act 2019, defines 'inflation' as being the Retail Prices Index (RPI)⁷³. This is similar to CPI+1% as historically over the last 10 years the difference between RPI and CPI has been about +0.8%⁷⁴. The discount rate in Northern Ireland, set under the Damages (Return on Investment) Act (Northern Ireland) 2022, also defines 'inflation' as being the Retail Prices Index (RPI)⁷⁵.

(a) Form of Award

- 164. Some claimants prefer the flexibility and clean break provided by a lump sum award. A lump sum calculated assuming that damages inflation will be CPI+1% may or may not match the inflation that in fact occurs. Fortunate claimants who invest their lump sum damages at the right time may be able to meet their needs, the costs of which have escalated in line with earnings growth. However, investment returns are unpredictable and the level of risk required to achieve returns sufficient to meet earnings growth on earnings-based elements of the claim may be unattractive.
- 165. In the absence of annuities linked to earnings-based measures, the safest means to track future earnings growth on earnings-based elements of the claim is by way of an award of earnings-linked periodical payments. It should be noted that such tracking can be positive or negative, and periodical payments linked to earnings-based measures may go up or down. Historically wages have increased at a faster rate than prices⁷⁶ and periodical payments are the only reliable way to closely match changes in earnings-based losses and expenses which may occur.
- 166. If loss of earnings claims are to be paid in the form of periodical payments, there are two substantial issues to be considered namely indexation and accounting for residual earnings capacity through reduced earnings, reduced earnings growth and

 ⁷² See further paragraphs 8.9 to 8.12 of Setting the Personal Injury Discount Rate published by the Government Actuary dated 25 June 2019: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/817236/Setting the Personal Injury Discount Rate_web_.pdf

⁷¹ See further Setting the Personal Injury Discount Rate published by the Government Actuary dated 25 June 2019 and paragraph 14 of the explanatory statement made by the Lord Chancellor, David Gauke, dated 15 July 2019 accepting the Government Actuary's advice and confirming the outcome of the first personal injury discount rate review under the Civil Liability Act 2018 available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/816819/stateme nt-of-reasons.pdf.

⁷³ Paragraph 9(2) of Schedule B1 of the Damages (Investment Returns and Periodical Payments) (Scotland) Act 2019 Act states that the impact of inflation is to be allowed for by reference to the RPI, whether indicating an upward or downward trend.

⁷⁴ Source ONS Difference between CPI and RPI rounded: <u>https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/dra2/mm23</u>.

⁷⁵ Paragraph 9(2)(a) of Schedule C1 of the Damages (Return on Investment) Act (Northern Ireland) 2022 states that the impact of inflation is to be allowed for by reference to the RPI, whether indicating an upward or downward trend.

Thompstone v Tameside & Glossop Acute Services NHS Trust & others [2008] EWCA Civ 5; [2008] 1 WLR 2207.

reduced employment prospects.

(b) Indexation

- 167. Fundamentally periodical payments are an entirely different character to lump sum awards⁷⁷. In order to keep pace with inflation, they can be uprated by a measure other than the rate of inflation assumed when setting the discount rate. Indexation is the term used to describe the measure that is to be applied under the Damages Act to escalate the periodical payments into the future. The default measure set in the Damages Act 1996 (as amended) is presently the RPI⁷⁸. However, the cases of *Thompstone v Tameside & Glossop Acute Services NHS Trust & others* [2008] EWCA Civ 5; [2008] 1 WLR 2207 established that, exercising its powers under s2(9) of the Damages Act 1996, the court could apply an alternative measure for indexation of periodical payments as long as it was more appropriate.
- 168. The test as to whether a measure is more appropriate, referred to as the Mackay test⁷⁹, is as follows:
 - (1) accuracy of match of the particular data series to the loss or expenditure being compensated;
 - (2) authority of the collector of the data;
 - (3) statistical reliability;
 - (4) accessibility;
 - (5) consistency over time;
 - (6) reproducibility in the future; and
 - (7) simplicity and consistency in application.
- 169. In respect of future care and case management, the Court of Appeal held in the *Thompstone* cases that periodical payments should be indexed by reference to the earnings of those within the standard occupational classification (SOC) of the Annual Survey of Hours and Earnings (ASHE) for 'care assistants and home carers' (classification "6115")⁸⁰. The courts have tended to index future care and case management by reference to the 80th centile (the level of the earnings of the top 20% within the earnings distribution, as this is usually the closest earnings level to that of the carers being employed). ASHE SOC 6115 is statistically reliable because the sample size defined in this role is large. There are many occupational groups where the cell size is too small to produce reliable estimates.
- 170. Small cell sizes are associated with statistical volatility. There is also a risk that the series will not be published in the future. Whilst the model Schedule to the Order can and does deal with a 'discontinuity of data' (i.e. the non-publication of an estimate), the model Schedule cannot accommodate statistical volatility which can give rise to large swings in the escalation that is applied.
- 171. For example, ASHE 2412 is the occupational classification for 'barristers and judges'. Earnings estimates for this occupational classification are not reliable (flagged by shading) due to small numbers. In 2015, the mean earnings level fell by 12.8%. Since

⁷⁷ *Flora v Wakom (Heathrow) Ltd* [2006] EWCA Civ 1103, per Brooke LJ at para 27.

⁷⁸ Damages Act 1996, s 2(8).

⁷⁹ RH v United Bristol Healthcare Trust [2007] EWHC 1441 paragraph 71, approved by the Court of Appeal in Thompstone v Tameside & Glossop Acute Services NHS Trust & others [2008] EWCA Civ 5; [2008] 1 WLR 2207.

⁸⁰ When occupational groups were reclassified in ASHE in 2011, carers were split into two groups (6145 and 6146). The ONS continue to publish the equivalent 2000 classification of SOC 6115 with the title Care Workers in Table 26.

there was no clear reason why the earnings of barristers and judges would have fallen in that year, we must assume that the large change was caused by statistical volatility. Interestingly, in 2016 there was a 14.3% increase in earnings; another large swing without an obvious cause.

172. If the closest occupational classification is not statistically reliable, an obvious problem arises. Would it be better to index with reference to a broader SOC, or would an aggregate measure at the appropriate centile of the earnings distribution produce a better measure under the Mackay test? If in doubt, in more substantial cases, it may be advisable to seek expert advice regarding the most suitable measure for indexation.

(c) Residual Earning Capacity

- 173. Where there is a residual earnings capacity, the lost earnings and the residual earnings may be in two different occupations, at different levels and with different employment risks. For the reasons explained under Section B above, a different reduction factor (RF) will probably need to be applied to capture the post-injury impact of disability on the claimant's employment prospects. In these circumstances, the court may need to consider applying two different indexation measures and two different reduction factors to the two different multiplicands in respect of the estimated net annual earnings "but for" the injury on the one hand and anticipated post-injury residual earnings on the other.
- 174. Take the example of a 25-year-old female full-time nurse prior to the index accident who is rendered disabled by reason of her injuries. Post-accident, she is restricted to basic entry-level clerical work on a part time basis and with no promotion prospects. The indexation of a periodical payments award for loss of earnings would need to reflect the following factors:
 - Pre-injury the calculation of earnings will be based on nurses' annual net earnings. The assessment will take account of her probable earnings growth from the age-earnings profile, including her prospects of promotion. Additionally, consideration must be given to the likely national wage growth for the occupation. Finally, a deduction will be made for risks other than mortality (in this example, the reduction factor would be 0.88 for 25-year-old, employed, female graduate) (Level 3).
 - Post-injury the earnings calculation will be based on a basic clerical rate for part time work. The probable earnings growth will be derived from the new post-injury age-earnings profile which is likely to be flatter. Promotion prospects are likely to be lower and may be nil. Earnings growth calculations will also take account of national wage growth for the post-injury occupation (which may also be lower). Finally, there will be a significant discount for risks other than mortality. In this example, the reduction factor for a disabled 25-year-old woman restricted to GCSE-level employment (Level 2) would be 0.42 if she is employed at the time of assessment and 0.31 if she is not employed at the time of assessment.
- 175. Once the pre-and post-injury occupations have been established, ASHE provides a helpful source of information for estimating individual earnings (the annual wage) and earnings growth (the annual escalation) for both pre- and post-injury earnings. However, it should be noted that the indexation of future earnings claims can be more complex than for future commercial costs of care because (i) the occupational earnings measure must be seen to meet the Mackay test, especially point (3) above in view of smaller SOC sample sizes; (ii) differential wages and wages growth pre- and post-injury; (iii) differential employment risks pre- and post-injury; and (iv) the potential application of a part-time pay penalty post-injury. Given the comparatively few reported cases concerning the indexation of periodical payments for loss of earnings and the additional complexity over the indexation of care costs, selecting the appropriate measure for

uprating loss of earnings claims may well justify the input of expert advice, in more substantial cases, especially where there is some residual earnings capacity.

176. Where there is a residual earnings capacity to be taken into account, there is a need to draft two separate Schedules to the Order, establishing two separate indexation calculations, applied as follows:

$$PP = [(a) x (b) x (c)] - [(d) x (e) x (f)]$$

where:

- (a) = annual pre-injury loss of earnings.
- (b) = the appropriate RF for pre-injury loss of earnings.
- (c) = the growth in earnings at the relevant part of the earnings distribution for the pre-injury loss of earnings at the relevant SOC.
- (d) = annual post-injury residual earnings.
- (e) = the appropriate RF for post-injury residual earnings.
- (f) = the growth in earnings at the relevant part of the earnings distribution for the post-injury residual earnings at the relevant SOC.
- 177. Any differences in the duration of pre-injury earnings compared to post-injury earnings will normally be accounted for in the difference between the respective reduction factors applied to each. It is important to note that promotion/age-earnings growth profiles must be included in the Schedule to the Order at (a) and (d) above. In the same way that there may be steps in the annual periodical payments for care and case management, if a periodical payments order for loss of earnings is to match the claimant's loss as closely as possible, similarly, there may be steps up and down over the course of the claimant's working life.

ASHE provides a guide to annual wages and will normally be used for the annual wage escalation. The reduction factors account for the employment risks. A view must be taken on how to account for earnings growth due to individual effects (age-earnings profile and promotion). There is no statistical evidence on the impact of disability on earnings growth other than through the effects of occupational downgrading, reduced pay due to working less hours and lost promotion opportunities.

Section F: Concluding Remarks

178. The Ogden Tables are designed to assist practitioners and the courts to arrive at suitable multipliers in a range of possible situations and retirement ages. The Additional Tables allow for the calculation of multipliers between different ages. However, not all possibilities are covered and in more complex situations, such as where there are significant pension rights, it may be advisable to seek specialist advice from a Fellow of the Institute and Faculty of Actuaries.

July 2020

William Latimer-Sayer QC On behalf of the Ogden Working Party London

(updated August 2022 in light of the change in the Northern Ireland discount rate from -1.75% to -1.5%)

Appendix A – Technical Note

- 1. The purposes of the tables and the application of the multipliers are set out in Section A of the explanatory notes. The main set of tables provide multipliers at rates of return ranging from -2.0% to +3.0%, in steps of 0.5%, along with inclusion of multipliers at the prescribed rates of discount at the date of publication of -0.25% for England and Wales, -0.75% for Scotland and -1.5% for Northern Ireland.
- 2. The assumptions underlying the calculation of the multipliers have been set by the Ogden Working Party following detailed consideration of the relevant issues and the latest available data.
- 3. The multipliers have been calculated assuming the average date of trial, or settlement, is 2022. This date has been chosen as providing multipliers which will be appropriate for award settlements occurring over the next four or five years, after which it is anticipated a new edition of the Ogden Tables will be produced. Further information on the construction of the multipliers are available on request from GAD using enquiries@gad.gov.uk.
- 4. The multipliers are assumed to be applicable to the average member of the United Kingdom population and allow for future projected changes in mortality based on the projected mortality rates underlying the 2018-based principal population projections for the United Kingdom, published by the Office for National Statistics (ONS) in October 2019⁸¹.
- 5. The multipliers in the 8th edition are generally lower than those in the 7th edition, especially in respect of losses after retirement age. This is because over the last decade there has been a stalling of mortality improvements at most ages with little increase in projected life expectancies. As a result, the 2008-based population projections (which were used in the 7th edition of the tables) have proved more optimistic over the short term than the actual outturn, and the 2018-based projections assume lower life expectancies for a given age in 2022 than the 2008-based projections had done. Section A of the explanatory notes provides further details on the mortality assumptions and discusses how the multipliers may be amended if the claimant is deemed to have atypical life expectancy.
- 6. In addition to the main set of tables, Additional Tables have been produced using the same assumptions which can be used to derive multipliers for loss of pension or to split multipliers into shorter periods, for example where variable levels of earnings or care costs are assumed payable over different age periods. These Additional Tables are provided at rates of discount of -0.25%, -0.75%, -1.5% and 0%. These include the rates of discount prescribed for use in England & Wales, in Scotland and in Northern Ireland at the date of publication. If the prescribed rates in any of the jurisdictions are changed in future, further supplementary tables will be provided.
- 7. In addition to the tables of multipliers we have also derived the factors for Table E (which provides factors for discounting pre-trial damages to allow for the risk the deceased would not have survived to provide a dependency for the full period to the date of trial or cessation of dependency) and Table F (which provides factors to apply to post-trial damages to allow for the risk that the deceased would not have survived to the date of trial. The factors in both of these tables were calculated using the same mortality rates used for calculating the multipliers but assuming the date of death was in 2020, which

⁸¹ The mortality rates used for the calculations are not published directly by ONS but have been derived from data provided by ONS giving the projected death rates assumed for the United Kingdom as a whole at the start of the projections process. These were converted into the format and age definition required for calculating the multipliers. There are a variety of other data sets published by ONS from which the mortality rates required could be derived. These can give slightly different results in some cases to the multipliers calculated for Ogden 8. The mortality rates used for the calculations are available from GAD on request at enquiries@gad.gov.uk.

is believed a reasonable assumption for most fatal accident cases reaching trial between 2020 and 2025.

8. The mortality projections do not include any allowance for the possible effects of the COVID-19 pandemic on future mortality, as the projections used were published before the outbreak of the pandemic. At this stage, the full impact of the COVID-19 pandemic is not known and will remain uncertain until further evidence has been established. In general, whilst pandemics may affect mortality rates in the short term, the effects on longer term rates may be relatively slight. For example, the main result may be the bringing forward of deaths that would have occurred anyway in the next few years so that longer-term mortality rates would be expected to remain relatively unaffected. The position may need to be reviewed in due course once the implications of the COVID-19 pandemic become more apparent to ensure that the mortality rates used in these projections remain fit for purpose.

Limitations and professional compliance

9. The multipliers and other actuarial analysis outlined in this publication have been calculated and 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.

July 2020

Government Actuary's Department

(updated August 2022 in light of the change in the Northern Ireland discount rate from -1.75% to -1.5%)

Table 1 Multipliers for pecuniary loss of life (males)

Age at date of	Multiplier and rate	calculated	l with allow f	ance for p	rojected m	ortality fro	m the 2018	8-based p	opulation	projectior	าร			Age at date of
triai	-2 00%	-1 75%	-1 50%	-1 00%	-0 75%	-0 50%	-0 25%	0.00%	0 50%	1 00%	1 50%	2 00%	2 50%	triai
0	254 93	219.46	189.83	144 12	126 51	111 60	98.93	88 13	70.95	58 10	48 57	41 20	2.5070	٥
1	249.12	214.91	186.26	141.94	124.81	110.27	97.90	87.34	70.33	57.93	48.43	41.14	35.47	1
2	242.63	209.74	182.15	139.32	122.71	108.60	96.56	86.26	69.79	57.47	48.14	40.95	35.34	2
3	236.22	204.63	178.06	136.70	120.61	106.90	95.19	85.16	69.07	57.00	47.82	40.74	35.20	3
4	229.95	199.60	174.03	134.10	118.51	105.21	93.83	84.05	68.34	56.52	47.50	40.52	35.05	4
5	223.80	194.67	1/0.0/	131.52	116.43	103.53	92.47	82.95	67.61 66.99	56.04	47.18	40.30	34.90	5
7	211.73	185.09	162.33	126.46	112.33	100.20	89.76	80.74	66.14	55.05	46.51	39.85	34.59	7
8	206.16	180.43	158.55	123.96	110.30	98.54	88.40	79.63	65.40	54.54	46.16	39.61	34.42	8
9	200.53	175.85	154.83	121.50	108.28	96.89	87.05	78.53	64.65	54.03	45.81	39.37	34.26	9
10	195.02	171.37	151.17	119.05	106.28	95.25	85.71	77.42	63.89	53.51	45.46	39.12	34.08	10
11	189.62	166.96	147.57	116.63	104.29	93.62	84.36	76.31	63.13	52.99 52.46	45.09	38.87	33.90	11
12	179 19	158 40	144.03	114.24	102.32	92.00 90.38	81.68	75.20	61 60	51.40	44.72	38.34	33.53	12
14	174.14	154.25	137.12	109.54	98.44	88.78	80.35	72.98	60.83	51.39	43.97	38.07	33.34	14
15	169.20	150.17	133.75	107.23	96.52	87.18	79.02	71.87	60.06	50.84	43.58	37.80	33.14	15
16	164.38	146.18	130.44	104.94	94.61	85.59	77.70	70.76	59.28	50.29	43.19	37.51	32.93	16
17	159.67	142.27	127.19	102.69	92.73	84.02	76.38	69.66	58.50	49.74	42.79	37.23	32.72	17
18 10	155.06	138.44	124.00	100.46	90.87 80.02	82.46	/5.0/ 73.76	68.56 67.46	57.72	49.18	42.39	36.94	32.51	18 10
20	146 18	134.00	117.78	96.20	87.19	79.37	72.46	66.36	56 15	48.02	41.90	36.34	32.29	20
21	141.89	127.41	114.76	93.95	85.39	77.84	71.17	65.27	55.36	47.48	41.15	36.03	31.85	21
22	137.69	123.88	111.78	91.83	83.60	76.32	69.89	64.17	54.57	46.90	40.73	35.72	31.61	22
23	133.59	120.42	108.86	89.73	81.82	74.82	68.60	63.08	53.77	46.32	40.30	35.40	31.38	23
24	129.58	117.03	105.99	87.66	80.06	73.32	67.33	61.99	52.97	45.73	39.87	35.08	31.13	24
25	125.66	113.70	103.16	85.62	78.31	71.83	64.78	60.90 50.81	52.17	45.14 11 51	39.42	34.74	30.88	25
20	118.08	107.24	97.65	81.59	74.87	68.87	63.52	58.72	50.55	43.93	38.52	34.06	30.36	20
28	114.42	104.11	94.97	79.62	73.17	67.41	62.26	57.63	49.74	43.32	38.05	33.71	30.09	28
29	110.84	101.04	92.33	77.67	71.49	65.96	61.00	56.55	48.92	42.70	37.59	33.35	29.81	29
30	107.35	98.04	89.74	75.74	69.82	64.52	59.75	55.46	48.10	42.08	37.11	32.98	29.53	30
31	103.93	95.09	87.20	73.84	68.18	63.09	58.51	54.38	47.28	41.45	36.63	32.61	29.24	31
32 33	97 34	92.21	82.25	71.96	64 93	60.26	57.28 56.05	52.31	46.46 45.64	40.82 40.19	36.14	32.23	28.95	32 33
34	94.16	86.62	79.85	68.28	63.33	58.86	54.82	51.16	44.81	39.54	35.15	31.46	28.34	34
35	91.06	83.91	77.48	66.47	61.75	57.48	53.61	50.09	43.98	38.90	34.64	31.06	28.02	35
36	88.02	81.26	75.16	64.69	60.19	56.10	52.40	49.02	43.15	38.25	34.13	30.66	27.70	36
37	85.06	78.67	72.89	62.93	58.64	54.74	51.19	47.96	42.32	37.59	33.62	30.25	27.37	37
38	82.17	76.13	70.66	61.20	57.11	53.39	50.00	46.90	41.49	36.94	33.09	29.83	27.04	38
<u> </u>	79.30	73.04	66 32	57.80	54 10	50.72	40.01	45.65	30.82	35.20	32.57	29.40	26.70	<u> </u>
41	73.92	68.84	64.21	56.14	52.63	49.41	46.46	43.75	38.99	34.94	31.49	28.54	26.00	41
42	71.30	66.51	62.14	54.51	51.17	48.11	45.30	42.71	38.15	34.27	30.95	28.10	25.64	42
43	68.75	64.24	60.12	52.89	49.72	46.81	44.14	41.68	37.32	33.59	30.40	27.65	25.27	43
44	66.26	62.01	58.13	51.30	48.30	45.53	42.99	40.65	36.48	32.91	29.84	27.19	24.89	44
45	63.82	59.83	56.18	49.73	46.89	44.27	41.85	39.62	35.64	32.23	29.28	26.73	24.51	45
40 47	01.40 59.13	57.70	52 38	40.10 46.65	45.49 44 11	43.01	40.71	30.59	34.60 33.96	31.54	28.71	20.20 25.78	24.12 23.72	40 47
48	56.86	53.57	50.54	45.14	42.75	40.52	38.46	36.55	33.12	30.15	27.56	25.30	23.31	48
49	54.65	51.58	48.73	43.66	41.40	39.30	37.35	35.54	32.28	29.45	26.97	24.80	22.90	49
50	52.50	49.62	46.95	42.19	40.06	38.08	36.24	34.53	31.44	28.74	26.38	24.30	22.47	50
51	50.39	47.71	45.21	40.75	38.74	36.88	35.14	33.52	30.59	28.03	25.78	23.80	22.04	51
52 53	48.34	45.83	43.50	39.32	37.44	35.69	34.05	32.52	29.75	27.32	25.17	23.28	21.60	52 53
54	40.34	44.00	41.03	36.53	34.88	33 34	31.89	30.53	28.90	25.88	23.95	22.70	20.70	54
55	42.48	40.47	38.58	35.17	33.63	32.18	30.82	29.55	27.22	25.16	23.33	21.69	20.23	55
56	40.63	38.76	37.01	33.84	32.40	31.04	29.77	28.57	26.38	24.43	22.70	21.15	19.76	56
57	38.83	37.10	35.48	32.53	31.18	29.92	28.72	27.60	25.55	23.71	22.07	20.61	19.29	57
58	37.09	35.49	33.98	31.24	29.99	28.81	27.69	26.64	24.72	22.99	21.45	20.06	18.81	58
59	35.39	33.92	32.52	29.98	28.82	21.12	26.68	25.70	23.89	22.27	20.82	19.51	18.32	59
60 61	30.75 32 15	32.39 30.90	29.71	20.75 27.54	21.01	20.04 25.59	25.00 24.69	24.70 23.84	23.07 22.26	∠1.00 20.84	20.19 19.56	18.30	17.03	60 61
62	30.60	29.45	28.36	26.36	25.43	24.55	23.72	22.93	21.46	20.13	18.93	17.83	16.84	62
63	29.10	28.05	27.05	25.20	24.34	23.53	22.76	22.02	20.66	19.42	18.30	17.27	16.34	63
64	27.65	26.68	25.76	24.06	23.28	22.53	21.81	21.13	19.87	18.72	17.67	16.71	15.83	64
65	26.23	25.35	24.51	22.95	22.23	21.54	20.88	20.25	19.08	18.02	17.04	16.14	15.32	65
66 67	24.87	24.06	23.30	21.87	21.21	20.57	19.97	19.39	18.31	17.32	16.41	15.58	14.81	66 67
68 68	∠ა.55 22.27	22.82 21.61	22.12	∠∪.8∠ 19.79	20.21	19.03	19.07	10.54	16 79	15.03	15.79	13.01	14.30 13.78	68 68
69	21.04	20.44	19.86	18.78	18.28	17.79	17.33	16.88	16.04	15.26	14.55	13.88	13.27	69

continued

Table 1 Multipliers for pecuniary loss of life (males) continued

Age at date of trial	ge at Multiplier calculated with allowance for projected mortality from the 2018-based population projections A te of and rate of return of trial												Age at date of trial	
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
70	19.84	19.30	18.78	17.80	17.34	16.90	16.48	16.07	15.30	14.59	13.93	13.32	12.75	70
71	18.69	18.20	17.73	16.85	16.43	16.03	15.64	15.27	14.57	13.92	13.32	12.76	12.23	71
72	17.58	17.14	16.72	15.92	15.54	15.18	14.83	14.49	13.86	13.26	12.71	12.20	11.71	72
73	16.51	16.11	15.73	15.02	14.68	14.35	14.03	13.73	13.15	12.61	12.11	11.64	11.20	73
74	15.47	15.12	14.78	14.14	13.84	13.54	13.26	12.98	12.46	11.97	11.52	11.09	10.68	74
75	14.48	14.17	13.87	13.29	13.02	12.76	12.50	12.25	11.78	11.34	10.93	10.54	10.17	75
76	13.53	13.25	12.98	12.47	12.23	11.99	11.77	11.54	11.12	10.73	10.35	10.00	9.67	76
77	12.62	12.37	12.14	11.68	11.47	11.26	11.05	10.85	10.48	10.12	9.79	9.47	9.17	77
78	11.75	11.53	11.32	10.92	10.73	10.54	10.36	10.19	9.85	9.53	9.23	8.95	8.68	78
79	10.92	10.73	10.55	10.19	10.02	9.86	9.70	9.54	9.24	8.96	8.69	8.44	8.19	79
80	10.14	9.97	9.81	9.50	9.35	9.20	9.06	8.92	8.66	8.40	8.16	7.94	7.72	80
81	9.39	9.25	9.10	8.83	8.70	8.57	8.45	8.33	8.09	7.87	7.66	7.45	7.26	81
82	8.69	8.56	8.44	8.20	8.09	7.97	7.86	7.76	7.55	7.35	7.17	6.99	6.82	82
83	8.03	7.92	7.81	7.60	7.50	7.40	7.31	7.22	7.03	6.86	6.70	6.54	6.39	83
84	7.41	7.31	7.22	7.04	6.95	6.87	6.78	6.70	6.54	6.39	6.25	6.11	5.97	84
85	6.83	6.75	6.67	6.51	6.43	6.36	6.28	6.21	6.08	5.94	5.82	5.69	5.58	85
86	6.29	6.22	6.14	6.01	5.94	5.88	5.82	5.75	5.63	5.52	5.41	5.30	5.20	86
87	5.78	5.72	5.66	5.54	5.48	5.43	5.37	5.32	5.22	5.12	5.02	4.93	4.84	87
88	5.31	5.26	5.20	5.10	5.05	5.01	4.96	4.91	4.82	4.74	4.65	4.57	4.49	88
89	4.87	4.83	4.78	4.70	4.65	4.61	4.57	4.53	4.45	4.38	4.31	4.24	4.17	89
90	4.47	4.43	4.39	4.32	4.28	4.25	4.21	4.18	4.11	4.05	3.98	3.92	3.86	90
91	4.10	4.07	4.03	3.97	3.94	3.91	3.88	3.85	3.79	3.74	3.68	3.63	3.58	91
92	3.76	3.73	3.70	3.65	3.62	3.60	3.57	3.55	3.50	3.45	3.40	3.36	3.31	92
93	3.45	3.43	3.40	3.36	3.33	3.31	3.29	3.27	3.23	3.18	3.14	3.11	3.07	93
94	3.17	3.15	3.13	3.09	3.07	3.05	3.03	3.01	2.98	2.94	2.91	2.87	2.84	94
95	2.92	2.90	2.88	2.85	2.83	2.82	2.80	2.78	2.75	2.72	2.69	2.66	2.63	95
96	2.69	2.67	2.66	2.63	2.61	2.60	2.58	2.57	2.54	2.52	2.49	2.47	2.44	96
97	2.47	2.46	2.45	2.42	2.41	2.40	2.38	2.37	2.35	2.33	2.31	2.28	2.26	97
98	2.28	2.26	2.25	2.23	2.22	2.21	2.20	2.19	2.1/	2.15	2.13	2.12	2.10	98
99	2.10	2.09	2.08	2.06	2.05	2.05	2.04	2.03	2.01	2.00	1.98	1.96	1.95	99
100	1.94	1.93	1.93	1.91	1.90	1.90	1.89	1.88	1.87	1.85	1.84	1.82	1.81	100

Table 2 Multipliers for pecuniary loss of life (females)

Age at	at Multiplier calculated with allowance for projected mortality from the 2018-based population projections Age												Age at	
date of	and rate	e of return	of											date of
trial														trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	268.92	230.71	198.89	150.02	131.29	115.47	102.08	90.69	72.66	59.34	49.35	41.74	35.86	0
1	262.78	225.90	195.13	147.74	129.51	114.09	101.01	89.87	72.18	59.07	49.21	41.67	35.83	1
2	256.07	220.59	190.92	145.09	127.40	112.41	99.67	88.80	/1.49	58.63	48.92	41.49	35.72	2
3 1	249.45	215.34	180.75	142.43	123.28	110.72	98.31	87.71	70.79	57.18	48.03	41.30	35.59	3 1
5	236.62	205.11	178 58	137.20	123.10	103.03	95.50	85.54	69.38	57.25	48.02	40.89	35 32	5
6	230.41	200.13	174.59	134.63	119.02	105.68	94.26	84.45	68.66	56.78	47.70	40.68	35.18	6
7	224.34	195.25	170.66	132.08	116.96	104.02	92.92	83.36	67.94	56.30	47.38	40.47	35.03	7
8	218.39	190.46	166.80	129.56	114.92	102.37	91.57	82.27	67.22	55.82	47.06	40.25	34.88	8
9	212.56	185.76	163.00	127.07	112.89	100.72	90.23	81.17	66.49	55.33	46.73	40.02	34.73	9
10	206.86	181.14	159.25	124.60	110.88	99.08	88.90	80.08	65.76	54.83	46.39	39.79	34.57	10
11	201.29	176.61	155.57	122.15	108.89	97.45	87.56	78.99	65.02	54.33	46.05	39.56	34.41	11
12	195.83	172.17	151.95	119.74	106.91	95.83	80.23	76.80	63.54	53.83 53.32	45.70 45.35	39.32 30.07	34.24	12
13	185 27	163.53	140.30	114.98	104.95	94.22	83.59	75.71	62 79	52.80	43.33	38.82	33.89	13
15	180.16	159.34	141.43	112.64	101.08	91.02	82.27	74.62	62.04	52.28	44.63	38.57	33.71	15
16	175.17	155.23	138.04	110.33	99.16	89.44	80.95	73.53	61.28	51.75	44.26	38.31	33.53	16
17	170.28	151.20	134.71	108.05	97.27	87.87	79.65	72.44	60.52	51.22	43.89	38.04	33.34	17
18	165.50	147.24	131.43	105.79	95.39	86.30	78.34	71.35	59.76	50.69	43.51	37.77	33.14	18
19	160.83	143.36	128.21	103.56	93.53	84.75	77.04	70.26	58.99	50.14	43.12	37.50	32.94	19
20	156.26	139.56	125.04	101.35	91.68	83.20	75.75	69.17	58.22	49.60	42.73	37.22	32.74	20
21	151.79	135.83	121.92	99.16	89.85	81.67	74.45	68.09	57.45	49.04	42.33	36.93	32.53	21
22	147.42	132.17	118.80	97.01	88.04	80.14 78.62	73.17	67.00 65.01	55.07	48.49	41.93	30.03	32.32	22
23	138.95	125.06	112.87	94.07	84.45	77.10	70.60	64 83	55.09	47.92	41.52	36.03	31.87	23
25	134.86	121.60	109.96	90.67	82.68	75.60	69.32	63.74	54.32	46.77	40.68	35.72	31.64	25
26	130.85	118.21	107.09	88.60	80.92	74.11	68.05	62.65	53.52	46.19	40.25	35.40	31.40	26
27	126.94	114.89	104.26	86.56	79.18	72.62	66.78	61.57	52.73	45.60	39.81	35.07	31.15	27
28	123.11	111.63	101.49	84.54	77.45	71.15	65.52	60.48	51.93	45.01	39.37	34.74	30.90	28
29	119.36	108.44	98.76	82.54	75.74	69.68	64.26	59.40	51.12	44.41	38.92	34.40	30.65	29
30	115.70	105.31	96.08	80.57	74.05	68.22	63.00	58.32	50.32	43.81	38.47	34.05	30.38	30
31	112.13	102.24	93.45	78.62	72.37	65.78	61./5 60.51	57.24	49.51	43.20	38.00	33.70	30.11	31
32 33	106.03	99.23 96.29	90.00 88.32	76.70	69.07	63 91	59 27	55.10	40.70	42.00	37.04	32.30	29.04	32 33
34	101.87	93.40	85.82	72.92	67.43	62.49	58.04	54.01	47.06	41.34	36.58	32.61	29.27	34
35	98.61	90.57	83.36	71.06	65.82	61.09	56.81	52.94	46.24	40.71	36.09	32.23	28.97	35
36	95.42	87.79	80.95	69.23	64.22	59.69	55.59	51.87	45.42	40.07	35.60	31.85	28.67	36
37	92.30	85.08	78.57	67.42	62.63	58.30	54.37	50.80	44.59	39.43	35.10	31.45	28.36	37
38	89.25	82.41	76.24	65.63	61.07	56.92	53.16	49.73	43.77	38.78	34.59	31.05	28.05	38
39	86.27	79.80	73.96	63.87	59.51	55.55	51.95	48.67	42.93	38.13	34.08	30.65	27.72	39
40	83.37	77.25	/1./1 60.50	62.12	57.97	54.20	50.75	47.61	42.10	37.47	33.50	30.23	27.39	40
41	77 75	72 29	67.33	58 70	54 94	51 51	49.30	40.55	41.27	36.14	32 50	29.01	26.71	41
43	75.03	69.89	65.20	57.02	53.45	50.18	47.19	44.44	39.59	35.47	31.96	28.95	26.36	43
44	72.38	67.53	63.11	55.36	51.97	48.87	46.01	43.39	38.74	34.79	31.41	28.51	26.00	44
45	69.79	65.23	61.05	53.73	50.51	47.56	44.84	42.34	37.90	34.11	30.86	28.05	25.63	45
46	67.27	62.97	59.04	52.11	49.07	46.26	43.68	41.29	37.05	33.42	30.30	27.59	25.25	46
47	64.80	60.76	57.06	50.52	47.63	44.97	42.52	40.25	36.20	32.73	29.73	27.13	24.86	47
48 40	60.03	56.60	52.11	48.95 47.40	46.22	43.70	41.37	39.21 38.17	35.36	32.03	∠9.16 28.59	26.65 26.17	24.47 24.07	48 ⊿0
50	57 74	54 41	51.33	45.87	43.43	41 18	39.09	37 14	33.65	30.63	27.99	25.68	23.66	50
51	55.50	52.38	49.50	44.36	42.07	39.94	37.96	36.12	32.80	29.92	27.40	25.19	23.24	51
52	53.31	50.40	47.70	42.88	40.72	38.71	36.84	35.09	31.95	29.21	26.80	24.69	22.82	52
53	51.18	48.46	45.94	41.41	39.38	37.49	35.72	34.08	31.10	28.49	26.20	24.18	22.39	53
54	49.10	46.57	44.21	39.97	38.06	36.28	34.62	33.07	30.25	27.77	25.59	23.66	21.95	54
55	47.08	44.72	42.52	38.55	36.76	35.09	33.53	32.06	29.40	27.05	24.98	23.14	21.50	55
56 F7	45.10	42.91	40.86	37.16	35.48	33.91	32.44	31.06	28.55	26.33	24.36	22.61	21.04	56
57 58	43.10 11 21	41.14	39.24 37 65	30.10 31 13	34.22 32 07	32.75 31 50	31.37	30.07 20.02	21.10	20.00 24 88	∠3.74 23.11	22.07	∠0.5ŏ 20.11	57 58
59	39.49	37.74	36.10	33.11	31.74	30.46	29.25	28.11	26.02	24.15	22.48	20.98	19.64	59
60	37.72	36.10	34.58	31.80	30.53	29.33	28.20	27.14	25.18	23.42	21.85	20.43	19.15	60
61	35.99	34.50	33.09	30.52	29.34	28.22	27.17	26.18	24.34	22.69	21.21	19.87	18.66	61
62	34.31	32.94	31.64	29.26	28.16	27.13	26.15	25.22	23.51	21.96	20.57	19.31	18.17	62
63	32.68	31.42	30.22	28.02	27.01	26.05	25.14	24.27	22.68	21.23	19.93	18.74	17.66	63
64	31.09	29.93	28.83	26.81	25.87	24.98	24.14	23.34	21.85	20.50	19.28	18.17	17.15	64
65	29.55	28.48	27.48	25.61	24.75	23.93	23.15	22.41	21.03	19.77	18.63	17.59	16.64	65
00 67	20.00 26.50	21.08 25.70	20.15	∠4.44 23 30	∠3.03 22 57	∠∠.୪୨ 21 ହହ	22.17	∠1.49 20.59	∠0.21 10.70	19.05	17 22	16.70	15.12	00 67
68	25.18	24.37	23.61	22.18	21.51	20.87	20.26	19.68	18.59	17.59	16.68	15.84	15.06	68
69	23.81	23.08	22.38	21.08	20.47	<u>19.</u> 89	19.33	18.80	17.79	<u>16</u> .87	<u>16.</u> 03	15.25	14.52	69

continued

Table 2 Multipliers for pecuniary loss of life (females) continued

Age at date of trial	e at Multiplier calculated with allowance for projected mortality from the 2018-based population projections e of and rate of return of													Age at date of trial
that	-2 00%	-1 75%	-1 50%	-1 00%	-0 75%	-0 50%	-0 25%	0.00%	0 50%	1 0.0%	1 50%	2 0.0%	2 50%	that
70	2.0070	01.00	-1.50 /0	20.00	40 45	10.0070	40 44	47.00	47.00	16 16	1.5070	2.0070	12.0070	70
70	22.48	21.82	21.19	20.00	19.45	18.92	18.41	17.92	17.00	10.10	15.38	14.05	13.98	70
71	21.19	20.60	20.03	18.96	18.45	17.97	17.50	17.06	16.22	15.44	14.73	14.00	13.44	71
72	19.95	19.42	18.90	17.93	17.48	17.04	16.62	16.21	15.45	14.74	14.08	13.47	12.90	72
73	18.76	18.28	17.81	16.94	16.53	16.13	15.75	15.38	14.69	14.04	13.44	12.88	12.36	73
74	17.60	17.17	16.76	15.97	15.60	15.25	14.90	14.57	13.94	13.35	12.80	12.29	11.81	74
75	16.49	16.11	15.74	15.04	14.70	14.38	14.07	13.77	13.20	12.67	12.17	11./1	11.27	75
76	15.43	15.09	14.76	14.13	13.83	13.54	13.27	13.00	12.48	12.00	11.55	11.13	10.73	76
//	14.41	14.10	13.81	13.25	12.99	12.73	12.48	12.24	11.78	11.35	10.94	10.56	10.20	11
78	13.43	13.16	12.90	12.40	12.17	11.94	11.72	11.50	11.09	10.70	10.34	10.00	9.67	78
/9	12.49	12.25	12.03	11.59	11.38	11.18	10.98	10.79	10.42	10.08	9.75	9.44	9.15	/9
80	11.60	11.39	11.19	10.80	10.62	10.44	10.27	10.10	9.77	9.46	9.17	8.90	8.63	80
81	10.75	10.57	10.39	10.05	9.89	9.73	9.58	9.43	9.14	8.87	8.61	8.36	8.13	81
82	9.94	9.78	9.63	9.33	9.19	9.05	8.92	8.79	8.53	8.29	8.06	7.85	7.64	82
83	9.18	9.04	8.90	8.65	8.52	8.40	8.28	8.17	7.95	7.73	7.53	7.34	7.16	83
84	8.45	8.33	8.22	7.99	7.89	7.78	7.68	7.58	7.38	7.20	7.02	6.85	6.69	84
85	7.77	7.67	7.57	7.37	7.28	7.19	7.10	7.01	6.84	6.68	6.53	6.38	6.24	85
86	7.13	7.04	6.95	6.79	6.71	6.63	6.55	6.48	6.33	6.19	6.05	5.92	5.80	86
87	6.53	6.45	6.38	6.24	6.17	6.10	6.03	5.97	5.84	5.72	5.60	5.49	5.38	87
88	5.97	5.91	5.85	5.72	5.66	5.61	5.55	5.49	5.38	5.28	5.18	5.08	4.99	88
89	5.46	5.41	5.35	5.25	5.20	5.15	5.10	5.05	4.96	4.87	4.78	4.69	4.61	89
90	4.99	4.94	4.90	4.81	4.77	4.72	4.68	4.64	4.56	4.48	4.41	4.33	4.26	90
91	4.56	4.52	4.48	4.41	4.37	4.34	4.30	4.26	4.20	4.13	4.06	4.00	3.94	91
92	4.18	4.14	4.11	4.04	4.01	3.98	3.95	3.92	3.86	3.80	3.75	3.70	3.64	92
93	3.83	3.80	3.77	3.71	3.69	3.66	3.63	3.61	3.56	3.51	3.46	3.41	3.37	93
94	3.51	3.48	3.46	3.41	3.39	3.37	3.34	3.32	3.28	3.24	3.20	3.16	3.12	94
95	3.22	3.20	3.18	3.14	3.12	3.10	3.08	3.06	3.03	2.99	2.95	2.92	2.89	95
96	2.96	2.94	2.92	2.89	2.87	2.85	2.84	2.82	2.79	2.76	2.73	2.70	2.67	96
97	2.71	2.70	2.68	2.65	2.64	2.62	2.61	2.60	2.57	2.54	2.52	2.49	2.47	97
98	2.49	2.47	2.46	2.44	2.43	2.41	2.40	2.39	2.37	2.34	2.32	2.30	2.28	98
99	2.29	2.27	2.26	2.24	2.23	2.22	2.21	2.20	2.18	2.16	2.14	2.13	2.11	99
100	2.10	2.09	2.08	2.07	2.06	2.05	2.04	2.03	2.02	2.00	1.98	1.97	1.95	100

Table 3 Multipliers for loss of earnings to pension age 50 (males)

Age at date of trial	ge at Multiplier calculated with allowance for projected mortality from the 2018-based population projections te of and rate of return of rial													Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	ai
16	48.39	46.14	44.02	40.16	38.40	36.74	35.18	33.71	31.02	28.62	26.48	24.56	22.85	16
17	46.44	44.34	42.37	38.76	37.11	35.56	34.09	32.71	30.17	27.90	25.87	24.05	22.41	17
18	44.52	42.57	40.74	37.38	35.84	34.38	33.01	31.71	29.32	27.18	25.25	23.52	21.96	18
19	42.64	40.84	39.14	36.01	34.58	33.22	31.93	30.71	28.47	26.45	24.63	22.98	21.50	19
20	40.81	39.14	37.57	34.66	33.33	32.06	30.86	29.72	27.61	25.71	23.99	22.44	21.03	20
21	39.01	37.47	36.02	33.33	32.09	30.91	29.79	28.73	26.75	24.97	23.35	21.88	20.54	21
22	37.24	35.83	34.49	32.01	30.86	29.76	28.72	27.73	25.89	24.22	22.70	21.31	20.05	22
23	35.52	34.22	32.99	30.70	29.64	28.62	27.66	26.74	25.02	23.46	22.04	20.74	19.54	23
24	33.83	32.64	31.51	29.41	28.43	27.49	26.60	25.75	24.15	22.70	21.37	20.15	19.03	24
25	32.17	31.09	30.05	28.12	27.22	26.36	25.54	24.75	23.28	21.93	20.69	19.54	18.50	25
26	30.54	29.56	28.62	26.86	26.03	25.24	24.48	23.76	22.40	21.15	19.99	18.93	17.95	26
27	28.95	28.06	27.20	25.60	24.85	24.13	23.43	22.77	21.52	20.36	19.29	18.31	17.39	27
28	27.39	26.59	25.81	24.36	23.67	23.02	22.38	21.78	20.63	19.57	18.58	17.67	16.82	28
29	25.86	25.14	24.44	23.13	22.51	21.91	21.34	20.78	19.74	18.76	17.86	17.02	16.24	29
30	24.37	23.72	23.09	21.91	21.35	20.81	20.29	19.79	18.84	17.96	17.13	16.36	15.64	30
31	22.90	22.32	21.77	20.71	20.21	19.72	19.25	18.80	17.94	17.14	16.39	15.68	15.02	31
32	21.47	20.95	20.46	19.52	19.07	18.64	18.22	17.81	17.04	16.31	15.63	15.00	14.40	32
33	20.06	19.61	19.17	18.34	17.94	17.56	17.18	16.82	16.13	15.48	14.87	14.29	13.75	33
34	18.68	18.29	17.90	17.17	16.82	16.48	16.15	15.83	15.22	14.64	14.10	13.58	13.09	34
35	17.33	16.99	16.66	16.02	15.71	15.42	15.13	14.85	14.31	13.80	13.31	12.85	12.42	35
36	16.01	15.71	15.43	14.88	14.61	14.35	14.10	13.86	13.39	12.94	12.51	12.11	11.73	36
37	14.71	14.46	14.22	13.75	13.52	13.30	13.08	12.87	12.46	12.08	11.71	11.35	11.02	37
38	13.44	13.23	13.02	12.63	12.43	12.25	12.06	11.88	11.54	11.20	10.89	10.58	10.29	38
39	12.20	12.02	11.85	11.52	11.36	11.20	11.05	10.90	10.60	10.32	10.05	9.80	9.55	39
40	10.98	10.84	10.69	10.42	10.29	10.16	10.03	9.91	9.67	9.43	9.21	8.99	8.79	40
41	9.78	9.67	9.56	9.34	9.23	9.13	9.02	8.92	8.73	8.54	8.35	8.18	8.00	41
42	8.61	8.52	8.43	8.26	8.18	8.10	8.02	7.94	7.78	7.63	7.48	7.34	7.20	42
43	7.46	7.39	7.33	7.20	7.13	7.07	7.01	6.95	6.83	6.71	6.60	6.49	6.38	43
44	6.34	6.29	6.24	6.14	6.10	6.05	6.01	5.96	5.87	5.79	5.70	5.62	5.54	44
45	5.23	5.20	5.16	5.10	5.07	5.03	5.00	4.97	4.91	4.85	4.79	4.73	4.68	45
46	4.15	4.12	4.10	4.06	4.04	4.02	4.00	3.98	3.94	3.90	3.86	3.83	3.79	46
47	3.08	3.07	3.06	3.03	3.02	3.01	3.00	2.99	2.97	2.94	2.92	2.90	2.88	47
48	2.04	2.03	2.03	2.01	2.01	2.00	2.00	1.99	1.98	1.97	1.97	1.96	1.95	48
49	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	49

Table 4 Multipliers for loss of earnings to pension age 50 (females)

Age at date of trial	e at Multiplier calculated with allowance for projected mortality from the 2018-based population projections A te of and rate of return of drial												Age at date of trial	
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
16	48.60	46.33	44.20	40.31	38.54	36.88	35.31	33.83	31.12	28.71	26.56	24.64	22.92	16
17	46.64	44.53	42.54	38.92	37.26	35.70	34.22	32.83	30.28	28.00	25.96	24.12	22.48	17
18	44.72	42.76	40.91	37.53	35.98	34.52	33.14	31.83	29.43	27.27	25.34	23.60	22.03	18
19	42.83	41.02	39.31	36.17	34.72	33.35	32.06	30.84	28.58	26.54	24.71	23.06	21.57	19
20	40.99	39.32	37.73	34.81	33.47	32.19	30.99	29.84	27.72	25.81	24.08	22.52	21.10	20
21	39.19	37.64	36.18	33.47	32.22	31.04	29.91	28.84	26.86	25.06	23.44	21.96	20.61	21
22	37.42	35.99	34.65	32.15	30.99	29.89	28.84	27.85	25.99	24.31	22.78	21.39	20.12	22
23	35.68	34.38	33.14	30.83	29.76	28.75	27.77	26.85	25.12	23.55	22.12	20.81	19.61	23
24	33.98	32.79	31.65	29.53	28.55	27.61	26.71	25.85	24.25	22.79	21.45	20.22	19.09	24
25	32.32	31.23	30.19	28.25	27.34	26.48	25.65	24.86	23.37	22.01	20.76	19.62	18.56	25
26	30.68	29.69	28.75	26.97	26.14	25.35	24.59	23.86	22.49	21.23	20.07	19.00	18.02	26
27	29.09	28.19	27.33	25.71	24.96	24.23	23.53	22.86	21.60	20.44	19.37	18.38	17.46	27
28	27.52	26.71	25.93	24.47	23.78	23.11	22.48	21.87	20.71	19.64	18.66	17.74	16.88	28
29	25.98	25.26	24.55	23.23	22.61	22.01	21.43	20.87	19.82	18.84	17.93	17.09	16.30	29
30	24.48	23.83	23.20	22.01	21.45	20.90	20.38	19.88	18.92	18.03	17.20	16.42	15.70	30
31	23.01	22.43	21.87	20.80	20.30	19.81	19.34	18.88	18.02	17.21	16.45	15.75	15.08	31
32	21.56	21.05	20.55	19.60	19.15	18.72	18.30	17.89	17.11	16.38	15.70	15.06	14.45	32
33	20.15	19.70	19.26	18.42	18.02	17.63	17.26	16.90	16.20	15.55	14.93	14.35	13.81	33
34	18.77	18.37	17.98	17.25	16.90	16.56	16.22	15.90	15.29	14.70	14.15	13.63	13.14	34
35	17.41	17.06	16.73	16.09	15.78	15.48	15.19	14.91	14.37	13.85	13.37	12.90	12.47	35
30	16.08	15.78	15.49	14.94	14.07	14.41	14.10	13.92	13.44	12.99	12.50	12.10	11.77	30
3/	14.78	14.52	14.28	13.80	13.58	13.35	13.14	12.92	12.51	12.12	11.75	10.62	10.00	3/
30 20	13.30	13.29	13.00	12.00	12.49	12.30	12.11	10.04	10.64	10.20	10.93	10.02	10.33	30 20
	12.20	10.00	10.74	10.46	10.22	10.20	10.07	0.05	0.70	0.47	0.09	9.03	9.00	39
40	0.82	0.70	0.50	0.40	0.26	0.16	0.06	9.90	9.70	9.47	9.24	9.03	0.0Z	40
41	9.02	9.70	9.39	9.37	9.20	9.10	9.00	7.95	7.81	7.65	7.51	7 36	7 23	41
42	7 /0	7 /2	7 35	7.29	7 16	7.00	7.03	6.90	6.85	6 73	6.62	6.51	6.40	42
43	6 35	6 30	6.26	6.16	6 11	6.07	6.02	5.98	5.89	5.80	5.72	5.64	5 56	43
45	5 24	5.21	5 18	5 11	5.08	5.05	5.02	4 98	4 92	4.86	4.80	4 74	4 69	45
46	4 15	4 13	4.11	4 07	4.05	4 03	4.01	3 99	3.95	3.91	3.87	3.83	3.80	46
47	3.09	3.07	3.06	3.04	3.03	3.02	3.00	2 99	2 97	2.95	2 93	2 91	2.89	47
48	2.04	2.03	2.03	2.02	2.01	2.01	2.00	2.00	1.99	1.98	1.97	1.96	1.95	48
49	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	49

Table 5 Multipliers for loss of earnings to pension age 55 (males)

Age at	Multiplier calculated with allowance for projected mortality from the 2018-based population projections												Age at	
date of	and rate	e of return	of											date of
แกลเ	-2 00%	-1 75%	-1 50%	-1 00%	-0 75%	-0 50%	-0 25%	0.00%	0 50%	1 00%	1 50%	2 00%	2 50%	เกลเ
40	-2.0070	-1.7570	-1.50 /0	-1.0070	-0.7570	-0.3078	-0.2370	0.00 //	0.0070	04.00	00.00	2.0070	2.30%	40
10	58.51	55.30	52.42	47.14	44.70	42.55	40.48	38.55	35.05	31.98	29.29	26.91	24.82	10
10	54.33	53.39 51.47	JU.04	40.07	43.43	41.34	39.30 20.20	37.00	34.ZZ	20.61	20.72	20.44	24.42	10
10	52.46	01.47 40.59	40.09	44.ZZ	42.11	40.13	30.20 27.10	30.33	33.39 22.56	20.01	20.10	20.90	24.02	10
	50.12	49.00	47.10	42.70	20.50	27.75	26.10	24 55	32.00	29.91	27.00	20.40	23.01	20
20	JU.13	47.72	40.47	20.06	39.00 20 22	31.13	30.10	34.33	31.72	29.21	20.97	24.90	23.20	20
21	46.14	45.90	43.00	39.90 20 E0	30.22 26.04	30.37	30.02	33.30	30.00	20.00	20.30	24.47	22.11	21
22	40.20	44.12	42.10	30.30	25.54	24.22	33.94 22.06	32.37	20.04	27.79	20.11	23.90	22.33	22
23	44.29	42.30	29.05	37.20	33.07	34.23	32.00	20.59	29.20	21.01	20.10	23.43	21.00	23
24	42.42	29.04	27.29	24.50	22 17	21.01	20.72	20.50	20.33	20.34	24.00	22.90	21.42	24
20	20.09	27.29	25.92	34.50	21 02	20.76	20.65	29.09	27.49	23.00	23.90	22.30	20.95	20
20	27.04	37.20	2/ 21	21.95	20 70	20.70	29.00	20.59	20.03	24.00	23.23	21.79	10.40	20
28	35 32	34.04	32 81	30.54	20.70	29.02	20.30	26.61	23.77	24.11	22.00	21.23	19.97	21
20	33.64	32.04	31.31	20.24	29.49	20.40	26.46	20.01	24.91	23.33	21.94	20.05	19.40	20
30	31 00	30.01	20.80	23.23	20.20	26.23	20.40	24.63	24.04	22.33	20.50	10.00	18 /1	20
31	30.37	20.31	29.05	26.71	25.89	20.23	24 36	24.03	22.10	21.02	10.00	18.40	17.87	31
32	28 79	23.33	20.40	25.46	23.03	24.00	24.30	22.04	22.23	20.26	19.90	18 22	17.07	32
33	20.73	26.44	25.67	20.40	23 55	27.00	20.01	21.66	20.52	19 47	18.49	17 59	16 74	33
34	25.72	25.00	24 31	23.00	22.30	21.80	21 23	20.68	19.64	18.67	17 77	16.94	16.16	34
35	24.23	23.59	22 97	20.00	21 24	20.70	20.19	19.69	18 75	17.87	17.05	16.28	15 56	35
36	27.23	22.00	21 65	20.60	20.10	19.62	19 15	18 71	17.85	17.07	16 31	15.20	14 95	36
37	21.35	20.84	20.35	19 41	18.97	18.54	18.12	17 72	16.95	16.23	15.56	14.92	14.33	37
38	19.95	19.50	19.07	18.24	17.85	17 47	17.10	16 74	16.00	15 41	14 80	14 23	13.69	38
39	18.58	18.19	17.81	17.08	16.74	16.40	16.07	15.76	15.15	14.57	14.03	13.52	13.03	39
40	17.24	16.90	16.57	15.94	15.64	15.34	15.05	14.77	14.24	13.73	13.25	12.79	12.36	40
41	15.93	15.64	15.35	14.81	14.54	14.29	14.04	13.79	13.33	12.88	12.46	12.06	11.67	41
42	14.64	14.39	14.15	13.68	13.46	13.24	13.02	12.81	12.41	12.02	11.66	11.31	10.97	42
43	13.38	13.17	12.97	12.57	12.38	12.19	12.01	11.83	11.49	11.16	10.84	10.54	10.25	43
44	12.15	11.97	11.80	11.47	11.31	11.16	11.00	10.85	10.56	10.28	10.02	9.76	9.51	44
45	10.94	10.79	10.65	10.38	10.25	10.12	10.00	9.87	9.63	9.40	9.18	8.96	8.75	45
46	9.75	9.63	9.52	9.31	9.20	9.10	8.99	8.89	8.70	8.51	8.32	8.15	7.98	46
47	8.58	8.49	8.41	8.24	8.15	8.07	7.99	7.91	7.76	7.61	7.46	7.32	7.18	47
48	7.44	7.37	7.31	7.18	7.11	7.05	6.99	6.93	6.81	6.69	6.58	6.47	6.37	48
49	6.32	6.27	6.22	6.13	6.08	6.03	5.99	5.94	5.86	5.77	5.69	5.61	5.53	49
50	5.22	5.18	5.15	5.09	5.05	5.02	4.99	4.96	4.90	4.84	4.78	4.72	4.67	50
51	4.14	4.12	4.10	4.05	4.03	4.01	3.99	3.97	3.93	3.90	3.86	3.82	3.78	51
52	3.08	3.06	3.05	3.03	3.02	3.01	3.00	2.98	2.96	2.94	2.92	2.90	2.88	52
53	2.03	2.03	2.02	2.01	2.01	2.00	2.00	1.99	1.98	1.97	1.96	1.95	1.94	53
54	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	54

Table 6 Multipliers for loss of earnings to pension age 55 (females)

Age at date of	Multiplier calculated with allowance for projected mortality from the 2018-based population projections and rate of return of											Age at date of		
trial	2 000/	1 750/	4 500/	1 000/	0 75%	0 500/	0.25%	0.000/	0 500/	1 000/	1 500/	2 000/	2 500/	trial
40	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	40
16	58.85	55.67	52.71	47.39	44.99	42.76	40.68	38.73	35.21	32.12	29.41	27.02	24.91	16
17	56.68	53.70	50.93	45.92	43.66	41.55	39.58	37.73	34.38	31.44	28.85	26.55	24.52	1/
18	54.56	51.77	49.17	44.47	42.34	40.35	38.48	36.74	33.56	30.75	28.27	26.07	24.12	18
19	52.48	49.88	47.44	43.03	41.03	39.15	37.39	35.74	32.72	30.06	27.69	25.59	23.71	19
20	50.44	48.02	45.74	41.61	39.73	37.96	36.30	34.74	31.89	29.35	27.10	25.09	23.30	20
21	48.45	46.19	44.07	40.20	38.44	36.78	35.21	33.74	31.05	28.65	26.50	24.59	22.87	21
22	46.49	44.39	42.42	38.80	37.15	35.60	34.13	32.75	30.20	27.93	25.90	24.07	22.43	22
23	44.58	42.63	40.79	37.42	35.88	34.43	33.05	31.75	29.35	27.21	25.28	23.54	21.98	23
24	42.70	40.69	39.19	30.00	34.02	33.20	31.97	30.75	20.00	20.40	24.00	23.01	21.52	24
20	40.00	39.19	37.01	34.71	33.31 22.42	32.10	30.90	29.70	27.04	20.74	24.02	22.40	21.05	20
20	39.00	37.3Z 25.07	24 52	33.37	20.00	20.94	29.02	20.70	20.70	24.99	23.31	21.90	20.00	20
21	37.29	34.26	34.55	32.04	20.09	29.00	20.75	26.77	25.92	24.24	22.12	21.33	20.07	21
20	22.20	22 69	21 54	20.73	29.07	20.03	27.09	20.77	20.00	23.40	22.00	20.75	19.00	20
20	22.20	21 12	20.00	29.44	20.40	26.30	20.03	23.77	24.10	22.12	21.33	10.56	19.04	20
31	30.58	20.50	28 65	26.15	26.06	20.33	20.07	24.70	23.30	21.33	20.70	18.00	17 07	31
32	28.08	28.00	20.00	25.00	24.87	20.27	23.46	20.70	22.72	20.38	10 31	18 32	17.37	32
33	20.30	26.62	25.84	20.00	23 70	23.04	20.40	21.80	20.65	19 59	18.60	17.69	16.84	33
34	25.89	25.02	24.47	23.15	22.53	21.94	21.36	20.81	19 76	18 78	17.88	17.00	16.25	34
35	20.00	23.75	23.12	21.94	21.38	20.84	20.32	19.81	18.86	17 97	17.00	16.37	15.65	35
36	22.93	22.35	21.79	20.73	20.23	19.75	19.28	18.82	17.96	17.16	16.40	15.70	15.04	36
37	21.49	20.98	20.48	19.54	19.09	18.66	18.24	17.83	17.06	16.33	15.65	15.01	14.41	37
38	20.08	19.63	19.20	18.36	17.96	17.58	17.20	16.84	16.15	15.50	14.89	14.31	13.77	38
39	18.70	18.31	17.93	17.19	16.84	16.50	16.17	15.85	15.24	14.66	14.11	13.60	13.11	39
40	17.35	17.01	16.68	16.04	15.73	15.44	15.15	14.86	14.32	13.81	13.33	12.87	12.43	40
41	16.03	15.73	15.45	14.90	14.63	14.37	14.12	13.88	13.40	12.96	12.53	12.12	11.74	41
42	14.73	14.48	14.24	13.76	13.54	13.31	13.10	12.89	12.48	12.09	11.72	11.37	11.03	42
43	13.46	13.25	13.04	12.64	12.45	12.26	12.08	11.90	11.55	11.22	10.90	10.59	10.30	43
44	12.21	12.04	11.87	11.53	11.37	11.21	11.06	10.91	10.62	10.34	10.07	9.81	9.56	44
45	10.99	10.85	10.71	10.44	10.30	10.17	10.05	9.92	9.68	9.44	9.22	9.00	8.79	45
46	9.79	9.68	9.57	9.35	9.24	9.14	9.03	8.93	8.74	8.55	8.36	8.18	8.01	46
47	8.62	8.53	8.44	8.27	8.19	8.10	8.02	7.94	7.79	7.64	7.49	7.35	7.21	47
48	7.47	7.40	7.33	7.20	7.14	7.08	7.01	6.95	6.83	6.72	6.60	6.49	6.39	48
49	6.34	6.29	6.24	6.15	6.10	6.05	6.01	5.96	5.88	5.79	5.71	5.62	5.54	49
50	5.23	5.20	5.17	5.10	5.07	5.04	5.00	4.97	4.91	4.85	4.79	4.74	4.68	50
51	4.15	4.13	4.10	4.06	4.04	4.02	4.00	3.98	3.94	3.90	3.87	3.83	3.79	51
52	3.08	3.07	3.06	3.03	3.02	3.01	3.00	2.99	2.97	2.95	2.92	2.90	2.88	52
53	2.04	2.03	2.03	2.02	2.01	2.00	2.00	1.99	1.98	1.98	1.97	1.96	1.95	53
54	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	54
Table 7 Multipliers for loss of earnings to pension age 60 (males)

Age at date of	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected	mortality fr	om the 201	8-based	population	n projectio	ons			Age at date of
liidi	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	unai
16	69.56	65.29	61.36	54.38	51.29	48.43	45.78	43.32	38.93	35.14	31.86	29.01	26.53	16
17	67.17	63.15	59.44	52.84	49.90	47.18	44.66	42.32	38.12	34.49	31.33	28.58	26.18	17
18	64.83	61.05	57.55	51.31	48.53	45.95	43.55	41.32	37.31	33.83	30.80	28.15	25.82	18
19	62.54	58.99	55.70	49.81	47.17	44.72	42.44	40.32	36.49	33.16	30.25	27.70	25.46	19
20	60.30	56.97	53.87	48.32	45.82	43.50	41.34	39.32	35.68	32.49	29.70	27.25	25.09	20
21	58.11	54.98	52.07	46.84	44.49	42.29	40.24	38.33	34.86	31.82	29.14	26.79	24.70	21
22	55.96	53.04	50.31	45.38	43.16	41.09	39.15	37.33	34.03	31.14	28.58	26.32	24.31	22
23	53.86	51.12	48.56	43.94	41.85	39.89	38.06	36.34	33.21	30.45	28.00	25.84	23.91	23
24	51.80	49.24	46.85	42.51	40.54	38.70	36.97	35.34	32.38	29.75	27.42	25.35	23.50	24
25	49.78	47.40	45.16	41.10	39.25	37.51	35.88	34.35	31.54	29.05	26.83	24.85	23.08	25
26	47.80	45.58	43.50	39.70	37.97	36.34	34.80	33.35	30.70	28.34	26.23	24.35	22.65	26
27	45.86	43.80	41.86	38.31	36.69	35.16	33.72	32.30	29.86	27.63	25.62	23.83	22.21	27
28	43.90	42.05	40.25	36.94	35.43	34.00	32.00	31.37	29.01	26.90	25.01	23.30	21.70	28
29	42.10	40.33	30.00	30.09	34.10	32.04	31.37	30.30	20.17	20.10	24.30	22.11	21.30	29
30	40.20 20 E0	30.00 26.00	37.10	34.20	32.93 24 70	31.09	20.01	29.39	27.31	23.44	23.73	22.22	20.03	30
22	36.30	25.27	24.05	32.92	20.49	20.04	29.44	20.40	20.40	24.70	23.11	21.00	20.33	22
32	35.05	33.57	34.03	30.32	20.40	29.41	20.30	26.42	23.00	23.95	22.40	20.52	19.00	32
34	33.00	32 21	31 10	20.02	29.27	20.20	26.28	20.42	24.74	23.20	21.00	10.02	18.83	34
35	31 74	30.68	29.66	23.03	26.88	26.04	25.20	24.45	23.07	22.44	20.45	10.33	18.30	35
36	30.13	20.00	28.00	26.51	25.00	20.04	24 18	23.47	22.00	20.90	10.77	18.72	17 76	36
37	28 56	27.69	26.85	25.27	24 53	23.82	23 14	22.47	21.15	20.00	19.77	18 10	17.70	37
38	27.03	26.24	25.48	24.05	23.37	22 73	22.11	21.51	20.38	19.34	18.37	17 47	16.64	38
39	25.52	24.81	24.13	22.83	22.23	21.64	21.07	20.53	19.50	18.54	17.66	16.83	16.06	39
40	24.05	23.41	22.80	21.64	21.09	20.56	20.05	19.55	18.62	17.75	16.93	16.17	15.47	40
41	22.61	22.04	21.49	20.45	19.96	19.48	19.02	18.58	17.73	16.94	16.20	15.51	14.86	41
42	21.19	20.69	20.20	19.28	18.84	18.41	18.00	17.60	16.84	16.13	15.46	14.83	14.24	42
43	19.81	19.37	18.94	18.12	17.73	17.35	16.98	16.63	15.95	15.31	14.71	14.14	13.60	43
44	18.46	18.07	17.69	16.97	16.63	16.29	15.97	15.66	15.05	14.48	13.94	13.44	12.96	44
45	17.13	16.79	16.46	15.84	15.54	15.24	14.96	14.68	14.15	13.65	13.17	12.72	12.29	45
46	15.83	15.54	15.26	14.71	14.45	14.20	13.95	13.71	13.25	12.81	12.39	11.99	11.61	46
47	14.55	14.31	14.07	13.60	13.38	13.16	12.95	12.74	12.34	11.95	11.59	11.24	10.91	47
48	13.30	13.09	12.89	12.50	12.31	12.12	11.94	11.77	11.42	11.10	10.78	10.48	10.19	48
49	12.08	11.90	11.74	11.41	11.25	11.09	10.94	10.79	10.50	10.23	9.96	9.71	9.46	49
50	10.88	10.73	10.60	10.33	10.20	10.07	9.94	9.82	9.58	9.35	9.13	8.92	8.71	50
51	9.70	9.58	9.47	9.26	9.15	9.05	8.95	8.85	8.65	8.46	8.28	8.11	7.94	51
52	8.54	8.45	8.36	8.19	8.11	8.03	7.95	7.87	7.72	7.57	7.42	7.28	7.15	52
53	7.40	7.34	7.27	7.14	7.08	7.02	6.96	6.90	6.78	6.66	6.55	6.44	6.34	53
54	6.29	6.24	6.19	6.10	6.05	6.01	5.96	5.92	5.83	5.75	5.66	5.58	5.50	54
55	5.20	5.16	5.13	5.06	5.03	5.00	4.97	4.94	4.88	4.82	4.76	4.70	4.65	55
56	4.12	4.10	4.08	4.04	4.02	4.00	3.98	3.96	3.92	3.88	3.84	3.81	3.77	56
57	3.07	3.05	3.04	3.02	3.01	3.00	2.99	2.97	2.95	2.93	2.91	2.89	2.87	57
58	2.03	2.02	2.02	2.01	2.00	2.00	1.99	1.99	1.98	1.97	1.96	1.95	1.94	58
59	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98	59

Table 8 Multipliers for loss of earnings to pension age 60 (females)

Age at date of trial		Multipli	er calculat	ed with allo	wance for	projected and rate	mortality fr	om the 20 of)18-based	l populati	on project	ions		Age at date of trial
that	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	tital
16	70.09	65.78	61.81	54.76	51.63	48.74	46.07	43.59	39.16	35.34	32.03	29.16	26.65	16
17	67.69	63.63	59.89	53.22	50.25	47.50	44.95	42.59	38.35	34.69	31.50	28.73	26.31	17
18	65.35	61.53	57.99	51.69	48.88	46.27	43.84	41.59	37.54	34.03	30.97	28.30	25.95	18
19	63.05	59.46	56.13	50.18	47.52	45.04	42.74	40.59	36.73	33.37	30.43	27.85	25.59	19
20	60.80	57.43	54.30	48.68	46.16	43.82	41.63	39.59	35.91	32.70	29.88	27.40	25.22	20
21	58.60	55.44	52.49	47.20	44.82	42.60	40.53	38.60	35.09	32.02	29.32	26.94	24.84	21
22	56.44	53.48	50.72	45.74	43.49	41.40	39.43	37.60	34.27	31.34	28.76	26.47	24.45	22
23	54.32	51.55	48.96	44.29	42.17	40.19	38.34	36.60	33.44	30.65	28.18	26.00	24.05	23
24	52.25	49.66	47.24	42.85	40.86	39.00	37.25	35.60	32.60	29.95	27.60	25.51	23.64	24
25	50.21	47.80	45.54	41.43	39.56	37.81	36.16	34.60	31.77	29.25	27.01	25.01	23.22	25
26	48.22	45.98	43.87	40.02	38.27	36.62	35.07	33.61	30.93	28.54	26.41	24.50	22.79	26
27	46.27	44.18	42.22	38.63	36.99	35.45	33.99	32.61	30.08	27.82	25.80	23.99	22.35	27
28	44.36	42.42	40.60	37.25	35.72	34.27	32.91	31.61	29.23	27.10	25.18	23.46	21.90	28
29	42.49	40.70	39.00	35.89	34.46	33.11	31.83	30.62	28.38	26.37	24.56	22.92	21.44	29
30	40.65	39.00	37.43	34.54	33.21	31.95	30.76	29.62	27.53	25.63	23.92	22.38	20.97	30
31	38.86	37.33	35.89	33.21	31.98	30.80	29.69	28.63	26.67	24.89	23.28	21.82	20.49	31
32	37.10	35.70	34.30	31.89	30.75	29.66	28.62	27.64	25.81	24.14	22.03	21.25	19.99	32
33	35.38	34.09	32.80	30.59	29.53	28.52	27.50	20.00	24.94	23.39	21.97	20.67	19.49	33
25	33.09	32.31	20.04	29.30	20.32	27.39	20.00	23.03	24.07	22.02	21.30	20.00	10.97	25
30 26	32.04	30.90	29.94	20.02 26.75	27.12	20.27	20.40	24.00	23.20	21.00	20.02	19.40	10.44	30 26
30	20.42	29.44	20.01	20.75	23.93	20.10	24.39	23.07	22.32	21.07	19.93	10.07	17.09	27
38	20.04	26.48	27.10	23.30	24.75	24.04	23.33	22.00	21.44	20.29	19.23	17.61	16 77	38
30	27.20	20.40	24.35	24.27	23.30	22.33	21.30	20.71	19.67	18.50	17.80	16.96	16.18	30
40	20.70	23.04	24.33	23.04	22.42	21.03	20.22	10.72	18.78	17.80	17.00	16.30	15 50	40
40	22.81	20.00	21.68	20.63	20.13	19.65	19 19	18 74	17.88	17.03	16 33	15.63	14 97	40
42	21.38	20.88	20.38	19.45	19.00	18.57	18.15	17 75	16.98	16.26	15.58	14.95	14.35	42
43	19.98	19.54	19.10	18 27	17.88	17.50	17.12	16 76	16.08	15 43	14 82	14 25	13 71	43
44	18.61	18.22	17.84	17.11	16.76	16.43	16.10	15.78	15.17	14.59	14.05	13.54	13.05	44
45	17.27	16.93	16.60	15.96	15.66	15.36	15.08	14.80	14.26	13.75	13.27	12.81	12.38	45
46	15.95	15.66	15.37	14.82	14.56	14.30	14.05	13.81	13.34	12.90	12.47	12.07	11.69	46
47	14.66	14.41	14.17	13.70	13.47	13.25	13.04	12.83	12.42	12.04	11.67	11.32	10.98	47
48	13.40	13.19	12.98	12.58	12.39	12.21	12.02	11.84	11.50	11.17	10.85	10.55	10.26	48
49	12.16	11.98	11.81	11.48	11.32	11.16	11.01	10.86	10.57	10.29	10.02	9.77	9.52	49
50	10.94	10.80	10.66	10.39	10.26	10.13	10.00	9.88	9.64	9.41	9.18	8.97	8.76	50
51	9.75	9.64	9.53	9.31	9.20	9.10	9.00	8.90	8.70	8.51	8.33	8.15	7.98	51
52	8.58	8.50	8.41	8.24	8.15	8.07	7.99	7.91	7.76	7.61	7.46	7.32	7.18	52
53	7.44	7.37	7.31	7.18	7.11	7.05	6.99	6.93	6.81	6.69	6.58	6.47	6.37	53
54	6.32	6.27	6.22	6.13	6.08	6.03	5.99	5.94	5.86	5.77	5.69	5.61	5.53	54
55	5.22	5.18	5.15	5.08	5.05	5.02	4.99	4.96	4.90	4.84	4.78	4.72	4.67	55
56	4.14	4.11	4.09	4.05	4.03	4.01	3.99	3.97	3.93	3.89	3.86	3.82	3.78	56
57	3.08	3.06	3.05	3.03	3.02	3.01	2.99	2.98	2.96	2.94	2.92	2.90	2.88	57
58	2.03	2.03	2.02	2.01	2.01	2.00	2.00	1.99	1.98	1.97	1.96	1.95	1.94	58
59	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	59

Table 9 Multipliers for loss of earnings to pension age 65 (males)

Age at	Multiplie	er calculate	ed with allo	wance for	projected i	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at
date of	and rate	e of return	of											date of
trial	0.000/	4 7 5 6 /	4 500/	4 000/		0 500/		0.000/	0 500/	4 0 0 0 1	4 500/	0.000/	0 500/	trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
16	81.53	75.93	70.81	61.85	57.93	54.33	51.03	48.00	42.64	38.09	34.21	30.88	28.02	16
17	78.89	73.59	68.74	60.23	56.49	53.06	49.90	46.99	41.85	37.46	33.71	30.48	27.70	17
18	76.31	71.30	66.71	58.62	55.06	51.79	48.77	45.99	41.05	36.83	33.21	30.08	27.38	18
19	73.79	69.06	64.71	57.04	53.65	50.53	47.65	44.99	40.25	36.19	32.70	29.68	27.05	19
20	71.32	66.85	62.74	55.47	52.25	49.28	46.53	43.99	39.45	35.55	32.18	29.26	26.72	20
21	68.90	64.69	60.81	53.92	50.86	48.03	45.42	42.99	38.65	34.90	31.66	28.84	26.38	21
22	66.53	62.57	58.91	52.39	49.49	46.80	44.31	41.99	37.84	34.25	31.13	28.41	26.03	22
23	64.21	60.48	57.03	50.87	48.12	45.57	43.20	41.00	37.03	33.59	30.59	27.97	25.67	23
24	61.94	58.43	55.18	49.37	46.77	44.35	42.10	40.00	36.22	32.93	30.05	27.53	25.31	24
25	59.71	56.42	53.37	47.88	45.42	43.13	41.00	39.00	35.40	32.26	29.50	27.07	24.93	25
26	57.53	54.45	51.58	46.41	44.09	41.92	39.90	38.01	34.58	31.58	28.94	26.61	24.55	26
27	55.39	52.51	49.81	44.96	42.77	40.72	38.80	37.01	33.76	30.89	28.37	26.13	24.15	27
28	53.30	50.60	48.08	43.52	41.46	39.53	37.71	36.02	32.93	30.20	27.79	25.65	23.75	28
29	51.25	48.73	46.37	42.10	40.16	38.34	36.63	35.02	32.10	29.51	27.21	25.16	23.34	29
30	49.25	46.90	44.70	40.69	38.87	37.16	35.55	34.03	31.26	28.81	26.62	24.66	22.91	30
31	47.28	45.10	43.04	39.30	37.59	35.98	34.47	33.04	30.43	28.10	26.02	24.15	22.48	31
3Z 22	40.30	43.33	41.42	37.92	30.33	34.62	33.40	32.05	29.39	27.30	20.41	23.04	22.04	3Z 22
33 24	43.40	20.00	39.0Z	30.00	30.07	33.00 22.51	32.33 21.26	31.07	20.70	20.00	24.79	23.11	21.09	33 24
25	20.02	20.09	26 70	22 00	22 50	21.27	20.20	20.00	27.90	25.94	24.17	22.07	21.13	25
30	39.03	30.22	25 19	33.09	32.39	20.22	20.20	29.10	27.00	20.21	23.04	22.03	20.00	30
27	36.34	24.00	33.10	32.57	20.16	20.23	29.13	20.11	20.20	24.47	22.90	21.47	10.69	30
38	34 65	33 10	33.00	20.00	28.06	29.10	20.09	26.16	20.00	22.73	22.23	20.91	10.00	38
30	33.00	31.85	30.76	23.33	20.30	26.87	26.00	25.10	24.43	22.30	20.03	10.55	18.66	30
40	31 38	30.33	20.33	20.72	26.60	25.76	24.07	24.20	20.04	21 /7	20.00	10.16	18 1/	40
40	20.70	28.84	23.33	26.23	20.00	23.70	24.57	24.20	22.70	20.70	19 58	18.55	17 60	40
42	28.24	20.04	26 55	25.00	23.43	23.58	22.00	22.20	21.01	19 93	18.89	17 94	17.00	42
43	26.73	25.95	25.20	23.79	23.13	22 49	21.88	21 29	20.18	19 15	18 20	17.31	16 49	43
44	25.24	24.54	23.87	22.59	21.99	21.42	20.86	20.32	19.31	18.37	17.49	16.67	15.91	44
45	23.79	23.16	22.55	21.41	20.87	20.35	19.84	19.36	18.43	17.58	16.77	16.03	15.33	45
46	22.36	21.80	21.26	20.24	19.75	19.28	18.83	18.39	17.56	16.78	16.05	15.37	14.73	46
47	20.96	20.47	19.99	19.08	18.64	18.22	17.82	17.43	16.68	15.97	15.31	14.69	14.11	47
48	19.60	19.16	18.74	17.93	17.55	17.17	16.81	16.46	15.79	15.16	14.57	14.01	13.48	48
49	18.26	17.87	17.50	16.80	16.46	16.13	15.81	15.50	14.90	14.34	13.81	13.31	12.84	49
50	16.94	16.61	16.29	15.67	15.37	15.09	14.81	14.53	14.01	13.51	13.04	12.60	12.18	50
51	15.66	15.37	15.09	14.56	14.30	14.05	13.81	13.57	13.11	12.68	12.27	11.87	11.50	51
52	14.40	14.15	13.91	13.46	13.24	13.02	12.81	12.61	12.21	11.84	11.48	11.13	10.81	52
53	13.16	12.95	12.75	12.37	12.18	12.00	11.82	11.64	11.31	10.98	10.68	10.38	10.10	53
54	11.95	11.78	11.61	11.29	11.13	10.98	10.83	10.68	10.40	10.12	9.86	9.61	9.37	54
55	10.76	10.62	10.48	10.22	10.09	9.96	9.84	9.72	9.48	9.26	9.04	8.83	8.62	55
56	9.60	9.48	9.37	9.16	9.06	8.96	8.86	8.76	8.57	8.38	8.20	8.03	7.86	56
57	8.45	8.37	8.28	8.11	8.03	7.95	7.87	7.79	7.64	7.50	7.35	7.21	7.08	57
58	7.33	7.27	7.20	7.08	7.01	6.95	6.89	6.83	6.72	6.60	6.49	6.38	6.28	58
59	6.24	6.19	6.14	6.05	6.00	5.96	5.91	5.87	5.78	5.70	5.62	5.54	5.46	59
60	5.16	5.12	5.09	5.03	4.99	4.96	4.93	4.90	4.84	4.78	4.73	4.67	4.61	60
61	4.10	4.07	4.05	4.01	3.99	3.97	3.95	3.93	3.89	3.86	3.82	3.78	3.75	61
62	3.05	3.04	3.03	3.00	2.99	2.98	2.97	2.96	2.94	2.92	2.89	2.87	2.85	62
63	2.02	2.02	2.01	2.00	2.00	1.99	1.99	1.98	1.97	1.96	1.95	1.94	1.93	63
64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.98	64

Table 10 Multipliers for loss of earnings to pension age 65 (females)

Age at	Multiplie	er calculate	ed with allo	wance for	projected i	mortality fro	om the 201	8-based	population	n projectio	ons			Age at
date of	and rate	e of return	of											date of
trial	0.000/	4 7 5 6 (4 500/	4 000/		0 500/		0.000/	0 500/	4 0 0 0 4	4 500/	0.000/	0 500/	trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
16	82.35	76.67	71.48	62.41	58.43	54.79	51.45	48.38	42.96	38.36	34.43	31.07	28.17	16
17	79.71	74.33	69.41	60.78	57.00	53.52	50.32	47.38	42.17	37.73	33.94	30.68	27.87	17
18	77.12	72.03	67.38	59.18	55.57	52.25	49.20	46.38	41.38	37.11	33.44	30.28	27.55	18
19	74.58	69.78	65.37	57.59	54.16	50.99	48.07	45.38	40.58	36.47	32.93	29.88	27.23	19
20	72.10	67.56	63.39	56.02	52.75	49.74	46.95	44.38	39.78	35.83	32.42	29.47	26.90	20
21	69.66	65.39	61.45	54.46	51.36	48.49	45.84	43.38	38.98	35.19	31.90	29.05	26.56	21
22	67.28	63.25	59.53	52.92	49.98	47.25	44.72	42.38	38.17	34.53	31.37	28.62	26.21	22
23	64.94	61.15	57.65	51.40	48.61	46.02	43.61	41.38	37.36	33.88	30.84	28.18	25.86	23
24	62.65	59.09	55.79	49.89	47.25	44.79	42.51	40.38	36.55	33.21	30.29	27.74	25.49	24
25	60.40	57.06	53.96	48.39	45.90	43.57	41.40	39.38	35.73	32.54	29.74	27.28	25.12	25
26	58.20	55.07	52.16	46.91	44.56	42.36	40.30	38.38	34.91	31.86	29.18	26.82	24.73	26
27	56.05	53.12	50.38	45.45	43.23	41.15	39.20	37.38	34.08	31.18	28.62	26.35	24.34	27
28	53.94	51.20	48.64	44.00	41.91	39.95	38.11	36.39	33.25	30.49	28.04	25.87	23.94	28
29	51.88	49.31	46.92	42.57	40.60	38.75	37.02	35.39	32.42	29.79	27.46	25.38	23.53	29
30	49.85	47.47	45.23	41.16	39.31	37.57	35.93	34.39	31.58	29.09	26.86	24.88	23.11	30
31	47.87	45.65	43.56	39.76	38.02	36.39	34.85	33.40	30.74	28.38	26.26	24.37	22.68	31
32	45.93	43.87	41.92	38.37	30.75	35.21	33.77	32.41	29.90	27.00	25.00	23.80	22.24	32
33	44.03	42.12	40.31	37.00	35.48	34.05	32.09	31.41	29.05	26.94	25.04	23.33	21.79	33
34	42.17	40.40	30.72	35.64	34.23	32.09	31.02	30.42	20.21	20.21	24.42	22.79	21.33	34
30	40.35	30.71	37.10	34.30	32.90 34 75	31.74	30.33	29.43	27.30	20.40	23.70	22.20	20.00	30
30 27	30.30	37.00	33.0Z	32.97	31.75	30.59	29.49	20.44	20.00	24.74	23.14	21.09	20.37	30 27
31 20	30.0Z	30.43 22.02	34.11	31.00	30.33	29.40	20.43	27.40	23.04	23.99	22.49	21.12	19.00	31
30	22 /2	33.03	32.02	20.30	29.32	20.32	21.31	20.40	24.77	23.23	21.00	20.00	19.37	20
40	21 70	32.20	20.71	29.00	20.12	26.09	20.32	20.40	23.91	22.47	21.10	10.36	10.00	40
40	20.19	20.72	29.71	27.01	20.92	20.00	23.21	24.49	23.04	21.71	10.40	19.50	17.55	40
41	28.61	23.21	26.25	20.00	23.74	24.30	24.22	23.51	22.17	20.33	10.00	18.13	17.70	41
42	27.07	26.27	25.53	24.08	24.57	23.00	23.10	22.52	21.23	10.15	18.40	17 50	16.66	42
43	25.56	20.27	23.31	24.00	22.41	22.70	21 10	20.56	10.53	18.50	17.68	16.85	16.00	43
45	24.08	23.44	22.83	21.66	21 11	20.58	20.07	19 58	18.64	17 77	16.95	16.00	15.00	45
46	22.63	22.14	21 51	21.00	19.98	19 50	19.04	18.60	17 75	16.96	16.00	15 52	14 87	46
40	21 21	20.71	20.22	19 29	18.85	18.00	18.02	17 62	16.86	16.00	15.47	14 84	14.07	40
48	19.82	19.38	18.95	18 13	17.74	17.36	16.99	16.64	15.96	15.32	14 72	14 15	13.61	48
49	18.46	18.07	17.70	16.98	16.63	16.30	15.97	15.66	15.06	14.49	13.95	13.44	12.96	49
50	17.13	16.79	16.46	15.84	15.54	15.24	14.96	14.68	14.15	13.65	13.17	12.72	12.29	50
51	15.82	15.53	15.25	14.71	14.45	14.20	13.95	13.71	13.24	12.80	12.38	11.99	11.61	51
52	14.54	14.30	14.06	13.59	13.37	13.15	12.94	12.73	12.33	11.95	11.59	11.24	10.91	52
53	13.29	13.08	12.88	12.49	12.30	12.12	11.93	11.76	11.42	11.09	10.77	10.48	10.19	53
54	12.07	11.89	11.72	11.40	11.24	11.08	10.93	10.78	10.49	10.22	9.95	9.70	9.45	54
55	10.86	10.72	10.58	10.32	10.19	10.06	9,93	9.81	9.57	9.34	9.12	8.91	8.70	55
56	9.68	9.57	9.46	9.24	9.14	9.04	8.94	8.84	8.64	8.45	8.27	8.10	7.93	56
57	8.53	8.44	8.35	8.18	8.10	8.02	7.94	7.86	7.71	7.56	7.41	7.27	7.14	57
58	7.39	7.33	7.26	7.13	7.07	7.01	6.95	6.89	6.77	6.65	6.54	6.43	6.33	58
59	6.28	6.23	6.19	6.09	6.05	6.00	5.96	5.91	5.82	5.74	5.66	5.58	5.50	59
60	5.19	5.16	5.13	5.06	5.03	5.00	4.97	4.93	4.87	4.81	4.76	4.70	4.64	60
61	4.12	4.10	4.08	4.04	4.02	4.00	3.98	3.96	3.92	3.88	3.84	3.80	3.77	61
62	3.07	3.05	3.04	3.02	3.01	3.00	2.98	2.97	2.95	2.93	2.91	2.89	2.87	62
63	2.03	2.02	2.02	2.01	2.00	2.00	1.99	1.99	1.98	1.97	1.96	1.95	1.94	63
64	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98	64

Table 11 Multipliers for loss of earnings to pension age 68 (males)

Age at date of	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected ı	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of
trial	-2 00%	-1 75%	-1 50%	-1 00%	-0 75%	-0 50%	-0 25%	0.00%	0 50%	1 00%	1 50%	2 00%	2 50%	triai
16	2.0070	82.62	76 70	66 /1	61 0/	57.97	54 15	50.74	11 79	20.75	25 50	21.0070	2.0070	16
10	86 35	80.16	74 53	64 74	60.47	56 57	53.00	10.74 10.74	44.70	39.75	35.00	31.09	28.50	10
18	83.61	77 75	72.41	63.08	59.01	55 28	51.86	48 73	43 20	38.52	34 54	31 13	28.21	18
19	80.93	75.39	70.32	61.45	57.56	54.00	50.73	47.72	42.41	37.90	34.05	30.74	27.90	19
20	78.31	73.07	68.26	59.83	56.13	52.73	49.60	46.72	41.62	37.27	33.55	30.35	27.59	20
21	75.75	70.79	66.24	58.24	54.71	51.47	48.48	45.72	40.83	36.64	33.05	29.95	27.27	21
22	73.24	68.56	64.25	56.66	53.30	50.21	47.36	44.72	40.03	36.00	32.54	29.54	26.94	22
23	70.78	66.36	62.29	55.09	51.91	48.96	46.24	43.72	39.23	35.36	32.02	29.12	26.60	23
24	68.37	64.21	60.37	53.55	50.52	47.72	45.13	42.72	38.43	34.71	31.50	28.70	26.26	24
25	66.01	62.09	58.47	52.02	49.15	46.49	44.02	41.73	37.62	34.06	30.97	28.27	25.91	25
26	63.70	60.01	56.60	50.50	47.78	45.26	42.91	40.73	36.81	33.40	30.43	27.83	25.55	26
27	61.43	57.97	54.75	49.00	46.43	44.03	41.81	39.73	35.99	32.73	29.88	27.38	25.18	27
28	59.21	55.96	52.94	47.52	45.09	42.82	40.71	38.73	35.17	32.06	29.32	26.92	24.80	28
29	57.04	54.00	51.16	46.06	43.76	41.61	39.61	37.74	34.35	31.38	28.76	26.45	24.41	29
30	54.92	52.07	49.41	44.61	42.44	40.42	38.52	36.75	33.53	30.69	28.19	25.98	24.02	30
31	52.84	50.17	47.68	43.17	41.13	39.22	37.43	35.75	32.70	30.00	27.62	25.50	23.61	31
32	50.80	48.31	45.98	41.76	39.84	38.04	36.35	34.76	31.87	29.31	27.03	25.01	23.20	32
33	48.81	46.49	44.31	40.36	38.56	36.86	35.27	33.78	31.04	28.61	26.44	24.51	22.78	33
34	46.86	44.70	42.67	38.97	37.29	35.70	34.20	32.79	30.20	27.90	25.84	24.00	22.34	34
35	44.95	42.94	41.06	37.60	36.03	34.54	33.13	31.80	29.37	27.19	25.23	23.48	21.90	35
36	43.08	41.22	39.47	36.25	34.78	33.38	32.07	30.82	28.53	26.47	24.62	22.95	21.45	36
37	41.25	39.53	37.90	34.91	33.54	32.24	31.01	29.84	27.69	25.75	24.00	22.42	20.99	37
38	39.46	37.87	36.37	33.59	32.32	31.10	29.95	28.86	26.84	25.02	23.37	21.87	20.52	38
39	37.71	30.23	34.00	32.29	20.00	29.97	20.90	27.00	20.00	24.20	22.73	21.32	20.04	39
40	30.00	34.05	33.37	31.00	29.90	28.85	27.80	26.91	25.15	23.55	22.09	20.76	19.54	40
41	34.33	33.09	20.40	29.13	20./1	21.14	20.02	20.94	24.30	22.60	21.44	20.19	19.04	41
42	32.09	31.00	30.40 20.07	20.47	27.00	20.04	23.70	24.97	23.44	22.00	20.70	19.00	10.00	42
43	29.51	28 57	23.07	25.00	25.30	20.04	24.75	24.00	22.53	20.53	10.11	18.01	17.47	43
45	23.51	20.37	26.31	23.33	24.06	24.43	23.73	22.04	20.87	10.55	18.75	17.80	16.92	44
46	26.47	25.10	20.01	23.58	27.00	22.07	21 69	22.07	20.07	18.99	18.05	17.00	16.32	46
47	25.00	24.31	23.64	22.39	21.79	21 22	20.67	20.15	19 14	18 21	17.35	16.54	15 79	40
48	23.56	22.94	22.34	21.21	20.68	20.16	19.66	19.18	18.28	17.43	16.64	15.90	15.21	48
49	22.14	21.59	21.06	20.05	19.57	19.11	18.66	18.23	17.40	16.63	15.91	15.24	14.61	49
50	20.76	20.27	19.80	18.90	18.47	18.05	17.65	17.27	16.53	15.83	15.18	14.57	13.99	50
51	19.40	18.97	18.55	17.76	17.38	17.01	16.65	16.31	15.65	15.03	14.44	13.89	13.37	51
52	18.07	17.70	17.33	16.63	16.30	15.97	15.66	15.35	14.76	14.21	13.69	13.19	12.72	52
53	16.77	16.44	16.13	15.52	15.22	14.94	14.66	14.39	13.88	13.39	12.92	12.49	12.07	53
54	15.50	15.21	14.94	14.41	14.16	13.91	13.67	13.44	12.99	12.56	12.15	11.76	11.40	54
55	14.25	14.01	13.77	13.32	13.11	12.89	12.69	12.48	12.10	11.72	11.37	11.03	10.71	55
56	13.03	12.82	12.63	12.24	12.06	11.88	11.70	11.53	11.20	10.88	10.58	10.28	10.00	56
57	11.83	11.66	11.50	11.18	11.02	10.87	10.73	10.58	10.30	10.03	9.77	9.52	9.28	57
58	10.66	10.52	10.38	10.12	10.00	9.87	9.75	9.63	9.40	9.17	8.96	8.75	8.55	58
59	9.51	9.40	9.29	9.08	8.98	8.88	8.78	8.68	8.49	8.31	8.13	7.96	7.80	59
60	8.38	8.30	8.21	8.05	7.96	7.89	7.81	7.73	7.58	7.43	7.29	7.16	7.02	60
61	7.28	7.21	7.15	7.02	6.96	6.90	6.84	6.78	6.66	6.55	6.44	6.34	6.23	61
62	6.19	6.14	6.10	6.00	5.96	5.91	5.87	5.83	5.74	5.66	5.58	5.50	5.42	62
63	5.12	5.09	5.06	5.00	4.96	4.93	4.90	4.87	4.81	4.75	4.70	4.64	4.59	63
64	4.07	4.05	4.03	3.99	3.97	3.95	3.93	3.91	3.87	3.84	3.80	3.76	3.73	64
65	3.04	3.03	3.01	2.99	2.98	2.97	2.96	2.95	2.93	2.90	2.88	2.86	2.84	65
60	2.02	2.01	2.01	1.99	1.99	1.98	1.98	1.98	1.97	1.96	1.95	1.94	1.93	66
٥/	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.98	0.98	/ە

Table 12 Multipliers for loss of earnings to pension age 68 (females)

Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected ı	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
16	90.21	83.58	77.56	67.11	62.58	58.44	54.66	51.21	45.16	40.07	35.76	32.11	28.99	16
17	87.40	81.11	75.39	65.44	61.10	57.15	53.53	50.21	44.38	39.46	35.29	31.74	28.70	17
18	84.65	78.69	73.26	63.78	59.65	55.86	52.39	49.21	43.60	38.85	34.81	31.36	28.40	18
19	81.96	76.32	71.17	62.15	58.20	54.58	51.26	48.20	42.81	38.23	34.33	30.98	28.10	19
20	79.32	73.99	69.10	60.52	56.76	53.31	50.13	47.20	42.02	37.61	33.84	30.59	27.79	20
21	76.74	71.69	67.07	58.92	55.34	52.04	49.00	46.20	41.23	36.98	33.34	30.19	27.48	21
22	74.21	69.44	65.06	57.33	53.92	50.78	47.88	45.20	40.43	36.35	32.83	29.79	27.15	22
23	71.73	67.23	63.09	55.76	52.52	49.53	46.76	44.20	39.63	35.71	32.31	29.37	26.82	23
24	69.30	65.06	61.15	54.21	51.13	48.28	45.64	43.20	38.83	35.06	31.79	28.95	26.48	24
25	66.92	62.92	59.23	52.67	49.75	47.04	44.53	42.20	38.02	34.40	31.26	28.52	26.13	25
26	64.59	60.83	57.35	51.14	48.38	45.81	43.42	41.20	37.21	33.74	30.72	28.08	25.77	26
27	62.30	58.77	55.50	49.64	47.02	44.58	42.31	40.20	36.39	33.08	30.18	27.64	25.40	27
28	60.07	56.75	53.67	48.15	45.67	43.36	41.21	39.20	35.57	32.40	29.63	27.18	25.03	28
29	57.87	54.77	51.87	46.67	44.33	42.15	40.11	38.20	34.75	31.73	29.06	26.72	24.64	29
30	55.73	52.82	50.11	45.21	43.00	40.94	39.01	37.20	33.93	31.04	28.50	26.25	24.25	30
31	53.63	50.91	48.37	43.77	41.69	39.74	37.92	36.21	33.10	30.35	27.92	25.77	23.85	31
32	51.57	49.03	46.65	42.34	40.39	38.55	36.83	35.21	32.26	29.65	27.34	25.28	23.44	32
33	49.56	47.19	44.97	40.93	39.09	37.37	35.75	34.22	31.43	28.95	26.75	24.78	23.02	33
34	47.58	45.38	43.31	39.53	37.81	36.19	34.67	33.23	30.59	28.24	20.15	24.27	22.59	34
30	43.05	43.00	41.00	36.10	25 29	22.96	22 52	32.24	29.75	27.00	20.04	23.75	22.10	30
27	43.70	41.00	29.40	30.79	24 02	33.00	32.32	20.26	20.91	20.01	24.92	23.23	21.09	27
38	41.91	38 /7	36.49	37 10	39.03	31 55	30.38	20.20	20.00	20.00	24.30	22.09	21.23	38
39	38 32	36.82	35 40	32 78	31 56	30.41	29.32	28.28	26.35	20.00	23.07	21 59	20.70	39
40	36 58	35.20	33.89	31 47	30.35	29.28	28.26	27 29	25 50	23.86	22.37	21.00	19.78	40
41	34.88	33.61	32.41	30.18	29.14	28.15	27.21	26.31	24.64	23.11	21.72	20.44	19.28	41
42	33.21	32.05	30.95	28.90	27.94	27.03	26.16	25.33	23.77	22.35	21.05	19.86	18.76	42
43	31.58	30.52	29.51	27.63	26.76	25.92	25.11	24.34	22.90	21.58	20.37	19.26	18.23	43
44	29.98	29.02	28.10	26.38	25.58	24.81	24.07	23.36	22.03	20.81	19.69	18.65	17.69	44
45	28.41	27.54	26.71	25.15	24.41	23.71	23.03	22.38	21.16	20.03	18.99	18.03	17.14	45
46	26.88	26.09	25.34	23.92	23.26	22.61	22.00	21.40	20.28	19.25	18.29	17.40	16.57	46
47	25.38	24.67	23.99	22.71	22.11	21.53	20.97	20.43	19.41	18.46	17.57	16.75	15.99	47
48	23.91	23.28	22.67	21.52	20.97	20.45	19.94	19.45	18.52	17.66	16.85	16.10	15.39	48
49	22.47	21.91	21.36	20.33	19.84	19.37	18.92	18.47	17.64	16.85	16.12	15.43	14.79	49
50	21.06	20.56	20.08	19.16	18.73	18.30	17.90	17.50	16.75	16.04	15.38	14.75	14.17	50
51	19.68	19.24	18.82	18.01	17.62	17.24	16.88	16.53	15.85	15.22	14.62	14.06	13.53	51
52	18.33	17.95	17.57	16.86	16.52	16.19	15.87	15.56	14.96	14.39	13.86	13.36	12.88	52
53	17.01	16.68	16.35	15.73	15.43	15.14	14.86	14.59	14.06	13.56	13.09	12.64	12.22	53
54	15.71	15.43	15.15	14.61	14.35	14.10	13.86	13.62	13.16	12.72	12.31	11.91	11.54	54
55	14.45	14.20	13.96	13.50	13.28	13.07	12.86	12.65	12.25	11.87	11.51	11.1/	10.84	55
56	13.20	13.00	12.80	12.41	12.22	12.04	11.86	11.68	11.34	11.02	10.71	10.41	10.13	56
57	10.99	11.82	11.00	11.33	11.17	10.00	10.80	10.72	10.43	10.16	9.89	9.64	9.40	57
20 50	10.00	10.00	10.52	10.25	10.12	0.00	9.07	9.75	9.51	9.29	9.07	0.00		20 50
<u> </u>	9.03	9.02	9.41	9.19	9.09	0.90	0.00	0.79	0.09	7.52	7 29	0.00	7.09	
61	0.40	0.39 7 20	0.31 7.22	0.14 7 10	7 0/	6 07	6 01	1.02 6.85	674	6 62	6 51	6.40	6 30	61
62	6 25	6 21	6 16	6.07	6.02	5 97	5 02	5 80	5.20	5 71	5.63	5 55	5 47	62
63	5 17	5 14	5 10	5.04	5 01	1 98	4 95	4 92	4 85	4.80	2.03 2.74	4.68	4.63	63
64	4 11	4 08	4.06	4 02	4.00	3.98	3.96	3.94	3.90	3.87	3 83	3 79	3 76	64
65	3.06	3.04	3.03	3.01	3.00	2.99	2.98	2.97	2.94	2.92	2.90	2.88	2.86	65
66	2.02	2.02	2.01	2.00	2.00	1.99	1.99	1.98	1.97	1.96	1.95	1.94	1.94	66
67	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98	67

Table 13 Multipliers for loss of earnings to pension age 70 (males)

Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected i	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
16	94.38	87.20	80.70	69.47	64.62	60.21	56.20	52.54	46.15	40.81	36.32	32.52	29.29	16
17	91.48	84.65	78.47	67.76	63.12	58.90	55.05	51.53	45.37	40.21	35.85	32.15	29.01	17
18	88.63	82.16	76.28	66.07	61.64	57.59	53.90	50.52	44.59	39.60	35.38	31.78	28.72	18
19	85.85	79.71	74.13	64.41	60.17	56.30	52.76	49.51	43.81	38.99	34.90	31.41	28.42	19
20	83.12	77.31	72.01	62.76	58.72	55.01	51.62	48.51	43.02	38.37	34.41	31.03	28.12	20
21	80.46	74.96	69.93	61.13	57.27	53.74	50.49	47.51	42.23	37.75	33.92	30.64	27.81	21
22	77.85	72.65	67.88	59.52	55.84	52.47	49.36	46.51	41.44	37.12	33.42	30.24	27.50	22
23	75.29	70.30 69.15	62.99	57.9Z	54.45 52.02	01.21 40.05	40.24	45.51	40.00 20.85	30.49	32.92	29.04	27.10	23
25	70.34	65.96	61 92	54 78	51.62	49.90	46.00	43 50	39.05	35.00	31.89	29.43	26.51	25
26	67.93	63.80	60.00	53.24	50.24	47.46	44.89	42.50	38.24	34.56	31.36	28.59	26.16	26
27	65.58	61.69	58.10	51.71	48.86	46.23	43.78	41.51	37.43	33.90	30.83	28.15	25.81	27
28	63.27	59.62	56.24	50.20	47.50	45.00	42.67	40.51	36.62	33.24	30.29	27.71	25.44	28
29	61.02	57.59	54.40	48.70	46.15	43.78	41.57	39.51	35.80	32.57	29.74	27.26	25.07	29
30	58.81	55.59	52.60	47.23	44.81	42.57	40.47	38.52	34.98	31.89	29.18	26.80	24.69	30
31	56.65	53.63	50.82	45.76	43.49	41.36	39.38	37.52	34.16	31.21	28.62	26.33	24.30	31
32	54.53	51.71	49.08	44.32	42.17	40.17	38.29	36.53	33.34	30.53	28.05	25.85	23.91	32
33	52.46	49.82	47.36	42.89	40.87	38.98	37.21	35.54	32.51	29.84	27.47	25.37	23.50	33
34	50.44	47.97	45.67	41.48	39.58	37.80	30.13	34.55	31.69	29.15	26.89	24.88	23.09	34
36	46.40	40.10	44.00	40.09	30.30	35.46	33.05	32.57	30.00	20.44 27 74	20.30	24.30	22.00	36
37	44 62	42 63	40.76	37.35	35.78	34.31	32.92	31 60	29.19	27.03	25.09	23.35	21 79	37
38	42.76	40.92	39.18	36.00	34.54	33.16	31.86	30.62	28.35	26.31	24.48	22.83	21.34	38
39	40.94	39.24	37.63	34.67	33.31	32.02	30.80	29.65	27.51	25.59	23.86	22.29	20.88	39
40	39.17	37.59	36.10	33.36	32.09	30.89	29.75	28.67	26.67	24.86	23.23	21.75	20.41	40
41	37.43	35.98	34.60	32.06	30.88	29.77	28.71	27.70	25.83	24.13	22.60	21.20	19.92	41
42	35.73	34.39	33.13	30.78	29.69	28.65	27.67	26.73	24.98	23.40	21.95	20.64	19.43	42
43	34.06	32.84	31.67	29.51	28.51	27.55	26.63	25.76	24.14	22.66	21.30	20.07	18.93	43
44	32.43	31.31	30.25	28.26	27.33	26.45	25.60	24.80	23.29	21.91	20.65	19.49	18.42	44
45	30.84	29.82	28.84	27.02	26.17	25.36	24.58	23.83	22.44	21.16	19.98	18.90	17.90	45
46	29.28	28.35	27.46	25.80	25.02	24.27	23.56	22.87	21.58	20.40	19.30	18.30	17.30	46
47 49	21.10	20.91	20.10	24.59	23.00 22.75	23.20	22.04	21.91	20.73	19.03	17.02	17.09	16.02	47
40	20.20	23.30	24.77	23.39	22.75	22.13	21.55	19 99	19.07	18.00	17.93	16.43	15.20	40
50	23.36	22.75	22.16	21.04	20.51	20.00	19.51	19.04	18.14	17.30	16.52	15.79	15.10	50
51	21.95	21.41	20.88	19.88	19.41	18.95	18.51	18.08	17.27	16.51	15.80	15.13	14.50	51
52	20.58	20.10	19.63	18.74	18.32	17.91	17.51	17.13	16.40	15.71	15.07	14.46	13.89	52
53	19.23	18.81	18.39	17.61	17.23	16.87	16.52	16.18	15.52	14.91	14.33	13.78	13.27	53
54	17.91	17.54	17.18	16.49	16.16	15.84	15.53	15.22	14.64	14.10	13.58	13.09	12.63	54
55	16.62	16.30	15.99	15.38	15.09	14.81	14.54	14.27	13.76	13.28	12.82	12.39	11.97	55
56	15.36	15.08	14.81	14.29	14.04	13.80	13.56	13.33	12.88	12.46	12.06	11.67	11.31	56
57	14.12	13.89	13.66	13.21	13.00	12.79	12.58	12.38	12.00	11.63	11.28	10.94	10.62	57
58 50	12.91	12.72	12.52	12.14	11.90	11.78	11.01	11.44	11.11	10.79	0.70	0.45	9.93	58
<u> </u>	10.57	10.44	10.30	10.05	0.02	0.80	0.68	9.56	0.22	9.95	9.70	9.40	9.22	60
61	9 44	9 33	9.22	9.01	8 91	8.81	8 71	8.62	8 43	8 25	8.07	7 91	7 74	61
62	8.32	8.24	8.15	7.99	7.91	7.83	7.75	7.68	7.53	7.39	7.25	7.11	6.98	62
63	7.23	7.17	7.10	6.98	6.92	6.86	6.80	6.74	6.62	6.51	6.40	6.30	6.20	63
64	6.16	6.11	6.06	5.97	5.93	5.88	5.84	5.79	5.71	5.63	5.55	5.47	5.39	64
65	5.10	5.07	5.03	4.97	4.94	4.91	4.88	4.85	4.79	4.73	4.67	4.62	4.56	65
66	4.06	4.04	4.01	3.97	3.95	3.93	3.92	3.90	3.86	3.82	3.78	3.75	3.71	66
67	3.03	3.02	3.00	2.98	2.97	2.96	2.95	2.94	2.92	2.89	2.87	2.85	2.83	67
68	2.01	2.01	2.00	1.99	1.99	1.98	1.98	1.97	1.96	1.95	1.94	1.93	1.92	68
69	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98	69

Table 14 Multipliers for loss of earnings to pension age 70 (females)

Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected i	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
16	95.65	88.33	81.71	70.29	65.35	60.87	56.79	53.08	46.59	41.17	36.61	32.76	29.49	16
17	92.73	85.78	79.48	68.58	63.86	59.56	55.65	52.07	45.82	40.57	36.15	32.41	29.22	17
18	89.87	83.28	77.29	66.89	62.38	58.26	54.50	51.07	45.04	39.97	35.68	32.04	28.93	18
19	87.07	80.82	75.13	65.22	60.91	56.97	53.37	50.07	44.26	39.37	35.21	31.67	28.64	19
20	84.33	78.40	73.00	63.57	59.45	55.68	52.23	49.06	43.48	38.75	34.73	31.30	28.35	20
21	81.64	76.03	70.90	61.93	58.00	54.40	51.10	48.06	42.69	38.13	34.24	30.91	28.04	21
22	79.01	73.70	68.84	60.31	56.57	53.13	49.97	47.06	41.90	37.51	33.75	30.52	27.73	22
23	76.43	71.41	66.81	58.71	55.14	51.86	48.84	46.05	41.11	36.88	33.25	30.12	27.41	23
24	73.90	69.16	64.81	57.12	53.73	50.60	47.72	45.05	40.31	36.24	32.74	29.71	27.09	24
25	/1.43	66.95	62.84	55.55	52.33	49.35	46.60	44.05	39.51	35.60	32.22	29.30	26.75	25
26	69.00	64.78	60.90 59.00	54.00	50.93	48.10	45.48	43.05	38.70	34.95	31.70	28.87	26.41	26
21	64.30	60.56	00.99 57 11	52.40	49.00	40.00	44.30	42.05	37.09	34.29	31.17	20.44	20.00	21
20	62.02	58 51	55.26	10 /3	40.10	45.05	43.23	41.05	36.26	32.03	30.03	20.00	25.70	20
30	59 79	56.49	53 43	47.94	45.05	43 19	41.05	39.05	35.45	32.07	29.53	27.30	23.00	30
31	57 60	54 52	51.64	46 47	44.15	41.98	39.95	38.05	34 62	31 61	28.97	26.64	24.50	31
32	55.47	52.57	49.88	45.02	42.82	40.77	38.85	37.06	33.80	30.93	28.40	26.16	24.18	32
33	53.37	50.67	48.14	43.58	41.51	39.58	37.76	36.06	32.97	30.24	27.82	25.68	23.78	33
34	51.32	48.80	46.44	42.15	40.21	38.39	36.68	35.07	32.14	29.54	27.24	25.19	23.36	34
35	49.31	46.96	44.75	40.74	38.92	37.21	35.59	34.08	31.30	28.84	26.65	24.69	22.94	35
36	47.34	45.16	43.10	39.35	37.64	36.03	34.51	33.09	30.47	28.13	26.05	24.18	22.51	36
37	45.42	43.39	41.47	37.97	36.37	34.86	33.44	32.10	29.63	27.42	25.44	23.67	22.07	37
38	43.53	41.65	39.87	36.61	35.12	33.70	32.37	31.11	28.78	26.70	24.82	23.14	21.62	38
39	41.69	39.94	38.29	35.26	33.87	32.55	31.30	30.12	27.94	25.97	24.20	22.60	21.15	39
40	39.88	38.27	36.74	33.93	32.63	31.40	30.24	29.13	27.09	25.24	23.57	22.06	20.68	40
41	38.11	36.63	35.22	32.61	31.41	30.27	29.18	28.15	26.23	24.50	22.93	21.50	20.20	41
42	36.38	35.01	33.72	31.31	30.19	29.13	28.13	27.16	25.38	23.76	22.28	20.93	19.70	42
43	34.68	33.43	32.24	30.02	28.99	28.01	27.07	26.18	24.52	23.00	21.62	20.36	19.20	43
44	33.02	31.88	30.78	28.75	27.80	26.89	26.03	25.20	23.66	22.25	20.95	19.77	18.68	44
45	31.40	30.35	29.30	27.49	20.01	25.78	24.98	24.22	22.79	21.48	20.28	19.17	18.15	45
40 47	29.01	20.00	27.94	20.24	20.44	24.00	23.95	23.24	21.92	20.71	19.59	10.00	17.01	40
47	20.23	25.94	20.30	23.01	24.20	23.30	22.91	22.27	21.03	19.95	18.20	17.94	16.49	47
49	25.23	24.53	23.86	22.59	21.99	21 41	20.85	20.32	19.30	18.36	17 49	16.67	15.91	49
50	23.77	23.14	22.54	21.39	20.85	20.33	19.83	19.34	18.42	17.57	16.77	16.02	15.32	50
51	22.34	21.78	21.24	20.22	19.73	19.26	18.81	18.37	17.54	16.76	16.04	15.35	14.71	51
52	20.94	20.44	19.96	19.05	18.62	18.20	17.80	17.40	16.66	15.95	15.30	14.68	14.10	52
53	19.57	19.13	18.71	17.90	17.52	17.15	16.79	16.44	15.77	15.14	14.55	13.99	13.46	53
54	18.22	17.84	17.47	16.77	16.43	16.10	15.78	15.47	14.88	14.32	13.79	13.29	12.82	54
55	16.91	16.58	16.26	15.64	15.35	15.06	14.78	14.51	13.98	13.49	13.02	12.58	12.15	55
56	15.62	15.34	15.06	14.53	14.27	14.02	13.78	13.54	13.09	12.65	12.24	11.85	11.48	56
57	14.36	14.12	13.89	13.43	13.21	13.00	12.79	12.58	12.19	11.81	11.45	11.11	10.79	57
58	13.13	12.93	12.73	12.34	12.16	11.97	11.80	11.62	11.29	10.96	10.65	10.36	10.08	58
59	11.92	11.75	11.59	11.27	11.11	10.96	10.81	10.66	10.38	10.11	9.84	9.59	9.35	59
60	10.74	10.60	10.47	10.20	10.07	9.95	9.82	9.70	9.47	9.24	9.02	8.81	8.61	60
61	9.58	9.47	9.36	9.15	9.04	8.94	8.84	8.74	8.55	8.37	8.19	8.02	7.85	61
62 62	0.44 7 22	0.30 7.26	8.2/ 7.20	8.10 7.07	8.02 7.04	1.94 6.05	00.\ 00 a	1.19	7.63 6.71	1.49	7.34 6.40	1.21	6.07	62 62
03 64	1.33	1.20 6.19	1.2U 6 12	1.07	6.00	0.90 5.05	0.00 5 01	0.03 5 96	0./1 5.79	0.00	0.49 5.61	0.30 5.52	0.21 5 15	03 64
65	5 15	5 12	5.00	5.02	1 00	1 06	1 02	1 00	1.8/	1 78	1 72	1 67	1 61	65
66	1 A A A	J.1∠ 4.07	J.09 ∥ 05	J.02 ⊿ ∩1	3 00	4.90 2 07	3 05	3 03	7.04 3.80	3 85	7.12 3.82	3 72	3.74	66
67	3.05	3.04	3.03	3.00	2 90	2 98	2 97	2.95	2 94	2 91	2 80	2 87	2 85	67
68	2.02	2.02	2.01	2.00	1.99	1.99	1.99	1.98	1.97	1.96	1.95	1.94	1.93	68
69	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98	0.98	69

Table 15 Multipliers for loss of earnings to pension age 75 (males)

Age at date of	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected r	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of
trial	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	trial
16	107.97	98.96	90.89	77.12	71.26	65.97	61.20	56.88	49.43	43.28	38.19	33.94	30.37	16
17	104.77	96.20	88.49	75.33	69.70	64.62	60.02	55.86	48.66	42.70	37.75	33.60	30.11	17
18	101.64	93.48	86.14	73.55	68.16	63.28	58.86	54.85	47.89	42.12	37.30	33.26	29.85	18
19	98.58	90.82	83.82	71.80	66.63	61.95	57.70	53.83	47.12	41.52	36.85	32.91	29.58	19
20	95.58	88.21	81.55	70.07	65.12	60.62	56.54	52.82	46.34	40.93	36.39	32.55	29.30	20
21	92.65	85.65	79.31	68.35	63.62	59.31	55.39	51.81	45.56	40.33	35.92	32.19	29.02	21
22	89.78	83.13	77.11	66.66	62.13	58.01	54.24	50.81	44.78	39.73	35.45	31.83	28.74	22
23	86.96	80.66	74.94	64.98	60.66	56.71	53.10	49.80	44.00	39.11	34.98	31.45	28.44	23
24	84.21	78.24	72.80	63.32	59.19	55.42	51.96	48.79	43.21	38.50	34.49	31.07	28.14	24
25	81.51	75.86	70.70	61.68	57.74	54.13	50.82	47.79	42.42	37.88	34.00	30.68	27.83	25
26	78.87	73.52	68.63	60.06	56.30	52.86	49.69	46.78	41.63	37.25	33.50	30.29	27.52	26
27	76.28	/1.22	66.59	58.45	54.87	51.59	48.56	45.77	40.83	36.61	33.00	29.89	27.20	27
28	73.75	68.97	64.59	50.80	53.40	50.33	47.44	44.77	40.03	35.97	32.49	29.47	20.87	28
29	60.04	64.50	60.69	52.29	52.00	49.07	40.32	43.77	39.23	30.33	21.44	29.00	20.00	29
30	00.04 66.46	62.46	60.00 59.77	52.74	10.07	47.00	45.20	42.77	30.42	34.00	31.44	20.00	20.10	21
32	64 14	60 37	56.89	50.69	49.29	40.39	44.09	41.77	36.80	33.36	30.91	20.20	25.03	32
33	61.87	58 33	55.05	<u>49 19</u>	46 57	43.30	41.88	39.78	35.00	32 70	29.83	27.70	25.47	33
34	59.64	56.32	53.23	47 71	45.23	42.93	40.78	38 78	35.18	32.03	29.27	26.85	20.10	34
35	57.46	54.35	51.45	46.24	43.90	41.72	39.69	37.79	34.36	31.35	28.72	26.39	24.34	35
36	55.33	52.41	49.69	44.80	42.59	40.53	38.60	36.80	33.54	30.67	28.15	25.92	23.95	36
37	53.25	50.52	47.97	43.37	41.29	39.34	37.52	35.82	32.72	29.99	27.58	25.44	23.55	37
38	51.21	48.66	46.28	41.96	40.00	38.17	36.45	34.84	31.90	29.30	27.00	24.96	23.14	38
39	49.22	46.84	44.61	40.56	38.72	37.00	35.38	33.85	31.07	28.61	26.42	24.46	22.72	39
40	47.27	45.06	42.98	39.19	37.46	35.84	34.31	32.88	30.25	27.91	25.83	23.96	22.29	40
41	45.37	43.31	41.37	37.83	36.21	34.69	33.26	31.90	29.42	27.21	25.23	23.45	21.86	41
42	43.51	41.59	39.79	36.49	34.98	33.55	32.20	30.93	28.59	26.50	24.62	22.94	21.42	42
43	41.68	39.91	38.23	35.16	33.75	32.42	31.16	29.96	27.76	25.79	24.01	22.41	20.96	43
44	39.90	38.26	36.71	33.85	32.54	31.29	30.11	29.00	26.93	25.07	23.40	21.88	20.50	44
45	38.16	36.64	35.21	32.56	31.34	30.18	29.08	28.03	26.10	24.35	22.77	21.34	20.03	45
46	36.45	35.06	33.73	31.28	30.15	29.07	28.05	27.07	25.26	23.63	22.14	20.78	19.55	46
47	34.78	33.50	32.28	30.02	28.97	27.97	27.02	26.11	24.43	22.89	21.50	20.22	19.06	47
48	33.15	31.97	30.85	28.77	27.80	26.88	26.00	25.16	23.59	22.16	20.85	19.65	18.56	48
49	31.55	30.47	29.40	27.04	20.04	23.79	24.90	24.20	22.75	21.41	20.19	19.07	17.50	49
50 51	29.99	29.01	20.07	20.32	20.00	24.71	23.90	23.20	21.90	20.07	19.00	10.40	16.00	50 51
52	26.45	26.15	25.71	23.11	24.30	22.04	22.95	22.29	21.03	19.91	18.18	17.09	16.99	52
53	25.30	20.10	24.06	20.02	22.24	21 52	20.95	20.40	19 35	18 39	17 49	16.66	15.88	53
54	24.06	23.40	22.77	21.58	21.02	20.48	19.96	19.45	18.50	17.62	16.79	16.03	15.31	54
55	22.65	22.07	21.50	20.43	19.93	19.44	18.97	18.51	17.65	16.84	16.09	15.39	14.73	55
56	21.29	20.76	20.26	19.30	18.85	18.41	17.98	17.57	16.79	16.06	15.38	14.74	14.14	56
57	19.95	19.48	19.04	18.19	17.78	17.39	17.01	16.64	15.94	15.28	14.66	14.08	13.53	57
58	18.64	18.23	17.84	17.09	16.73	16.38	16.04	15.71	15.09	14.50	13.94	13.42	12.92	58
59	17.37	17.01	16.66	16.00	15.68	15.38	15.08	14.79	14.23	13.71	13.21	12.74	12.30	59
60	16.12	15.81	15.51	14.93	14.65	14.39	14.12	13.87	13.38	12.91	12.47	12.06	11.66	60
61	14.90	14.64	14.38	13.88	13.64	13.40	13.17	12.95	12.52	12.12	11.73	11.36	11.01	61
62	13.71	13.49	13.26	12.84	12.63	12.43	12.23	12.04	11.67	11.32	10.98	10.66	10.35	62
63	12.55	12.36	12.17	11.81	11.63	11.46	11.29	11.13	10.81	10.51	10.22	9.94	9.68	63
64	11.41	11.25	11.09	10.79	10.64	10.50	10.30	10.22	9.95	9.70	9.45	9.21	8.99	64
66	0.29	0.00	9 00	9.70	9.00	9.54	9.43	9.31	9.09	0.00 9.05	0.07	0.47	0.20	00 66
67	9.20	9.09	7 96	7.80	7 72	7.65	7 57	7 50	7 36	7 22	7.00	6.95	6.82	67
68	7 07	7 01	6 94	6.82	6 76	6 70	6 65	6 59	6 48	6 37	6 27	6 16	6.02	68
69	6.03	5.98	5.94	5.85	5.81	5.76	5.72	5.68	5.60	5.52	5.44	5.36	5.29	69
70	5.00	4.97	4.94	4.88	4.85	4.82	4.79	4.76	4.70	4.65	4.59	4.54	4.48	70
71	3.99	3.97	3.95	3.91	3.89	3.87	3.85	3.83	3.80	3.76	3.72	3.69	3.65	71
72	2.99	2.98	2.97	2.94	2.93	2.92	2.91	2.90	2.88	2.86	2.84	2.82	2.80	72
73	1.99	1.99	1.98	1.97	1.97	1.96	1.96	1.95	1.94	1.93	1.92	1.91	1.90	73
74	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98	0.98	0.97	74

Table 16 Multipliers for loss of earnings to pension age 75 (females)

Age at date of	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected r	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of
triai	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	triai
16	109.91	100.68	92.41	78.32	72.32	66.92	62.04	57.63	50.03	43.77	38.58	34.25	30.62	16
17	106.69	97.90	90.01	76.53	70.77	65.57	60.87	56.62	49.27	43.19	38.14	33.92	30.37	17
18	103.54	95.17	87.64	74.75	69.23	64.23	59.71	55.61	48.51	42.62	37.70	33.59	30.12	18
19	100.45	92.49	85.32	72.99	67.70	62.91	58.56	54.61	47.74	42.03	37.26	33.25	29.86	19
20	97.43	89.86	83.03	71.25	66.18	61.58	57.40	53.60	46.97	41.44	36.81	32.90	29.59	20
21	94.47	87.28	80.77	69.53	64.68	60.27	56.25	52.59	46.20	40.85	36.35	32.55	29.32	21
22	91.57	84.74	78.55	67.83	63.19	58.96	55.10	51.58	45.42	40.25	35.89	32.19	29.04	22
23	88.72	82.25	76.36	66.14	61.71	57.66	53.96	50.58	44.64	39.64	35.41	31.82	28.75	23
24	85.94	79.80	74.21	64.48	60.24	56.36	52.82	49.57	43.86	39.03	34.94	31.44	28.45	24
25	83.21	75.02	72.09	62.82	58./8 57.22	55.07	51.08	48.50	43.07	38.41	34.45	31.00	28.15	25
20	00.04 77.02	75.03	70.00 67.04	01.19 50.57	57.33	53.79 52.52	50.54 40.41	47.00	42.20	37.19	33.90 33.46	30.07	27.64	20
28	75 35	70.43	65 02	57.07	51.90	51.02	49.41	40.00	41.40	36.52	33.40	20.27	27.03	21
29	72.84	68 20	63.93	56.39	53.06	49 99	47.16	44 54	39.88	35.88	32.33	29.46	26.87	29
30	70.39	66.00	61.97	54.83	51.66	48.74	46.04	43.54	39.08	35.24	31.92	29.04	26.53	30
31	67.98	63.85	60.04	53.28	50.28	47.50	44.92	42.54	38.27	34.58	31.39	28.61	26.18	31
32	65.62	61.74	58.15	51.75	48.90	46.26	43.81	41.54	37.46	33.93	30.85	28.17	25.83	32
33	63.32	59.66	56.28	50.24	47.54	45.03	42.71	40.54	36.65	33.26	30.31	27.73	25.47	33
34	61.06	57.63	54.44	48.74	46.19	43.81	41.60	39.54	35.83	32.60	29.76	27.28	25.09	34
35	58.85	55.63	52.63	47.26	44.85	42.60	40.50	38.55	35.01	31.92	29.21	26.82	24.71	35
36	56.68	53.67	50.85	45.80	43.52	41.39	39.41	37.55	34.19	31.24	28.64	26.35	24.33	36
37	54.56	51.74	49.11	44.35	42.20	40.20	38.32	36.56	33.37	30.56	28.07	25.88	23.93	37
38	52.49	49.85	47.38	42.92	40.90	39.01	37.23	35.57	32.54	29.86	27.50	25.39	23.52	38
39	50.46	48.00	45.69	41.50	39.61	37.82	36.15	34.58	31./1	29.17	26.91	24.90	23.11	39
40	48.47	46.18	44.02	40.11	38.32	36.65	35.07	33.59	30.88	28.46	26.32	24.40	22.68	40
41	40.53	44.39	42.39	38.72 27.26	37.05	35.48	34.00	32.60	30.04	27.70	25.72	23.89	22.25	41
42	44.02	42.04	40.77	37.30	30.79	34.3Z	32.93 21.97	31.02	29.20	27.04	20.11	23.31	21.00	42
43	42.70	30.22	37.63	34.67	34.33	32.02	30.80	29.65	20.30	20.32	24.49	22.04	21.55	43
45	39 15	37 58	36.09	33 35	32.08	30.89	29.75	28.67	26.67	23.00	23.07	21.30	20.03	45
46	37.40	35.95	34.58	32.04	30.87	29.76	28.70	27.69	25.82	24.13	22.59	21.20	19.93	46
47	35.69	34.36	33.10	30.75	29.67	28.63	27.65	26.71	24.97	23.39	21.94	20.63	19.43	47
48	34.02	32.80	31.64	29.48	28.47	27.52	26.61	25.74	24.12	22.64	21.29	20.05	18.92	48
49	32.38	31.26	30.20	28.22	27.29	26.41	25.57	24.76	23.26	21.88	20.62	19.47	18.40	49
50	30.78	29.76	28.79	26.97	26.12	25.31	24.54	23.79	22.40	21.12	19.95	18.87	17.88	50
51	29.21	28.29	27.40	25.74	24.97	24.22	23.51	22.83	21.54	20.36	19.27	18.27	17.34	51
52	27.68	26.84	26.04	24.53	23.82	23.14	22.49	21.86	20.68	19.59	18.58	17.65	16.78	52
53	26.18	25.42	24.70	23.33	22.68	22.06	21.47	20.90	19.82	18.81	17.89	17.02	16.22	53
54	24.71	24.03	23.38	22.14	21.56	21.00	20.46	19.94	18.95	18.03	17.18	16.39	15.65	54
55	23.28	22.67	22.08	20.97	20.45	19.94	19.45	18.98	18.08	17.25	16.47	15.74	15.06	55
56	21.87	21.33	20.81	19.82	19.34	18.89	18.45	18.02	17.21	16.46	15.75	15.08	14.46	56
57 59	20.50	20.02	19.00	10.07	10.20	16.91	17.40	16.12	10.34	11.00	10.02	14.42	13.00	57 59
59	17.85	17 48	17 12	16.43	16 10	15.78	15.47	15.12	14 60	14.00	13 54	13.74	12 59	59
60	16.57	16.24	15.93	15.33	15.05	14 77	14.49	14 23	13.72	13.24	12 78	12.35	11.94	60
61	15.31	15.03	14.76	14.25	14.00	13.75	13.52	13.29	12.84	12.42	12.02	11.64	11.28	61
62	14.08	13.85	13.62	13.17	12.96	12.75	12.55	12.35	11.96	11.60	11.25	10.92	10.60	62
63	12.88	12.68	12.49	12.11	11.93	11.75	11.58	11.41	11.08	10.77	10.47	10.18	9.90	63
64	11.70	11.53	11.37	11.06	10.91	10.76	10.61	10.47	10.19	9.93	9.67	9.43	9.19	64
65	10.54	10.41	10.28	10.02	9.89	9.77	9.65	9.53	9.30	9.08	8.87	8.66	8.47	65
66	9.41	9.30	9.20	8.99	8.89	8.79	8.69	8.60	8.41	8.23	8.05	7.89	7.72	66
67	8.30	8.22	8.13	7.97	7.89	7.81	7.73	7.66	7.51	7.37	7.23	7.09	6.96	67
68	7.21	7.15	7.08	6.96	6.90	6.84	6.78	6.72	6.61	6.49	6.39	6.28	6.18	68
69	6.14	6.09	6.05	5.95	5.91	5.87	5.82	5.78	5.69	5.61	5.53	5.45	5.38	69
70	5.08	5.05	5.02	4.96	4.93	4.90	4.86	4.83	4.78	4.72	4.66	4.61	4.55	70
71	4.05	4.02	4.00	3.96	3.94	3.92	3.91	3.89	3.85	3.81	3.77	3.74	3.70	71
72	3.02	3.01	3.00	2.97	2.96	2.95	2.94	2.93	2.91	2.89	2.87	2.85	2.83	12
13 74	2.01	∠.00 1.00	2.00	1.99	1.90	1.98	0.00	1.97	0.00	0.00	0.00	1.93	1.92	13
/ 4	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.90	0.90	0.90	14

Table 17 Multipliers for loss of earnings to pension age 80 (males)

Age at date of	Multiplie and rate	er calculate	ed with allo of	wance for	projected ı	mortality fro	om the 20°	18-based	population	n projectio	ons			Age at date of
แาล	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	แล
16	121.96	110.93	101.12	84 62	77.68	71 47	65.91	60.92	52 40	45 48	39.81	35 13	31 25	16
17	118.45	107.92	98.55	82.73	76.06	70.08	64.71	59.89	51.64	44.91	39.39	34.82	31.02	17
18	115.01	104.97	96.02	80.86	74.45	68.70	63.52	58.87	50.88	44.34	38.96	34.50	30.77	18
19	111.65	102.08	93.53	79.02	72.86	67.32	62.34	57.84	50.11	43.77	38.53	34.17	30.52	19
20	108.36	99.25	91.09	77.20	71.29	65.96	61.16	56.82	49.35	43.19	38.09	33.84	30.27	20
21	105.14	96.47	88.68	75.40	69.73	64.61	59.99	55.81	48.58	42.61	37.65	33.50	30.01	21
22	08.01	93.74	80.32 92.00	73.01	66.64	63.27 61.02	57.62	54.79 52.77	47.81	42.02	37.20	33.10	29.75	22
23	90.91	88.43	81 70	70.11	65 12	60.60	56.49	52 76	47.03	41.43	36.28	32.01	29.40	23
25	92.93	85.84	79.44	68.38	63.61	59.28	55.33	51.74	45.47	40.22	35.81	32.08	28.92	25
26	90.03	83.31	77.22	66.68	62.11	57.96	54.18	50.72	44.68	39.61	35.34	31.71	28.63	26
27	87.19	80.82	75.03	64.99	60.63	56.65	53.03	49.71	43.89	39.00	34.85	31.33	28.33	27
28	84.41	78.37	72.88	63.32	59.16	55.36	51.88	48.70	43.10	38.37	34.37	30.95	28.02	28
29	81.69	75.97	70.76	61.67	57.70	54.06	50.74	47.68	42.30	37.75	33.87	30.56	27.71	29
30	79.03	73.62	68.68	60.03	56.25	52.78	49.60	46.67	41.51	37.12	33.37	30.16	27.39	30
31	76.43	/1.32	66.64	58.42	54.82	51.51	48.47	45.67	40.71	36.48	32.86	29.75	27.07	31
32	73.89	66.83	04.0Z	55.83	53.40	50.24 48.00	47.34	44.00	39.90	35.84	32.35	29.34	26.74	32
34	68.96	64 66	60 70	53 70	50.60	40.99	40.22	43.00	38.29	34 54	31.00	20.92	26.40	34
35	66.58	62.52	58.79	52.16	49.22	46.50	43.99	41.66	37.49	33.89	30.77	28.06	25.69	35
36	64.24	60.43	56.91	50.64	47.86	45.28	42.88	40.66	36.68	33.23	30.23	27.62	25.33	36
37	61.96	58.38	55.06	49.14	46.51	44.06	41.78	39.66	35.86	32.56	29.69	27.17	24.96	37
38	59.74	56.37	53.25	47.66	45.17	42.85	40.69	38.67	35.05	31.89	29.13	26.72	24.59	38
39	57.56	54.40	51.46	46.20	43.84	41.65	39.60	37.69	34.24	31.22	28.58	26.25	24.20	39
40	55.43	52.47	49.71	44.76	42.53	40.46	38.52	36.70	33.42	30.55	28.02	25.79	23.81	40
41	53.35	50.58	47.99	43.34	41.24	39.27	37.44	35.72	32.61	29.87	27.45	25.31	23.41	41
42	51.31	48.72	46.30	41.93	39.95	38.10	36.37	34.74	31.79	29.18	26.87	24.83	23.01	42
43 44	49.32	40.90	44.04 43.01	40.04 30.17	30.00	30.94	34 25	32.80	30.97	20.49	20.29	24.34	22.09	43 44
45	45.48	43.38	41.41	37.82	36.18	34 65	33.20	31.83	29.33	27.00	25.11	23.33	21.17	45
46	43.61	41.67	39.83	36.48	34.95	33.51	32.15	30.87	28.51	26.40	24.51	22.82	21.30	46
47	41.79	39.99	38.28	35.16	33.73	32.38	31.11	29.90	27.68	25.69	23.91	22.30	20.85	47
48	40.01	38.34	36.76	33.86	32.53	31.26	30.07	28.94	26.86	24.98	23.29	21.77	20.39	48
49	38.27	36.73	35.26	32.57	31.33	30.15	29.04	27.98	26.03	24.27	22.67	21.23	19.92	49
50	36.57	35.14	33.79	31.30	30.15	29.05	28.01	27.03	25.20	23.54	22.04	20.68	19.44	50
51	34.90	33.59	32.35	30.04	28.97	27.96	26.99	26.07	24.37	22.82	21.41	20.12	18.95	51
52	33.28	32.07	30.93	28.80	27.81	26.87	25.98	25.12	23.53	22.09	20.77	19.56	18.46	52
53 54	31.00	20.00	29.55	26.36	20.00	23.60	24.97	24.10	22.70	21.55	20.12 19.46	18.40	17.90	53 54
55	28.61	27.69	26.10	25.17	20.00	23.67	23.30	22.20	21.00	19.87	18.80	17.81	16.90	55
56	27.12	26.29	25.49	24.00	23.30	22.62	21.98	21.36	20.20	19.12	18.13	17.22	16.37	56
57	25.68	24.92	24.20	22.84	22.20	21.59	21.00	20.43	19.36	18.38	17.46	16.61	15.82	57
58	24.27	23.59	22.93	21.70	21.12	20.56	20.03	19.51	18.53	17.63	16.78	16.00	15.27	58
59	22.89	22.28	21.70	20.58	20.06	19.55	19.07	18.60	17.71	16.88	16.10	15.38	14.71	59
60	21.55	21.01	20.48	19.48	19.01	18.55	18.11	17.69	16.88	16.13	15.42	14.76	14.14	60
61	20.25	19.76	19.29	18.40	17.98	17.57	17.17	16.79	16.06	15.37	14.73	14.13	13.57	61
62 63	10.90	10.00	16.13	16.20	15.90	16.59	10.24	15.69	10.24	14.02	14.04	13.30	12.90	63
64	16.52	16.19	15.87	15.25	14.96	14.67	14.39	14.12	13.60	13.11	12.64	12.00	11.79	64
65	15.34	15.05	14.77	14.23	13.98	13.72	13.48	13.24	12.78	12.35	11.94	11.54	11.17	65
66	14.19	13.94	13.70	13.23	13.01	12.79	12.58	12.37	11.97	11.59	11.22	10.88	10.55	66
67	13.06	12.85	12.64	12.24	12.05	11.86	11.68	11.50	11.15	10.82	10.51	10.20	9.92	67
68	11.96	11.78	11.61	11.27	11.10	10.94	10.79	10.63	10.34	10.05	9.78	9.52	9.27	68
69	10.89	10.74	10.59	10.31	10.17	10.03	9.90	9.77	9.52	9.28	9.05	8.83	8.61	69
70	9.83	9.71	9.59	9.36	9.24	9.13	9.02	8.91	8.71	8.50	8.31	8.12	7.94	70
/1 72	8.80 7 70	8.70 7.71	8.60	8.41 7 40	8.32	8.23	8.14 7 07	8.06	7.89	1.12	7.56	7.41 6.69	1.26	/1 70
12 73	1.10 6.70	673	7.03 6.67	7.40 6.56	6 50	7.34 6.44	6 30	1.20 6.34	00.1 6.23	6 1 2	0.00	5 93	0.00 5.84	12 73
74	5.80	5.76	5.72	5.63	5.59	5.55	5.51	5.47	5.39	5.32	5.24	5.17	5.10	74
75	4.83	4.80	4.77	4.72	4.69	4.66	4.63	4.60	4.55	4.49	4.44	4.39	4.34	75
76	3.87	3.85	3.83	3.80	3.78	3.76	3.74	3.72	3.69	3.65	3.62	3.58	3.55	76
77	2.92	2.90	2.89	2.87	2.86	2.85	2.84	2.83	2.81	2.79	2.77	2.75	2.73	77
78	1.96	1.95	1.95	1.94	1.93	1.93	1.92	1.92	1.91	1.90	1.89	1.88	1.87	78
79	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.97	79

Table 18 Multipliers for loss of earnings to pension age 80 (females)

Age at date of	Multiplie and rate	er calculate	ed with allo of	wance for	projected ı	mortality fro	om the 201	18-based	populatio	n projectio	ons			Age at date of
liidi	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	lliai
16	124.91	113.50	103.38	86.36	79.20	72.81	67.09	61.96	53.22	46.12	40.31	35.53	31.57	16
17	121.37	110.48	100.79	84.47	77.59	71.43	65.90	60.95	52.47	45.56	39.90	35.23	31.34	17
18	117.90	107.51	98.25	82.60	75.98	70.05	64.72	59.93	51.72	45.00	39.49	34.92	31.11	18
19	114.50	104.60	95.75	80.75	74.39	68.68	63.54	58.91	50.96	44.44	39.06	34.60	30.87	19
20	111.17	101.73	93.28	78.92	72.82	67.32	62.37	57.90	50.20	43.87	38.64	34.28	30.63	20
21	107.92	98.92	90.86	75.00	71.25	65.97	61.20	56.89	49.44	43.30	38.20	33.95	30.38	21
22	104.72	96.16	86.47	75.32 73.55	69.70 68.16	63.28	58 86	57.87	48.67	42.72	37.70	33.62 33.28	20.13	22
23	98.53	93.43 90.79	83.80	73.55	66.63	61.95	57.70	53 84	47.90	42.13	36.86	32.93	29.00	23
25	95.53	88.17	81.52	70.05	65.11	60.62	56.54	52.83	46.35	40.94	36.40	32.57	29.32	25
26	92.59	85.60	79.27	68.34	63.61	59.31	55.39	51.82	45.57	40.34	35.94	32.21	29.04	26
27	89.71	83.08	77.06	66.63	62.11	57.99	54.24	50.80	44.79	39.73	35.46	31.84	28.75	27
28	86.89	80.60	74.89	64.95	60.63	56.69	53.09	49.79	44.00	39.12	34.98	31.46	28.45	28
29	84.13	78.17	72.75	63.29	59.17	55.40	51.94	48.78	43.21	38.50	34.50	31.08	28.15	29
30	81.43	75.79	70.64	61.64	57.71	54.11	50.81	47.77	42.42	37.87	34.00	30.69	27.84	30
31	76.78 76.10	73.45	66.53	60.02 58.41	50.27	52.83 51.56	49.67	46.76	41.62	37.24	33.50	30.29 20.80	27.53	31
32	73.66	68.90	64 52	56.82	53 42	50.30	40.34	43.70	40.02	35.01	32.00	29.09	26.87	32
34	71.18	66.68	62.55	55.25	52.02	49.04	46.29	43.75	39.22	35.32	31.97	29.06	26.53	34
35	68.75	64.51	60.61	53.69	50.63	47.79	45.17	42.74	38.41	34.67	31.44	28.63	26.19	35
36	66.37	62.38	58.70	52.15	49.25	46.55	44.06	41.74	37.60	34.02	30.91	28.20	25.83	36
37	64.05	60.29	56.82	50.63	47.88	45.32	42.95	40.74	36.79	33.35	30.37	27.76	25.47	37
38	61.77	58.24	54.97	49.13	46.52	44.10	41.84	39.75	35.97	32.69	29.82	27.31	25.10	38
39	59.54	56.23	53.15	47.65	45.18	42.88	40.74	38.75	35.15	32.01	29.26	26.85	24.72	39
40	57.36	54.25	51.37	46.18	43.85	41.68	39.65	37.76	34.33	31.34	28.70	26.38	24.33	40
41 42	53.22	52.32 50.42	49.01	44.73	42.00	40.40 30.20	30.00	30.70	32.68	20.05	20.13	25.91	23.94	41
43	51.09	48.55	46.18	41.88	39.93	38.10	36.39	34 78	31.86	29.30	26.98	23.43	23.04	43
44	49.09	46.72	44.50	40.47	38.64	36.93	35.31	33.80	31.03	28.57	26.39	24.44	22.70	44
45	47.13	44.93	42.86	39.09	37.37	35.76	34.24	32.81	30.19	27.87	25.79	23.93	22.27	45
46	45.22	43.17	41.24	37.72	36.11	34.60	33.17	31.83	29.36	27.16	25.18	23.42	21.83	46
47	43.34	41.44	39.65	36.37	34.87	33.45	32.11	30.85	28.52	26.44	24.57	22.89	21.38	47
48	41.51	39.75	38.08	35.03	33.63	32.31	31.05	29.87	27.68	25.72	23.95	22.36	20.92	48
49	39.72	38.09	36.55	33.71	32.41	31.17	30.00	28.89	26.84	24.99	23.33	21.82	20.45	49
50 51	36.25	30.40 34.87	33.04	32.41	31.20	28.03	20.90	27.92	26.00	24.20 23.53	22.09	21.27	19.97	50 51
52	34.58	33.30	32.10	29.85	28.81	27.82	26.88	25.98	24.31	22.79	21.41	20.14	18.99	52
53	32.94	31.77	30.66	28.60	27.64	26.73	25.85	25.02	23.47	22.05	20.75	19.57	18.48	53
54	31.34	30.27	29.26	27.36	26.48	25.64	24.83	24.06	22.62	21.30	20.09	18.98	17.96	54
55	29.77	28.80	27.88	26.14	25.33	24.56	23.81	23.10	21.77	20.55	19.42	18.39	17.43	55
56	28.25	27.36	26.52	24.94	24.20	23.49	22.81	22.15	20.92	19.79	18.75	17.79	16.89	56
5/	26.75	25.96	25.19	23.75	23.07	22.43	21.80	21.20	20.08	19.03	18.07	17.18	16.35	57
20 50	23.30	24.00	23.00	22.30	21.97	21.37	20.01	20.20	19.23	17.50	16.69	15.00	15.79	50 50
60	22.48	21.90	21.34	20.29	19.79	19.30	18.84	18.39	17.53	16.73	15.99	15.29	14.64	60
61	21.12	20.61	20.11	19.16	18.71	18.28	17.86	17.45	16.68	15.96	15.28	14.65	14.05	61
62	19.80	19.34	18.90	18.05	17.65	17.27	16.89	16.53	15.83	15.18	14.57	13.99	13.45	62
63	18.50	18.10	17.71	16.96	16.61	16.26	15.93	15.60	14.98	14.40	13.85	13.33	12.84	63
64	17.23	16.88	16.54	15.88	15.57	15.27	14.97	14.68	14.13	13.61	13.12	12.66	12.22	64
65	15.99	15.68	15.39	14.82	14.54	14.28	14.02	13.77	13.28	12.82	12.39	11.97	11.58	65
67	14.78	14.52	14.20	13.77	13.53	13.30	13.07	12.85	12.43	12.03	11.05	11.28	10.93	67
68	12 44	12 25	12.06	12.73	11.53	12.33	11.20	11.94	10.72	10.42	10.90	9.86	9.60	68
69	11.30	11.15	10.99	10.69	10.55	10.41	10.27	10.13	9.87	9.61	9.37	9.14	8.91	69
70	10.19	10.06	9.94	9.69	9.57	9.46	9.34	9.23	9.01	8.80	8.60	8.40	8.21	70
71	9.11	9.00	8.90	8.70	8.61	8.51	8.42	8.33	8.15	7.98	7.81	7.65	7.49	71
72	8.04	7.96	7.88	7.72	7.65	7.57	7.50	7.43	7.28	7.15	7.01	6.88	6.76	72
73	7.00	6.93	6.87	6.75	6.69	6.64	6.58	6.52	6.42	6.31	6.21	6.10	6.01	73
74	5.97	5.92	5.88	5.79	5.75	5.70	5.66	5.62	5.54	5.46	5.38	5.31	5.24	74
75 76	4.95	4.92	4.89	4.83	4.80	4.//	4.74	4./1	4.66	4.60	4.55	4.49	4.44	/5 76
70	3.90 2 97	5.94 2.95	3.92 2 94	3.00 2.92	3.00 2 91	3.04 2 90	3.0∠ 2.80	3.60 2.88	3.70 2.86	5.75 284	3.09 2.82	3.00 2.80	3.02 2.78	70 77
78	1.98	1.97	1.97	1.96	1.95	1.95	1.95	1.94	1.93	1.92	1.91	1.90	1.89	78
79	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.97	0.97	79

Table 19 Multipliers for loss of pension commencing age 50 (males)

Age at	Multiplie	er calculate	ed with allo	wance for	projected i	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at
date of	and rate	of return	of						• •					date of
trial														trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	169.44	140.02	115.90	79.81	66.39	55.32	46.17	38.59	27.09	19.13	13.59	9.71	6.98	0
1	166.05	137.58	114.18	79.05	65.94	55.08	46.09	38.63	27.26	19.35	13.81	9.92	7.16	1
2	162.19	134.74	112.13	78.04	65.26	54.67	45.86	38.54	27.33	19.50	14.00	10.10	7.33	2
3	158.38	131.93	110.08	77.02	64.58	54.23	45.61	38.43	27.40	19.65	14.18	10.28	7.50	3
4	154.65	129.17	108.07	76.02	63.90	53.80	45.38	38.32	27.47	19.80	14.36	10.47	7.67	4
5	151.00	126.46	106.09	75.01	63.23	53.38	45.14	38.23	27.53	19.96	14.55	10.65	7.85	5
6	147.44	123.81	104.14	74.03	62.56	52.96	44.90	38.12	27.61	20.10	14.73	10.85	8.04	6
7	143.96	121.22	102.23	73.06	61.91	52.54	44.66	38.02	27.67	20.26	14.92	11.05	8.22	7
8	140.56	118.67	100.34	72.09	61.26	52.12	44.41	37.91	27.74	20.41	15.11	11.24	8.40	8
9	137.24	116.17	98.49	71.15	60.60	51.70	44.17	37.81	27.81	20.57	15.30	11.44	8.61	9
10	133.99	113.73	96.67	70.20	59.96	51.29	43.94	37.70	27.87	20.72	15.50	11.65	8.80	10
11	130.80	111.32	94.89	69.27	59.32	50.88	43.70	37.59	27.93	20.88	15.69	11.86	9.00	11
12	127.70	108.97	93.14	68.35	58.68	50.47	43.46	37.49	28.00	21.03	15.89	12.07	9.21	12
13	124.67	106.67	91.41	67.44	58.06	50.06	43.22	37.38	28.06	21.20	16.09	12.28	9.42	13
14	121.71	104.42	89.72	66.55	57.44	49.66	42.99	37.27	28.13	21.35	16.30	12.50	9.64	14
15	118.81	102.20	88.05	65.66	56.83	49.25	42.75	37.16	28.20	21.51	16.50	12.73	9.86	15
16	115.99	100.04	86.42	64.78	56.21	48.85	42.52	37.05	28.26	21.67	16.71	12.95	10.08	16
17	113.23	97.93	84.82	63.93	55.62	48.46	42.29	36.95	28.33	21.84	16.92	13.18	10.31	17
18	110.54	95.87	83.26	63.08	55.03	48.08	42.06	36.85	28.40	22.00	17.14	13.42	10.55	18
19	107.93	93.84	81.72	62.25	54.44	47.69	41.83	36.75	28.46	22.17	17.35	13.66	10.79	19
20	105.37	91.87	80.21	61.43	53.86	47.31	41.60	36.64	28.54	22.34	17.58	13.90	11.04	20
21	102.88	89.94	78.74	60.62	53.30	46.93	41.38	36.54	28.61	22.51	17.80	14.15	11.31	21
22	100.45	88.05	77.29	59.82	52.74	46.56	41.17	36.44	28.68	22.68	18.03	14.41	11.56	22
23	98.07	86.20	75.87	59.03	52.18	46.20	40.94	36.34	28.75	22.86	18.26	14.66	11.84	23
24	95.75	84.39	74.48	58.25	51.63	45.83	40.73	36.24	28.82	23.03	18.50	14.93	12.10	24
25	93.49	82.61	73.11	57.50	51.09	45.47	40.51	36.15	28.89	23.21	18.73	15.20	12.38	25
26	91.29	80.88	71.76	56.73	50.55	45.10	40.30	36.05	28.96	23.39	18.98	15.48	12.67	26
27	89.13	79.18	70.45	55.99	50.02	44.74	40.09	35.95	29.03	23.57	19.23	15.75	12.97	27
28	87.03	77.52	69.16	55.26	49.50	44.39	39.88	35.85	29.11	23.75	19.47	16.04	13.27	28
29	84.98	75.90	67.89	54.54	48.98	44.05	39.66	35.77	29.18	23.94	19.73	16.33	13.57	29
30	82.98	74.32	66.65	53.83	48.47	43.71	39.46	35.67	29.26	24.12	19.98	16.62	13.89	30
31	81.03	72.77	65.43	53.13	47.97	43.37	39.26	35.58	29.34	24.31	20.24	16.93	14.22	31
32	79.13	71.26	64.25	52.44	47.47	43.03	39.06	35.50	29.42	24.51	20.51	17.23	14.55	32
33	77.28	69.77	63.08	51.77	46.99	42.70	38.87	35.41	29.51	24.71	20.78	17.56	14.90	33
34	75.48	68.33	61.95	51.11	46.51	42.38	38.67	35.33	29.59	24.90	21.05	17.88	15.25	34
35	73.73	66.92	60.82	50.45	46.04	42.06	38.48	35.24	29.67	25.10	21.33	18.21	15.60	35
36	72.01	65.55	59.73	49.81	45.58	41.75	38.30	35.16	29.76	25.31	21.62	18.55	15.97	36
37	70.35	64.21	58.67	49.18	45.12	41.44	38.11	35.09	29.86	25.51	21.91	18.90	16.35	37
38	68.73	62.90	57.64	48.57	44.68	41.14	37.94	35.02	29.95	25.74	22.20	19.25	16.75	38
39	67.16	61.62	56.62	47.97	44.24	40.85	37.76	34.95	30.05	25.96	22.52	19.60	17.15	39
40	65.63	60.37	55.63	47.38	43.81	40.56	37.60	34.89	30.15	26.18	22.82	19.99	17.56	40
41	64.14	59.17	54.65	46.80	43.40	40.28	37.44	34.83	30.26	26.40	23.14	20.36	18.00	41
42	62.69	57.99	53.71	46.25	42.99	40.01	37.28	34.77	30.37	26.64	23.47	20.76	18.44	42
43	61.29	56.85	52.79	45.69	42.59	39.74	37.13	34.73	30.49	26.88	23.80	21.16	18.89	43
44	59.92	55.72	51.89	45.16	42.20	39.48	36.98	34.69	30.61	27.12	24.14	21.57	19.35	44
45	58.59	54.63	51.02	44.63	41.82	39.24	36.85	34.65	30.73	27.38	24.49	22.00	19.83	45
46	57.30	53.58	50.16	44.12	41.45	38.99	36.71	34.61	30.86	27.64	24.85	22.43	20.33	46
4/	56.05	52.55	49.32	43.62	41.09	38.75	36.59	34.58	30.99	27.91	25.22	22.88	20.84	47
48	54.82	51.54	48.51	43.13	40.74	38.52	36.46	34.56	31.14	28.18	25.59	23.34	21.36	48
49	53.64	50.57	4/./2	42.66	40.40	38.30	36.35	34.54	31.28	28.46	25.98	23.81	21.91	49
50	52.50	49.62	46.95	42.19	40.06	38.08	36.24	34.53	31.44	28.74	26.38	24.30	22.47	50

Table 20Multipliers for loss of pension commencing age 50 (females)

$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected i	mortality fr	om the 201	8-based	populatio	n projectio	ons			Age at date of trial
0 183.15 151.02 124.73 85.52 71.00 59.03 49.17 41.02 28.69 20.19 14.30 10.40 74.94 1 2 175.40 145.39 120.72 83.66 69.81 59.35 48.66 40.98 29.85 20.57 14.93 10.00 76.53 3 4 167.46 139.54 116.42 80.64 67.75 57.00 48.41 40.77 29.13 20.22 21.10 15.53 11.10 8.23 6 6 163.81 131.19 110.38 78.53 66.40 77.65 57.40 55.62 47.71 40.41 29.33 21.44 15.73 16.16 7 7 156.18 131.19 10.38 78.50 65.47 55.62 47.74 40.44 29.47 21.64 15.24 10.34 11.18 8.82 8 8 11.14 13.54 11.14 22.11 15.56 11.18 20.99 2		-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
1 179.48 148.37 122.87 84.70 70.50 58.75 48.66 40.96 28.85 20.59 14.72 10.60 7.67 2 3 171.39 142.44 116.49 81.56 64.91 57.50 48.62 40.88 29.04 20.76 14.93 10.80 7.85 3 4 167.46 139.54 114.42 80.54 67.75 57.00 48.17 40.71 29.22 12.10 15.33 11.19 8.23 5 6 159.85 123.87 71.85 67.06 56.64 47.71 40.53 29.30 21.27 15.52 11.40 8.61 7.6 8.82 8 8 9 149.06 125.89 106.42 77.56 65.07 55.40 47.24 40.34 29.56 17.96 12.49 9.42 11 14.24 13.57 115.8 20.49 9.65 10.79 2.21 16.56 12.49 9.42 11 14.24 13.56 11.45 55.64 47.7 13.41 10.55 12.49 9.42 <td>0</td> <td>183.15</td> <td>151.02</td> <td>124.73</td> <td>85.52</td> <td>71.00</td> <td>59.03</td> <td>49.17</td> <td>41.02</td> <td>28.69</td> <td>20.19</td> <td>14.30</td> <td>10.18</td> <td>7.30</td> <td>0</td>	0	183.15	151.02	124.73	85.52	71.00	59.03	49.17	41.02	28.69	20.19	14.30	10.18	7.30	0
2 175.40 145.39 120.72 83.66 69.81 57.33 48.66 40.98 28.95 20.42 20.76 14.72 10.60 7.67 2 4 167.46 139.54 116.49 81.58 68.44 57.50 48.40 40.79 29.13 20.22 11.00 8.03 4 5 163.61 136.71 114.42 80.64 67.76 57.06 68.74 74.74 40.62 29.30 21.44 15.72 11.61 8.23 5 7 156.16 110.42 77.54 65.74 55.62 47.77 40.54 29.45 21.79 16.15 12.04 90.39 9 90.09 10 145.62 12.28 11.18 75.60 64.42 54.99 47.01 40.25 29.64 17.05 12.26 91.49 90.7 12.71 74.63 63.76 50.77 63.50 39.79 22.50 17.72 12.41 9.67 12.19 96.7 12.21 9.67 12.21 9.67 12.21 9.67 12.21 9.67	1	179.48	148.37	122.87	84.70	70.50	58.77	49.08	41.06	28.86	20.42	14.54	10.40	7.49	1
3 171.39 142.44 116.49 81.56 64.04 67.75 57.50 48.04 40.79 29.13 20.92 15.12 11.00 8.03 4 6 163.61 136.71 114.42 80.54 67.75 57.06 48.17 40.71 29.20 21.27 15.53 11.08 8.23 5 7 156.18 131.19 110.84 77.55 65.74 55.42 47.71 40.53 29.38 21.27 15.53 11.64 8.61 7 149.06 125.89 106.49 76.57 65.67 55.40 47.24 40.34 29.64 21.96 16.56 12.20 9.24 10 16.58 12.20 9.46 11 12 136.57 11.81 99.37 11.68 53.36 46.10 39.97 29.50 17.02 12.24 9.04 13 14 132.65 11.11.8 99.36 13.31 14.11.14 14.11.14 14.11.14 13.81 10.37 15 13.81 10.37 15 11.11.14 13.81 10.31 14	2	175.40	145.39	120.72	83.66	69.81	58.35	48.86	40.98	28.95	20.59	14.72	10.60	7.67	2
4 167.46 139.54 116.49 81.58 68.44 57.50 48.40 40.79 29.12 21.512 11.00 8.03 4 5 163.61 136.71 114.42 80.54 67.75 57.08 48.17 40.62 29.30 21.27 15.52 11.40 8.42 6 7 156.18 131.19 110.38 75.53 66.40 56.24 47.71 40.53 29.38 21.42 15.53 11.10 8.42 6 8 149.06 125.89 106.49 75.60 65.77 65.40 47.72 40.34 29.56 21.79 16.15 12.04 9.03 9 10 145.62 12.31 106.49 75.60 65.47 46.78 40.07 29.13 16.58 12.24 9.24 11 12 138.57 115.88 79.07 62.50 63.77 46.57 30.07 21.81 10.10 14 12.82 17.02 12.44 9.00 12.34 17.01 13.61 10.13 14 12.52 11.	3	171.39	142.44	118.59	82.60	69.12	57.93	48.62	40.88	29.04	20.76	14.93	10.80	7.85	3
5 163.61 136.71 114.22 80.54 67.75 57.08 48.17 40.71 29.32 21.27 15.52 11.40 8.42 6 7 156.18 131.19 110.38 76.53 66.40 56.24 47.71 40.53 29.30 21.27 15.52 11.40 8.42 8.61 7 8 152.58 128.51 106.49 76.57 65.07 55.40 47.24 40.34 29.64 21.97 16.36 12.26 9.24 10 11 14.227 120.78 104.58 75.60 64.42 54.99 47.04 40.25 29.64 21.96 16.36 12.26 9.24 10 11 14.227 120.78 102.71 74.63 63.78 54.78 46.75 40.16 29.79 21.67 16.26 12.71 9.67 12 13 135.77 115.88 90.97 72.76 62.10 53.77 46.33 40.16 23.04 17.72.4 13.18 10.13 14 14 122.56 <td< td=""><td>4</td><td>167.46</td><td>139.54</td><td>116.49</td><td>81.58</td><td>68.44</td><td>57.50</td><td>48.40</td><td>40.79</td><td>29.13</td><td>20.92</td><td>15.12</td><td>11.00</td><td>8.03</td><td>4</td></td<>	4	167.46	139.54	116.49	81.58	68.44	57.50	48.40	40.79	29.13	20.92	15.12	11.00	8.03	4
6 159.85 133.92 112.38 79.53 67.08 56.64 47.33 40.62 29.38 21.47 15.53 11.40 8.42 6 8 152.58 128.51 106.49 77.54 65.74 55.82 47.47 40.44 29.47 21.62 15.94 11.82 8.82 8 9 149.06 125.89 106.49 77.54 65.76 65.07 75.40 47.72 40.34 29.56 21.79 16.58 12.49 9.45 11 142.72 120.78 76.63 63.73 54.58 46.78 40.16 29.32 16.58 12.49 9.45 11 12 138.99 113.50 97.30 77.83 61.86 53.36 46.10 39.88 29.99 22.67 17.24 13.18 10.13 14 12.265 11.11 95.56 70.92 61.24 52.66 45.64 39.79 30.08 22.46 17.70 13.67 16.50 10.44 10.44 10.44 11.170 13.67 16.50 10.11 <td>5</td> <td>163.61</td> <td>136.71</td> <td>114.42</td> <td>80.54</td> <td>67.75</td> <td>57.08</td> <td>48.17</td> <td>40.71</td> <td>29.22</td> <td>21.10</td> <td>15.33</td> <td>11.19</td> <td>8.23</td> <td>5</td>	5	163.61	136.71	114.42	80.54	67.75	57.08	48.17	40.71	29.22	21.10	15.33	11.19	8.23	5
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	6	159.85	133.92	112.38	79.53	67.08	56.65	47.93	40.62	29.30	21.27	15.52	11.40	8.42	6
8 142.548 128.51 106.42 77.54 65.74 55.82 47.24 40.44 29.47 21.62 15.94 11.82 8.82 8 9 140.62 123.31 104.58 75.60 64.42 54.99 47.24 40.25 29.64 21.96 16.36 12.26 9.24 10 11 142.27 120.78 17.463 63.78 64.58 46.78 40.16 29.73 22.13 16.56 12.49 9.45 11 12 133.50 97.30 71.83 61.86 53.36 46.10 39.88 29.90 22.67 17.24 13.18 10.13 14 15 129.56 11.14 95.56 70.92 61.24 52.96 45.64 39.70 30.06 22.46 17.47 13.42 10.37 15.16 16 126.57 109.90 93.44 70.92 61.24 52.04 45.20 39.25 30.30.32 24.21 11.17 11.11 18 10.75 10.44 49.49 33.3 30.50 23.79	7	156.18	131.19	110.38	78.53	66.40	56.24	47.71	40.53	29.38	21.44	15.73	11.61	8.61	7
9 149.06 129.89 104.88 76.57 65.07 65.04 47.24 40.34 29.36 21.79 16.15 12.04 9.03 9 10 145.62 123.31 104.58 75.60 64.42 54.98 47.01 40.25 29.64 21.96 15.68 12.26 9.24 10 11 142.27 120.78 100.88 73.66 63.13 54.17 46.53 39.97 29.90 22.60 17.02 12.94 9.90 13 14 152.65 113.16 97.30 71.183 61.66 53.86 46.10 39.88 29.99 22.60 17.47 13.42 10.81 10.13 14 15 126.56 111.18 95.56 70.92 61.24 52.96 45.87 39.70 30.06 23.04 17.70 13.67 10.61 16 13.43 14.84 13.92 10.68 17 14 14.24 13.33 30.50 23.33	8	152.58	128.51	108.42	//.54	65.74	55.82	47.47	40.44	29.47	21.62	15.94	11.82	8.82	8
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	9	149.06	125.89	106.49	76.57	65.07	55.40	47.24	40.34	29.56	21.79	16.15	12.04	9.03	9
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	10	145.62	123.31	104.58	75.60	64.42	54.99	47.01	40.25	29.64	21.96	16.30	12.26	9.24	10
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	10	142.27	120.70	102.71	74.03	03./0 62.12	04.00 54.17	40.70	40.10	29.73	22.13	16.30	12.49	9.40	10
13 13.2.63 113.2.63 97.30 72.1.83 61.2.64 53.7.6 44.33 39.88 29.9.9 22.2.67 77.24 13.81 10.13 14 15 129.56 111.18 95.56 70.92 61.24 52.96 45.87 39.78 39.08 22.67 77.77 13.67 10.61 16 16 126.57 108.90 93.84 70.02 60.62 52.64 45.64 39.70 30.16 23.04 77.70 13.67 10.61 16 120.78 104.48 90.52 68.26 59.41 51.78 45.20 39.42 30.41 23.60 18.41 14.44 11.37 19 20 115.27 100.24 87.31 66.54 58.21 51.01 44.76 39.33 30.50 23.98 18.89 14.97 11.62 11.64 20 21 11.26 98.19 14.70 11.64 20 22 11 11.60 98.19 37.97 16.22 14.33 39.15 30.60 23.98 18.89 14.97 11.8	12	130.90	115.00	00.00	73.09	62.13	52 77	40.00	20.07	29.01	22.32	10.79	12.71	9.07	12
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	14	132.63	113.00	99.07	72.70	61.86	53 36	40.33	30.88	29.90	22.50	17.02	12.94	9.90	14
$ \begin{array}{c} 12 \\ 126 \\ 17 \\ 123 \\ 16 \\ 126 \\ 126 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 100 \\ 102 \\ 115 \\ 127 \\ 100 \\ 1$	15	129 56	111 18	95.56	70.92	61 24	52.96	45.87	30.00	30.08	22.07	17.24	13.42	10.13	15
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	16	129.50	108.90	93.84	70.32	60.62	52.50	45.67	39.79	30.00	22.00	17.47	13.42	10.57	16
18 120.78 104.48 90.52 68.26 59.41 51.78 45.20 39.52 30.33 23.42 18.17 14.17 11.11 18 19 118.00 102.34 88.90 67.39 58.81 51.40 44.98 39.42 30.41 23.60 18.41 14.47 11.17 19 20 115.27 100.24 87.31 66.54 56.21 51.01 44.76 39.33 30.50 23.98 18.89 14.70 11.64 20 21 110.00 96.18 84.21 64.86 57.05 50.25 44.33 39.15 30.68 24.18 19.15 15.24 12.20 22 23 107.46 94.20 82.77 18.40 15.52 12.249 23 25 102.54 90.37 79.77 62.42 55.34 49.12 43.67 38.88 30.95 24.76 19.92 16.10 13.08 25 102.14 16.69 13.69 27 83.58 83.88 30.95 24.76 19.92 16.10 13.08	17	123.64	106.00	92.17	69 13	60.01	52.00	45.43	39.61	30.24	23.22	17.93	13.92	10.86	17
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	18	120.78	104.48	90.52	68.26	59.41	51.78	45.20	39.52	30.33	23.42	18.17	14.17	11.11	18
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	19	118.00	102.34	88.90	67.39	58.81	51.40	44.98	39.42	30.41	23.60	18.41	14.44	11.37	19
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	115.27	100.24	87.31	66.54	58.21	51.01	44.76	39.33	30.50	23.79	18.65	14.70	11.64	20
22 110.00 96.18 84.21 64.86 57.05 50.25 44.31 39.15 30.68 24.18 19.15 15.24 12.20 22 23 107.46 94.20 82.70 64.04 56.47 49.87 44.11 39.06 30.77 24.37 19.40 15.52 12.49 23 24 104.97 92.27 81.22 63.23 55.90 49.49 43.89 38.88 30.95 24.76 19.92 16.10 13.08 25 26 100.17 88.52 78.34 61.63 54.78 48.76 43.46 38.71 31.13 24.96 20.18 16.40 13.38 26 27 97.85 86.70 76.93 60.85 54.22 48.39 43.25 38.71 31.13 25.16 20.44 16.60 13.89 29 30 91.22 81.48 72.88 58.56 52.60 47.32 42.62 38.44 31.40 25.78 21.27 17.63 14.68 30 31 89.12 70.7	21	112.60	98.19	85.74	65.69	57.63	50.63	44.54	39.25	30.59	23.98	18.89	14.97	11.92	21
23 107.46 94.20 82.70 64.04 56.47 49.87 44.19 39.06 30.77 24.37 19.40 15.52 12.49 23 24 104.97 92.27 81.22 63.23 55.90 49.49 43.89 38.88 30.86 24.56 19.65 15.81 12.78 24 25 102.54 90.37 79.77 62.42 55.34 49.12 43.67 38.88 30.95 24.76 19.92 16.10 13.08 25 26 100.17 88.52 78.34 61.63 54.72 48.39 43.25 38.71 31.13 25.16 20.14 16.60 13.69 27 28 95.59 84.92 75.56 60.07 53.67 48.04 43.04 43.64 31.40 25.77 20.91 17.31 14.35 29 30 91.22 81.48 71.88 76.82 52.07 46.97 42.41 38.63 31.49 25.97 20.99 17.51 14.68 30 31 89.12 79.8	22	110.00	96.18	84.21	64.86	57.05	50.25	44.33	39.15	30.68	24.18	19.15	15.24	12.20	22
24 104.97 92.27 81.22 63.23 55.90 49.49 43.89 38.98 30.86 24.56 19.65 15.81 12.78 24 25 102.54 90.37 79.77 62.42 55.34 49.12 43.67 38.89 30.95 24.76 19.92 16.10 13.08 25 26 100.17 88.52 78.34 61.63 54.22 48.39 43.25 38.71 31.13 25.16 20.14 16.69 13.89 27 28 95.59 84.92 75.56 60.07 53.67 48.04 43.04 38.61 31.22 25.37 20.71 17.00 14.02 28 29 93.38 83.18 74.21 59.31 53.13 47.67 42.83 38.27 31.0 25.57 20.99 17.31 14.85 30 32 30 91.22 81.48 72.88 58.56 52.07 46.97 42.21 38.27 31.59 </td <td>23</td> <td>107.46</td> <td>94.20</td> <td>82.70</td> <td>64.04</td> <td>56.47</td> <td>49.87</td> <td>44.11</td> <td>39.06</td> <td>30.77</td> <td>24.37</td> <td>19.40</td> <td>15.52</td> <td>12.49</td> <td>23</td>	23	107.46	94.20	82.70	64.04	56.47	49.87	44.11	39.06	30.77	24.37	19.40	15.52	12.49	23
25 102.54 90.37 79.77 62.42 55.34 49.12 43.67 38.88 30.95 24.76 19.92 16.10 13.08 25 26 100.17 88.52 78.34 61.63 54.78 48.76 43.46 38.79 31.03 24.96 20.18 16.40 13.38 26 27 97.85 86.70 75.56 60.07 53.67 48.04 43.04 38.61 31.22 25.16 20.44 16.60 13.89 27 28 95.59 84.92 75.56 60.07 53.67 48.04 43.04 38.61 31.22 25.77 20.71 17.00 14.02 28 30 91.22 81.48 71.58 57.82 52.07 46.97 42.41 38.36 31.49 25.99 21.55 17.95 15.03 31 32 87.07 78.18 70.31 51.56 46.62 42.21 38.27 31.40 25.78 21.27 17.83 15.93 32 33 85.06 76.59 69.06<	24	104.97	92.27	81.22	63.23	55.90	49.49	43.89	38.98	30.86	24.56	19.65	15.81	12.78	24
26 100.17 88.52 78.34 61.63 54.78 48.76 43.46 38.79 31.03 24.96 20.18 16.40 13.38 26 27 97.85 86.70 76.93 60.85 54.22 48.39 43.25 38.71 31.13 25.16 20.44 16.69 13.69 27 28 95.59 84.92 75.56 60.07 53.67 48.04 43.04 38.61 31.22 25.37 20.71 17.00 14.02 28 29 93.38 83.18 74.21 59.31 53.13 47.67 42.83 38.53 31.30 25.57 20.99 17.31 14.35 29 30 91.22 81.48 70.81 70.31 57.10 51.66 46.62 42.21 38.26 31.49 25.99 21.55 17.95 15.03 31 32 87.07 78.18 70.31 57.10 51.66 42.241 38.19 31.68 26.41 22.13 18.63 15.75 33 34 83.10	25	102.54	90.37	79.77	62.42	55.34	49.12	43.67	38.88	30.95	24.76	19.92	16.10	13.08	25
27 97.85 86.70 76.93 60.85 54.22 48.39 43.25 38.71 31.13 25.16 20.44 16.69 13.69 27 28 95.59 84.92 75.56 60.07 53.67 48.04 43.04 38.61 31.22 25.37 20.71 17.00 14.02 28 30 91.22 81.48 72.88 58.56 52.60 47.32 42.62 38.44 31.40 25.57 20.99 17.31 14.35 29 31 89.12 79.81 77.58 57.82 52.07 46.97 42.41 38.36 31.49 25.99 21.55 17.95 15.03 31 32 87.07 78.18 70.31 57.10 51.56 46.62 42.21 38.27 31.59 26.20 21.84 18.29 15.39 32 33 85.06 76.59 69.06 56.38 51.05 46.28 42.01 38.17 31.68 26.41 22.43 18.98 16.13 34 35 79.34 72.01 <td>26</td> <td>100.17</td> <td>88.52</td> <td>78.34</td> <td>61.63</td> <td>54.78</td> <td>48.76</td> <td>43.46</td> <td>38.79</td> <td>31.03</td> <td>24.96</td> <td>20.18</td> <td>16.40</td> <td>13.38</td> <td>26</td>	26	100.17	88.52	78.34	61.63	54.78	48.76	43.46	38.79	31.03	24.96	20.18	16.40	13.38	26
28 95.59 84.92 75.56 60.07 53.67 48.04 43.04 43.61 31.22 25.37 20.71 17.00 14.02 28 29 93.38 83.18 74.21 59.31 53.13 47.67 42.83 38.53 31.30 25.57 20.99 17.31 14.32 29 30 91.22 81.48 72.88 55.65 52.60 47.32 42.62 38.44 31.40 25.78 21.27 17.63 14.68 30 31 89.12 79.81 71.58 57.82 52.07 46.67 42.41 38.36 31.49 25.99 21.55 17.95 15.03 31 32 87.07 78.18 70.31 57.10 51.56 46.62 42.01 38.19 31.68 26.41 22.43 18.93 16.50 32 34 83.10 77.51 66.63 54.97 50.04 45.61 41.62 38.03 31.87 26.86 22.72 19.33 16.50 35 36 79.34 72.01 <td>27</td> <td>97.85</td> <td>86.70</td> <td>76.93</td> <td>60.85</td> <td>54.22</td> <td>48.39</td> <td>43.25</td> <td>38.71</td> <td>31.13</td> <td>25.16</td> <td>20.44</td> <td>16.69</td> <td>13.69</td> <td>27</td>	27	97.85	86.70	76.93	60.85	54.22	48.39	43.25	38.71	31.13	25.16	20.44	16.69	13.69	27
29 93.38 83.18 14.21 59.31 53.13 41.67 42.83 38.53 31.30 25.57 20.99 17.31 14.35 29 30 91.22 81.48 72.88 58.56 52.60 47.32 42.62 38.44 31.40 25.78 21.27 17.63 14.68 30 31 89.12 79.81 70.31 57.10 51.56 46.62 42.21 38.27 31.59 26.20 21.84 18.29 15.39 32 33 85.06 76.59 69.06 56.38 51.05 46.28 42.01 38.19 31.68 26.41 22.13 18.63 15.75 33 34 83.10 75.03 67.84 55.67 50.53 45.93 41.62 38.03 31.87 26.86 22.72 19.33 16.50 35 36 79.34 72.01 65.429 53.62 49.05 41.23 37.80 32.19 27.53 23.66 20.43 17.72 38 37 77.52	28	95.59	84.92	75.56	60.07	53.67	48.04	43.04	38.61	31.22	25.37	20.71	17.00	14.02	28
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	29	93.38	83.18	74.21	59.31	53.13	47.67	42.83	38.53	31.30	25.57	20.99	17.31	14.35	29
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	30	91.22	81.48	72.88	58.56	52.60	47.32	42.62	38.44	31.40	25.78	21.27	17.63	14.68	30
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22	09.1Z 97.07	79.01	71.30	57.0Z	52.07	40.97	42.41	20.30	31.49	20.99	21.00	19.20	15.03	22
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	32	85.06	76.10	69.06	56 38	51.05	40.02	42.21	38.10	31.59	20.20	21.04	18.63	15.59	32
35 81.20 73.51 66.63 54.97 50.04 45.61 41.62 38.03 31.87 26.86 22.72 19.33 16.50 35 36 79.34 72.01 65.46 54.29 49.55 45.28 41.43 37.95 31.98 27.08 23.04 19.69 16.90 36 37 77.52 70.56 64.29 53.62 49.05 44.95 41.23 37.88 32.08 27.31 23.35 20.05 17.30 37 38 75.75 69.12 63.16 52.95 48.58 44.62 41.05 37.80 32.19 27.53 23.66 20.43 17.72 38 39 74.02 67.73 62.06 52.30 48.11 44.00 40.68 37.66 32.40 28.00 24.32 21.20 18.57 40 40 72.35 66.37 60.97 51.66 47.64 44.00 40.68 37.60 32.51 28.24 24.65 21.61 19.03 41 41 70.70 65.04 <td>34</td> <td>83 10</td> <td>75.03</td> <td>67.84</td> <td>55.67</td> <td>50.53</td> <td>45.20</td> <td>41.82</td> <td>38 11</td> <td>31.00</td> <td>26.41</td> <td>22.10</td> <td>18.98</td> <td>16 13</td> <td>34</td>	34	83 10	75.03	67.84	55.67	50.53	45.20	41.82	38 11	31.00	26.41	22.10	18.98	16 13	34
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35	81.20	73.51	66.63	54.97	50.04	45.61	41.62	38.03	31.87	26.86	22.72	19.33	16.50	35
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	36	79.34	72.01	65.46	54.29	49.55	45.28	41.43	37.95	31.98	27.08	23.04	19.69	16.90	36
38 75.75 69.12 63.16 52.95 48.58 44.62 41.05 37.80 32.19 27.53 23.66 20.43 17.72 38 39 74.02 67.73 62.06 52.30 48.11 44.30 40.86 37.73 32.29 27.77 23.99 20.82 18.14 39 40 72.35 66.37 60.97 51.66 47.64 44.00 40.68 37.66 32.40 28.00 24.32 21.20 18.57 40 41 70.70 65.04 59.91 51.03 47.19 43.69 40.50 37.60 32.51 28.24 24.65 21.61 19.03 41 42 69.11 63.74 58.87 50.41 46.73 43.39 40.33 37.53 32.62 28.49 24.99 22.02 19.48 42 43 67.54 62.47 57.85 49.80 46.29 43.09 40.16 37.47 32.74 28.74 25.34 22.44 19.96 43 44 66.03 61.23 <td>37</td> <td>77.52</td> <td>70.56</td> <td>64.29</td> <td>53.62</td> <td>49.05</td> <td>44.95</td> <td>41.23</td> <td>37.88</td> <td>32.08</td> <td>27.31</td> <td>23.35</td> <td>20.05</td> <td>17.30</td> <td>37</td>	37	77.52	70.56	64.29	53.62	49.05	44.95	41.23	37.88	32.08	27.31	23.35	20.05	17.30	37
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	38	75.75	69.12	63.16	52.95	48.58	44.62	41.05	37.80	32.19	27.53	23.66	20.43	17.72	38
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	39	74.02	67.73	62.06	52.30	48.11	44.30	40.86	37.73	32.29	27.77	23.99	20.82	18.14	39
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40	72.35	66.37	60.97	51.66	47.64	44.00	40.68	37.66	32.40	28.00	24.32	21.20	18.57	40
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	41	70.70	65.04	59.91	51.03	47.19	43.69	40.50	37.60	32.51	28.24	24.65	21.61	19.03	41
43 67.54 62.47 57.85 49.80 46.29 43.09 40.16 37.47 32.74 28.74 25.34 22.44 19.96 43 44 66.03 61.23 56.85 49.20 45.86 42.80 39.99 37.41 32.85 28.99 25.69 22.87 20.44 44 45 64.55 60.02 55.87 48.62 45.43 42.51 39.83 37.36 32.98 29.25 26.06 23.31 20.94 45 46 63.12 58.84 54.93 48.04 45.02 42.23 39.67 37.30 33.10 29.51 26.43 23.76 21.45 46 47 61.71 57.69 54.00 47.48 44.60 41.95 39.52 37.26 33.23 29.78 26.80 24.22 21.97 47 48 60.35 56.57 53.08 46.93 44.21 41.69 39.37 37.21 33.37 30.05 27.19 24.69 22.52 48 49 59.02	42	69.11	63.74	58.87	50.41	46.73	43.39	40.33	37.53	32.62	28.49	24.99	22.02	19.48	42
44 66.03 61.23 56.85 49.20 45.86 42.80 39.99 37.41 32.85 28.99 25.69 22.87 20.44 44 45 64.55 60.02 55.87 48.62 45.43 42.51 39.83 37.36 32.98 29.25 26.06 23.31 20.94 45 46 63.12 58.84 54.93 48.04 45.02 42.23 39.67 37.30 33.10 29.51 26.43 23.76 21.45 46 47 61.71 57.69 54.00 47.48 44.60 41.95 39.52 37.26 33.23 29.78 26.80 24.22 21.97 47 48 60.35 56.57 53.08 46.93 44.21 41.69 39.37 37.21 33.37 30.05 27.19 24.69 22.52 48 49 59.02 55.47 52.20 46.40 43.82 41.43 39.02 37.17 33.50 30.34 27.59 25.18 23.08 49 50 57.74 54.41 <td>43</td> <td>67.54</td> <td>62.47</td> <td>57.85</td> <td>49.80</td> <td>46.29</td> <td>43.09</td> <td>40.16</td> <td>37.47</td> <td>32.74</td> <td>28.74</td> <td>25.34</td> <td>22.44</td> <td>19.96</td> <td>43</td>	43	67.54	62.47	57.85	49.80	46.29	43.09	40.16	37.47	32.74	28.74	25.34	22.44	19.96	43
45 64.55 60.02 55.87 48.62 45.43 42.51 39.83 37.36 32.98 29.25 26.06 23.31 20.94 45 46 63.12 58.84 54.93 48.04 45.02 42.23 39.67 37.30 33.10 29.51 26.43 23.76 21.45 46 47 61.71 57.69 54.00 47.48 44.60 41.95 39.52 37.26 33.23 29.78 26.80 24.22 21.97 47 48 60.35 56.57 53.08 46.93 44.21 41.69 39.37 37.21 33.37 30.05 27.19 24.69 22.52 48 49 59.02 55.47 52.20 46.40 43.82 41.43 39.22 37.17 33.50 30.34 27.59 25.18 23.08 49 50 57.74 54.41 51.33 45.87 43.43 41.18 39.09 37.14 33.65 30.63 27.99 25.68 23.66 50	44	66.03	61.23	56.85	49.20	45.86	42.80	39.99	37.41	32.85	28.99	25.69	22.87	20.44	44
46 63.12 58.84 54.93 48.04 49.02 42.23 39.67 37.30 33.10 29.51 26.43 23.76 21.45 46 47 61.71 57.69 54.00 47.48 44.60 41.95 39.52 37.26 33.23 29.78 26.80 24.22 21.97 47 48 60.35 56.57 53.08 46.93 44.21 41.69 39.37 37.21 33.37 30.05 27.19 24.69 22.52 48 49 59.02 55.47 52.20 46.40 43.82 41.43 39.22 37.17 33.50 30.34 27.59 25.18 23.08 49 50 57.74 54.41 51.33 45.87 43.43 41.18 39.09 37.14 33.65 30.63 27.99 25.68 23.66 50	45	64.55	60.02	55.87	48.62	45.43	42.51	39.83	37.36	32.98	29.25	26.06	23.31	20.94	45
47 01.71 57.09 54.00 47.48 44.00 41.95 39.52 37.26 33.23 29.78 26.80 24.22 21.97 47 48 60.35 56.57 53.08 46.93 44.21 41.69 39.37 37.21 33.37 30.05 27.19 24.69 22.52 48 49 59.02 55.47 52.20 46.40 43.82 41.43 39.22 37.17 33.50 30.34 27.59 25.18 23.08 49 50 57.74 54.41 51.33 45.87 43.43 41.18 39.09 37.14 33.65 30.63 27.99 25.68 23.66 50	46	63.12	58.84	54.93	48.04	45.02	42.23	39.67	37.30	33.10	29.51	26.43	23.76	21.45	46
40 00.50 50.57 53.00 40.95 44.21 41.09 39.37 37.21 33.37 30.05 27.19 24.09 22.52 48 49 59.02 55.47 52.20 46.40 43.82 41.43 39.22 37.17 33.50 30.34 27.59 25.18 23.08 49 50 57.74 54.41 51.33 45.87 43.43 41.18 39.09 37.14 33.65 30.63 27.99 25.68 23.66 50	47	61./1 60.25	57.69	54.00	47.48	44.60	41.95	39.52	37.26	33.23	29.78	26.80	24.22	21.97	47
<u>48 56.02 55.47 52.20 40.40 45.62 41.45 59.22 57.17 55.50 50.54 27.59 25.16 25.06 49</u> 50 57.74 54.41 51.33 45.87 43.43 41.18 39.09 37.14 33.65 30.63 27.99 25.68 23.66 50	40 40	50.00	55.07	50.08 50.00	40.93	44.21	41.09	39.37 30.22	37.21	33.37 33.50	30.03	27.19	24.09	22.52	40 70
	50	57 74	54 41	51.33	45 87	43.43	41 18	39.09	37 14	33.65	30.63	27.99	25.68	23.66	50

Table 21Multipliers for loss of pension commencing age 55 (males)

Ago at	Multiplic		d with allo	wanco for	projected	mortality fr	om tha 201	8 basad	nonulatio		200			Ago at
date of	and rate	of return	of		projecteur	nonality in		lo-baseu	population	i piojecii	115			Aye at
trial	anu rate	orietuin	01											trial
uiai	2 000/	1 750/	4 500/	1 000/	0 750/	0 500/	0.250/	0.000/	0 500/	1 000/	1 500/	2 000/	2 5 00/	uiai
_	-2.00%	-1.75%	-1.30%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	-
0	155.45	127.78	105.19	71.60	59.20	49.02	40.64	33.75	23.36	16.26	11.37	7.99	5.65	0
1	152.28	125.52	103.60	70.89	58.77	48.79	40.56	33.77	23.50	16.44	11.55	8.16	5.80	1
2	148.70	122.88	101.70	69.96	58.15	48.41	40.35	33.68	23.55	16.56	11.71	8.31	5.93	2
3	145.16	120.29	99.81	69.03	57.53	48.01	40.11	33.58	23.60	16.68	11.85	8.46	6.07	3
4	141.71	117.73	97.95	68.11	56.90	47.61	39.89	33.47	23.65	16.80	12.00	8.61	6.20	4
5	138.32	115.23	96.13	67.18	56.28	47.22	39.67	33.37	23.70	16.93	12.15	8.76	6.35	5
6	135.01	112.77	94.34	66.29	55.67	46.83	39.44	33.26	23.76	17.05	12.30	8.92	6.49	6
7	131.79	110.38	92.57	65.39	55.07	46.44	39.22	33.16	23.80	17.18	12.46	9.07	6.64	7
8	128.64	108.03	90.84	64.50	54.47	46.05	38.99	33.06	23.86	17.30	12.60	9.23	6.79	8
9	125.55	105.71	89.13	63.64	53.87	45.67	38.77	32.96	23.90	17.42	12.76	9.39	6.95	9
10	122.54	103.46	87.46	62.77	53.28	45.29	38.55	32.85	23.95	17.54	12.92	9.56	7.10	10
11	119.59	101.23	85.81	61.91	52.69	44.91	38.32	32.75	23.99	17.67	13.07	9.73	7.26	11
12	116.72	99.06	84.20	61.07	52.11	44.53	38.10	32.64	24.04	17.79	13.23	9.89	7.43	12
13	113.91	96.93	82.61	60.24	51.54	44.15	37.87	32.53	24.09	17.93	13.40	10.06	7.59	13
14	111.16	94.86	81.05	59.42	50.98	43.79	37.66	32.43	24.13	18.05	13.57	10.24	7.77	14
15	108.48	92.81	79.52	58.61	50.41	43.41	37.44	32.32	24.19	18.18	13.73	10.42	7.94	15
16	105.87	90.82	78.02	57.80	49.85	43.04	37.22	32.21	24.23	18.31	13.90	10.60	8.11	16
17	103.32	88.88	76.55	57.02	49.30	42.68	37.00	32.11	24.28	18.44	14.07	10.79	8.30	17
18	100.83	86.97	75.11	56.24	48.76	42.33	36.79	32.01	24.33	18.57	14.24	10.98	8.49	18
19	98.41	85.10	73.70	55.48	48.22	41.97	36.57	31.91	24.37	18.71	14.42	11.16	8.68	19
20	96.05	83.29	72.31	54.72	47.69	41.62	36.36	31.81	24.43	18.84	14.60	11.36	8.87	20
21	93.75	81.51	70.96	53.99	47.17	41.27	36.15	31.71	24.48	18.98	14.77	11.56	9.08	21
22	91.49	79.76	69.62	53.25	46.66	40.92	35.95	31.60	24.53	19.11	14.96	11.76	9.28	22
23	89.30	78.06	68.32	52.53	46.15	40.59	35.74	31.51	24.57	19.25	15.15	11.97	9.50	23
24	87.16	76.39	67.04	51.82	45.64	40.25	35.54	31.41	24.62	19.39	15.34	12.18	9.71	24
25	85.07	74.76	65.78	51.12	45.14	39.92	35.33	31.31	24.68	19.54	15.52	12.39	9.93	25
26	83.03	73.16	64.55	50.43	44.65	39.58	35.13	31.22	24.73	19.68	15.72	12.62	10.16	26
27	81.04	71.60	63.34	49.74	44.17	39.25	34.94	31.12	24.78	19.82	15.92	12.83	10.39	27
28	79.10	70.07	62.16	49.08	43.68	38.93	34.74	31.02	24.83	19.97	16.11	13.06	10.63	28
29	77.20	68.58	60.99	48.42	43.21	38.61	34.54	30.93	24.88	20.11	16.32	13.29	10.87	29
30	75.36	67.13	59.85	47.77	42.74	38.29	34.34	30.83	24.94	20.26	16.52	13.52	11.12	30
31	73.56	65.70	58.74	47.13	42.29	37.98	34.15	30.74	24.99	20.41	16.73	13.77	11.37	31
32	71.81	64.31	57.66	46.50	41.82	37.67	33.97	30.66	25.05	20.56	16.94	14.01	11.64	32
33	70.10	62.94	56.58	45.88	41.38	37.37	33.78	30.57	25.12	20.72	17.16	14.26	11.91	33
34	68.44	61.62	55.54	45.28	40.94	37.06	33.59	30.48	25.17	20.87	17.38	14.52	12.18	34
35	66.83	60.32	54.51	44.68	40.51	36.78	33.42	30.40	25.23	21.03	17.59	14.78	12.46	35
36	65.25	59.06	53.51	44.09	40.09	36.48	33.25	30.31	25.30	21.20	17.82	15.05	12.75	36
37	63.71	57.83	52.54	43.52	39.67	36.20	33.07	30.24	25.37	21.36	18.06	15.33	13.04	37
38	62.22	56.63	51.59	42.96	39.26	35.92	32.90	30.16	25.44	21.53	18.29	15.60	13.35	38
39	60.78	55.45	50.66	42.41	38.86	35.65	32.74	30.09	25.50	21.71	18.54	15.88	13.67	39
40	59.37	54.31	49.75	41.86	38.46	35.38	32.58	30.03	25.58	21.88	18.78	16.19	13.99	40
41	57.99	53.20	48.86	41.33	38.09	35.12	32.42	29.96	25.66	22.06	19.03	16.48	14.33	41
42	56.66	52.12	47.99	40.83	37.71	34.87	32.28	29.90	25.74	22.25	19.29	16.79	14.67	42
43	55.37	51.07	47.15	40.32	37.34	34.62	32.13	29.85	25.83	22.43	19.56	17.11	15.02	43
44	54.11	50.04	46.33	39.83	36.99	34.37	31.99	29.80	25.92	22.63	19.82	17.43	15.38	44
45	52.88	49.04	45.53	39.35	36.64	34.15	31.85	29.75	26.01	22.83	20.10	17.77	15.76	45
46	51.70	48.07	44.74	38.87	36.29	33.91	31.72	29.70	26.10	23.03	20.39	18.11	16.14	46
47	50.55	47.13	43.97	38.41	35.96	33.69	31.60	29.66	26.20	23.24	20.68	18.46	16.54	47
48	49.42	46.20	43.23	37.96	35.64	33.47	31.47	29.62	26.31	23.46	20.98	18.83	16.94	48
49	48.33	45.31	42.51	37.53	35.32	33.27	31.36	29.60	26.42	23.68	21.28	19.19	17.37	49
50	47.28	44.44	41.80	37.10	35.01	33.06	31.25	29.57	26.54	23.90	21.60	19.58	17.80	50
51	46.25	43.59	41.11	36.70	34.71	32.87	31.15	29.55	26.66	24.13	21.92	19.98	18.26	51
52	45.26	42.77	40.45	36.29	34.42	32.68	31.05	29.54	26.79	24.38	22.25	20.38	18.72	52
53	44.31	41.97	39.81	35.91	34.14	32.51	30.96	29.53	26.92	24.63	22.60	20.81	19.21	53
54	43.37	41.20	39.18	35.53	33.88	32.34	30.89	29.53	27.06	24.89	22.96	21.24	19.71	54
55	42 48	40 47	38.58	35.17	33.63	32.18	30.82	29.55	27.22	25 16	23.33	21 69	20.23	55

Table 22Multipliers for loss of pension commencing age 55 (females)

Age at	Multiplie	er calculate	ed with allo	wance for	projected i	mortality fro	om the 201	8-based	population	n projectio	ons			Age at
date of	and rate	e of return	of											date of
trial														trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	169.00	129.62	112 80	77 01	62 72	52.66	12 59	26 12	24 02	17.20	12.05	9 15	5.06	0
1	100.99	100.00	113.09	76.45	63.72	52.00	43.30	26.14	24.92	17.20	12.00	0.40	0.90	1
1	100.00	130.17	112.10	76.45	03.20	52.41	43.49	30.14	25.00	17.40	12.20	0.03	0.11	1
2	161.77	133.40	110.17	75.49	62.63	52.02	43.28	36.06	25.13	17.61	12.41	8.79	6.26	2
3	158.02	130.67	108.21	74.52	61.99	51.63	43.06	35.97	25.20	17.76	12.58	8.95	6.40	3
4	154.36	127.97	106.26	73.58	61.36	51.24	42.85	35.88	25.27	17.89	12.73	9.11	6.55	4
5	150.78	125.34	104.35	72.63	60.73	50.84	42.63	35.80	25.34	18.03	12.90	9.27	6.70	5
6	147.28	122.75	102.47	71.70	60.11	50.45	42.41	35.71	25.40	18.18	13.06	9.44	6.86	6
7	143.86	120.22	100.61	70.77	59.49	50.07	42.20	35.62	25.47	18.32	13.23	9.62	7.02	7
8	140.51	117.74	98.80	69.86	58.88	49.69	41.98	35.53	25.54	18.46	13.41	9.79	7.18	8
9	137.23	115.30	97.01	68.97	58.26	49.30	41.76	35.43	25.61	18.60	13.58	9.96	7.35	9
10	134.03	112.91	95.25	68.07	57.66	48.91	41.56	35.34	25.67	18.74	13.75	10.14	7.52	10
11	130.91	110.57	93.52	67.19	57.07	48.54	41.33	35.26	25.74	18.89	13.93	10.33	7.69	11
12	127.86	108.28	91.83	66 32	56 48	48 16	41 12	35.17	25.80	19.00	14 11	10.50	7.87	12
13	12/ 87	106.20	90.15	65.46	55 80	40.10	10 01	35.07	25.88	10.04	1/ 20	10.01	8.05	13
1/	124.07	102.03	99.13	64.61	55.31	47.73	40.51	24.02	25.00	10.22	14.23	10.70	0.00	14
4	121.95	103.02	00.32	04.01	53.31	47.42	40.70	34.90	20.94	19.55	14.47	10.09	0.23	14
15	119.10	101.67	00.91	63.77	54.74	47.04	40.49	34.09	20.01	19.40	14.00	11.09	0.42	10
16	116.32	99.56	85.33	62.94	54.17	46.68	40.27	34.80	26.07	19.63	14.85	11.29	8.62	16
1/	113.60	97.50	83.78	62.13	53.61	46.32	40.07	34.71	26.14	19.78	15.04	11.49	8.82	17
18	110.94	95.47	82.26	61.32	53.05	45.95	39.86	34.61	26.20	19.94	15.24	11.70	9.02	18
19	108.35	93.48	80.77	60.53	52.50	45.60	39.65	34.52	26.27	20.08	15.43	11.91	9.23	19
20	105.82	91.54	79.30	59.74	51.95	45.24	39.45	34.43	26.33	20.25	15.63	12.13	9.44	20
21	103.34	89.64	77.85	58.96	51.41	44.89	39.24	34.35	26.40	20.39	15.83	12.34	9.66	21
22	100.93	87.78	76.44	58.21	50.89	44.54	39.04	34.25	26.47	20.56	16.03	12.56	9.89	22
23	98.56	85.95	75.05	57.45	50.35	44.19	38.83	34.16	26.54	20.71	16.24	12.79	10.12	23
24	96.25	84.17	73.68	56.70	49.83	43.84	38.63	34.08	26.61	20.87	16.45	13.02	10.35	24
25	94 00	82 41	72.35	55.96	49.31	43 50	38.42	33.99	26.68	21.03	16.66	13.26	10.59	25
26	91 79	80.69	71 03	55 23	48 79	43 17	38 23	33.89	26 74	21.00	16.88	13 50	10.84	26
27	89.65	79.02	69.73	54 52	48.29	42.82	38.03	33.81	26.81	21.20	17.00	13.74	11.08	27
28	87 55	77.37	68.46	53.81	40.25	42.02	37.83	33 71	26.88	21.50	17.00	13.00	11.00	28
20	95 50	75.76	67.22	53.01	47.70	42.50	37.63	22.62	20.00	21.00	17.51	14.24	11.04	20
29	00.00	73.70	65.00	53.10	47.20	42.10	37.03	22.03	20.94	21.09	17.55	14.24	11.01	29
30	03.30	74.19	65.99	52.42	40.00	41.03	37.43	33.34	27.02	21.00	17.77	14.49	11.07	30
31	81.55	72.65	64.80	51.74	46.31	41.51	37.24	33.40	27.09	22.03	17.99	14.75	12.14	31
32	79.65	71.14	63.63	51.07	45.84	41.19	37.05	33.37	27.16	22.20	18.23	15.03	12.43	32
33	77.79	69.67	62.48	50.42	45.37	40.87	36.86	33.29	27.23	22.37	18.46	15.29	12.72	33
34	75.98	68.23	61.35	49.77	44.90	40.55	36.68	33.20	27.30	22.56	18.70	15.57	13.02	34
35	74.21	66.82	60.24	49.12	44.44	40.25	36.49	33.13	27.38	22.74	18.94	15.86	13.32	35
36	72.49	65.44	59.16	48.50	43.99	39.94	36.31	33.05	27.46	22.91	19.20	16.15	13.63	36
37	70.81	64.10	58.09	47.88	43.54	39.64	36.13	32.97	27.53	23.10	19.45	16.44	13.95	37
38	69.17	62.78	57.04	47.27	43.11	39.34	35.96	32.89	27.62	23.28	19.70	16.74	14.28	38
39	67.57	61.49	56.03	46.68	42.67	39.05	35.78	32.82	27.69	23.47	19.97	17.05	14.61	39
40	66.02	60.24	55.03	46.08	42.24	38.76	35.60	32.75	27.78	23.66	20.23	17.36	14.96	40
41	64.49	59.01	54.05	45.50	41.82	38.48	35.44	32.67	27.87	23.85	20.50	17.69	15.32	41
42	63.02	57.81	53.09	44.94	41.40	38.20	35.27	32.60	27.95	24.05	20.78	18.01	15.68	42
43	61.57	56.64	52.16	44.38	41.00	37.92	35.11	32.54	28.04	24.25	21.06	18.36	16.06	43
44	60 17	55 49	51.24	43.83	40.60	37.66	34.95	32 48	28.12	24 45	21.34	18 70	16 44	44
45	59.90	54.39	50.34	12.00	40.21	27.20	34.70	22.10	20.12	24.67	21.64	10.05	16.94	45
40	57 / 2	52 20	10.34	40.29 10 76	20.21	37 10	34.13	32.42	20.22	24.07	21.04	10./1	17.04	40 76
40	56 10	50.29	43.41	42.10	20.44	36 07	2/ 50	32.30	20.31	24.01	∠1.94 22.24	10.70	17.24	40
4/	54.00	52.23	40.02	42.20	39.44 20.00	30.07	34.30	JZ.JI	20.41	20.09	22.24	19.70		47
48	54.92	51.20	41.18	41.75	39.08	30.62	34.36	32.20	20.53	25.31	22.50	20.16	10.08	48
49	53.69	50.19	40.9/	41.25	38.72	30.38	34.21	32.21	28.62	25.54	22.87	20.55	18.53	49
50	52.51	49.21	46.16	40.77	38.36	36.14	34.09	32.17	28.74	25.78	23.20	20.94	18.98	50
51	51.35	48.25	45.40	40.30	38.03	35.92	33.96	32.14	28.86	26.02	23.53	21.36	19.45	51
52	50.23	47.33	44.64	39.85	37.70	35.70	33.84	32.10	28.98	26.26	23.88	21.79	19.94	52
53	49.14	46.43	43.91	39.39	37.37	35.49	33.72	32.09	29.12	26.51	24.23	22.22	20.44	53
54	48.09	45.56	43.20	38.97	37.06	35.28	33.62	32.07	29.25	26.78	24.60	22.67	20.96	54
55	47.08	44.72	42.52	38.55	36.76	35.09	33.53	32.06	29.40	27.05	24.98	23.14	21.50	55

Table 23 Multipliers for loss of pension commencing age 60 (males)

Age at	Multiplie	er calculate	ed with allo	wance for	proiected i	mortality fro	om the 201	8-based	populatio	n proiectio	ons			Age at
date of	and rate	e of return	of		, ,	,, ,				1				date of
trial														trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	140.13	114.55	93.76	63.06	51.81	42.63	35.11	28.95	19.76	13.55	9.34	6.46	4.49	0
1	137.23	112.48	92.31	62.41	51.42	42.41	35.02	28.96	19.87	13.70	9.48	6.59	4.61	1
2	133.95	110.08	90.58	61.57 60.72	50.85	42.06	34.82	28.87	19.91	13.79	9.60	6.71	4.71	2
3	130.71	107.71	00.00 87 17	59.88	50.29 49.72	41.09 41.33	34.01	28.77	19.94	13.09	9.71	0.03 6.94	4.0Z 4.02	3 4
<u></u> 5	124.35	103.00	85.52	59.00	49.16	40.97	34 19	28.57	20.01	14.08	9.00	7.06	5.03	5
6	121.43	100.86	83.89	58.24	48.60	40.62	33.98	28.46	20.04	14.17	10.07	7.19	5.15	6
7	118.48	98.68	82.28	57.43	48.06	40.27	33.78	28.37	20.08	14.28	10.19	7.31	5.26	7
8	115.60	96.54	80.71	56.62	47.52	39.91	33.57	28.26	20.11	14.37	10.31	7.43	5.37	8
9	112.79	94.43	79.16	55.84	46.97	39.56	33.36	28.17	20.14	14.46	10.43	7.56	5.50	9
10	110.04	92.38	77.64	55.05	46.44	39.21	33.16	28.06	20.17	14.56	10.56	7.68	5.62	10
11	107.34	90.35	76.14	54.27	45.90	38.87	32.94	27.96	20.20	14.66	10.68	7.82	5.74	11
12	104.72	88.38	74.00	53.51	45.37	38.53	32.74	27.80	20.23	14.75	10.80	7.95	5.87	12
14	99.65	84 56	71.83	52.70	44.05	37.84	32.33	27.75	20.20	14.05	11.94	8.00	6.13	14
15	97.20	82.70	70.44	51.28	43.83	37.50	32.12	27.54	20.32	15.05	11.19	8.36	6.27	15
16	94.82	80.89	69.08	50.56	43.32	37.16	31.92	27.44	20.35	15.15	11.33	8.50	6.40	16
17	92.50	79.12	67.75	49.85	42.83	36.84	31.72	27.34	20.38	15.25	11.46	8.65	6.54	17
18	90.23	77.39	66.45	49.15	42.34	36.51	31.52	27.24	20.41	15.35	11.59	8.79	6.69	18
19	88.03	75.69	65.16	48.45	41.85	36.19	31.32	27.14	20.44	15.46	11.73	8.94	6.83	19
20	85.88	74.04	63.91	47.77	41.37	35.87	31.12	27.04	20.47	15.56	11.87	9.09	6.98	20
21	83.78	72.43	62.69	47.11	40.90	35.55	30.93	26.94	20.50	15.66	12.01	9.24	7.15	21
22	81.73	70.84	61.4/	46.45	40.44	35.23	30.74	26.84	20.54	15.76	12.15	9.40	7.30	22
23	79.73	67 79	50.30 50 1 <i>1</i>	45.79	39.97	34.93	30.54	20.74	20.50	15.07	12.30	9.50	7.47	23
25	75.88	66.30	58.00	44 52	39.06	34.32	30.17	26.55	20.00	16.09	12.59	9.89	7.80	25
26	74.03	64.86	56.88	43.89	38.61	34.00	29.98	26.46	20.66	16.20	12.74	10.06	7.97	26
27	72.22	63.44	55.79	43.28	38.18	33.71	29.80	26.36	20.69	16.30	12.90	10.23	8.15	27
28	70.46	62.06	54.72	42.68	37.74	33.41	29.61	26.26	20.73	16.42	13.04	10.41	8.33	28
29	68.74	60.71	53.67	42.08	37.31	33.12	29.43	26.17	20.75	16.52	13.21	10.58	8.51	29
30	67.07	59.39	52.64	41.49	36.89	32.83	29.24	26.07	20.79	16.64	13.36	10.76	8.70	30
31	65.43	58.10	51.63	40.92	36.48	32.55	29.07	25.98	20.82	16.75	13.52	10.95	8.89	31
32	63.84	55.84	00.00	40.35	30.00	32.20	28.90	25.90	20.86	16.00	13.00	11.13	9.10	32
33 34	60 78	54 41	49.00	39.79	35.00	31.90	20.72	25.01	20.90	17 10	13.00	11.55	9.50	33
35	59.32	53.23	47.82	38.70	34.87	31.44	28.38	25.64	20.98	17.23	14.19	11.73	9.72	35
36	57.89	52.09	46.92	38.18	34.49	31.17	28.22	25.55	21.02	17.35	14.36	11.94	9.94	36
37	56.50	50.98	46.04	37.66	34.11	30.92	28.05	25.47	21.06	17.47	14.55	12.15	10.17	37
38	55.14	49.89	45.18	37.15	33.74	30.66	27.89	25.39	21.11	17.60	14.72	12.36	10.40	38
39	53.84	48.83	44.34	36.66	33.37	30.41	27.74	25.32	21.15	17.74	14.91	12.57	10.64	39
40	52.56	47.80	43.52	36.16	33.01	30.16	27.58	25.25	21.20	17.86	15.10	12.81	10.88	40
41	51.31	46.80	42.72	35.69	32.67	29.93	27.44	25.17	21.26	18.00	15.29	13.03	11.14	41
42 43	18 QA	40.0Z 44.87	41.94	30.23	32.33	29.70	27.30	25.11	21.31	18.14	15.49	13.27	11.40	42
44	47.80	43.94	40.44	34.33	31.67	29.24	27.02	24.99	21.43	18.43	15.90	13.75	11.93	44
45	46.69	43.04	39.72	33.89	31.35	29.03	26.89	24.94	21.49	18.58	16.11	14.01	12.22	45
46	45.62	42.16	39.00	33.47	31.04	28.81	26.76	24.88	21.55	18.73	16.32	14.27	12.51	46
47	44.58	41.31	38.31	33.05	30.73	28.60	26.64	24.83	21.62	18.90	16.55	14.54	12.81	47
48	43.56	40.48	37.65	32.64	30.44	28.40	26.52	24.78	21.70	19.05	16.78	14.82	13.12	48
49	42.57	39.68	36.99	32.25	30.15	28.21	26.41	24.75	21.78	19.22	17.01	15.09	13.44	49
50	41.62	38.89	36.35	31.86	29.86	28.01	26.30	24.71	21.86	19.39	17.25	15.38	13.76	50
51 52	40.69 30 20	38.13 37 29	30.74 35 11	31.49	∠9.59 20.22	27.83	20.19	24.67 24.65	21.94	19.57	17.50	15.69	14.10 14.45	51 52
53	38.00	36 66	34 56	30.78	29.33 29.07	27.00 27.40	20.10	24.00	22.00	19.75	18.01	16 32	14.40	52
54	38.09	35.97	34.00	30.43	28.83	27.33	25.93	24.61	22.23	20.13	18.29	16.65	15.20	54
55	37.28	35.31	33.45	30.11	28.60	27.18	25.85	24.61	22.34	20.34	18.57	16.99	15.58	55
56	36.51	34.66	32.93	29.80	28.38	27.04	25.79	24.61	22.46	20.55	18.86	17.34	15.99	56
57	35.76	34.05	32.44	29.51	28.17	26.92	25.73	24.63	22.60	20.78	19.16	17.72	16.42	57
58	35.06	33.47	31.96	29.23	27.99	26.81	25.70	24.65	22.74	21.02	19.49	18.11	16.87	58
59	34.38	32.91	31.52	28.98	27.82	26.72	25.68	24.70	22.90	21.28	19.83	18.52	17.34	59
60	33.75	32.39	31.10	28.75	27.67	26.64	25.68	24.76	23.07	21.56	20.19	18.95	17.83	60

Table 24 Multipliers for loss of pension commencing age 60 (females)

Age at	Multiplie	er calculate	ed with allo	wance for	projected r	mortality fro	om the 201	8-based	population	n projectio	ons			Age at
date of trial	and rate	e of return	of											date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	153.45	125.21	102.30	68.54	56.23	46.17	37.97	31.26	21.26	14.54	9.99	6.89	4.78	0
1	150.29	122.94	100.71	67.85	55.80	45.94	37.88	31.27	21.38	14.70	10.15	7.03	4.90	1
2	146.80	120.41	98.89	66.98	55.22	45.58	37.68	31.19	21.43	14.81	10.27	7.16	5.02	2
3	143.36	117.90	97.10	66.09	54.64	45.23	37.47	31.09	21.48	14.92	10.41	7.29	5.13	3
4	139.99	115.43	95.32	65.23	54.07	44.86	37.28	31.01	21.54	15.03	10.53	7.42	5.24	4
5	136.70	113.03	93.57	64.37	53.49	44.50	37.08	30.93	21.59	15.14	10.67	7.55	5.37	5
6 7	133.48	110.66	91.85	63.52	52.93	44.15	30.87	30.84	21.63	15.26	10.80	7.68	5.49	6 7
8	100.00	106.04	90.10 88.51	61.85	51 81	43.79	36.00	30.75	21.00	15.37	11.94	7.02	5.02	/ 8
9	124.26	103.84	86.88	61.03	51.25	43.09	36.27	30.57	21.74	15.40	11.00	8 10	5.88	9
10	121.33	101.65	85.27	60.23	50.70	42.74	36.08	30.48	21.83	15.71	11.35	8.24	6.01	10
11	118.46	99.51	83.70	59.42	50.17	42.39	35.87	30.39	21.88	15.82	11.50	8.39	6.15	11
12	115.66	97.42	82.15	58.64	49.63	42.05	35.67	30.30	21.93	15.95	11.64	8.54	6.28	12
13	112.92	95.36	80.63	57.86	49.10	41.71	35.48	30.21	21.98	16.06	11.78	8.68	6.43	13
14	110.24	93.35	79.14	57.08	48.56	41.37	35.28	30.12	22.03	16.18	11.93	8.83	6.57	14
15	107.63	91.38	77.67	56.32	48.05	41.03	35.08	30.03	22.08	16.30	12.08	8.99	6.72	15
16	105.08	89.45	76.23	55.57	47.53	40.70	34.88	29.94	22.12	16.41	12.23	9.15	6.88	16
17	102.59	87.57	74.82	54.83	47.02	40.37	34.70	29.85	22.17	16.53	12.39	9.31	7.03	17
18	100.15	85.71	73.44	54.10	46.51	40.03	34.50	29.76	22.22	16.66	12.54	9.47	7.19	18
19	97.78	83.90	72.08	53.38	46.01	39.71	34.30	29.67	22.26	16.77	12.69	9.65	7.35	19
20	95.40	02.13 80.20	70.74 60.72	52.07	45.52	39.30 20.07	34.12	29.00	22.31	10.90	12.00	9.62	7.52	20
21	93.19 QA QR	78 69	68 1 <i>4</i>	51.90	45.05	39.07	33.92	29.49	22.30	17.02	13.01	9.99	7.09	21
22	88.82	77.03	66.88	50 58	44.06	38.43	33 54	29.40	22.40	17.13	13.17	10.10	8.05	22
24	86.70	75.40	65.63	49.91	43.59	38.10	33.35	29.23	22.51	17.40	13.50	10.52	8.23	24
25	84.65	73.80	64.42	49.24	43.12	37.79	33.16	29.14	22.55	17.52	13.67	10.71	8.42	25
26	82.63	72.23	63.22	48.58	42.65	37.49	32.98	29.04	22.59	17.65	13.84	10.90	8.61	26
27	80.67	70.71	62.04	47.93	42.19	37.17	32.79	28.96	22.65	17.78	14.01	11.08	8.80	27
28	78.75	69.21	60.89	47.29	41.73	36.88	32.61	28.87	22.70	17.91	14.19	11.28	9.00	28
29	76.87	67.74	59.76	46.65	41.28	36.57	32.43	28.78	22.74	18.04	14.36	11.48	9.21	29
30	75.05	66.31	58.65	46.03	40.84	36.27	32.24	28.70	22.79	18.18	14.55	11.67	9.41	30
31	73.27	64.91	57.56	45.41	40.39	35.98	32.06	28.61	22.84	18.31	14.72	11.88	9.62	31
32	71.53	63.53	56.50	44.81	39.96	35.68	31.89	28.52	22.89	18.44	14.91	12.10	9.85	32
33	69.83 69.19	60.80	53.40 54.42	44.21	39.54	35.39	31.71	28.44	22.94	18.57	15.09	12.31	10.07	33
35	66.57	50.61	53 / 2	43.02	38.70	34.82	31.34	20.30	22.99	18.86	15.20	12.55	10.50	35
36	65.00	58.35	52.44	42 48	38.29	34.54	31.20	28.20	23.04	19.00	15.47	12.75	10.33	36
37	63.46	57.13	51.47	41.92	37.88	34.26	31.02	28.12	23.15	19.14	15.87	13.20	11.02	37
38	61.97	55.93	50.53	41.36	37.49	33.99	30.86	28.03	23.22	19.28	16.07	13.44	11.28	38
39	60.51	54.76	49.61	40.83	37.09	33.72	30.69	27.96	23.26	19.43	16.28	13.69	11.54	39
40	59.10	53.62	48.70	40.29	36.70	33.46	30.53	27.89	23.32	19.58	16.49	13.93	11.80	40
41	57.71	52.50	47.82	39.77	36.32	33.20	30.37	27.81	23.39	19.73	16.70	14.18	12.09	41
42	56.37	51.41	46.95	39.25	35.94	32.94	30.22	27.74	23.45	19.88	16.92	14.43	12.36	42
43	55.05	50.35	46.10	38.75	35.57	32.68	30.07	27.68	23.51	20.04	17.14	14.70	12.65	43
44	53.77	49.31	45.27	38.25	35.21	32.44	29.91	27.61	23.57	20.20	17.36	14.97	12.95	44
40 46	52.52 51.32	40.30	44.40	37.77	34.00	32.20	29.70	27.54	23.04 23.71	20.30	17.59	15.24	13.20	45
40	50.14	47.31	43.07	36.82	34.31	31.90	29.03	27.40	23.71	20.52	18.06	15.52	13.50	40
48	48.99	45.41	42.13	36.37	33.83	31.49	29.35	27.37	23.86	20.86	18.31	16.10	14.21	48
49	47.87	44.50	41.40	35.92	33.50	31.27	29.21	27.31	23.93	21.04	18.56	16.40	14.55	49
50	46.80	43.61	40.67	35.48	33.17	31.05	29.09	27.26	24.01	21.22	18.81	16.71	14.90	50
51	45.75	42.74	39.97	35.05	32.87	30.84	28.96	27.22	24.10	21.41	19.07	17.04	15.26	51
52	44.73	41.90	39.29	34.64	32.57	30.64	28.85	27.18	24.19	21.60	19.34	17.37	15.64	52
53	43.74	41.09	38.63	34.23	32.27	30.44	28.73	27.15	24.29	21.80	19.62	17.71	16.02	53
54	42.78	40.30	37.99	33.84	31.98	30.25	28.63	27.13	24.39	22.00	19.90	18.05	16.42	54
55	41.86	39.54	37.37	33.47	31.71	30.07	28.54	27.10	24.50	22.21	20.20	18.42	16.83	55
56	40.96	38.80	36.77	33.11	31.45	29.90	28.45	27.09	24.62	22.44	20.50	18.79	17.26	56
5/	40.10	38.08	36.19	32.75	31.20	29.74	28.38	27.09	24.74	22.66	20.82	19.17	17.70	5/
50	39.20 38.19	36 73	35.03	32.4Z 32.11	30.90	29.09 20 16	20.30	∠1.09 27.11	24.00 25.02	22.91	21.10 21.40	19.00	10.17	50
60	37.72	36.10	34.58	31.80	30.53	29.33	28.20	27.14	25.18	23.42	21.85	20.43	19.15	60
~~	<u> </u>					-0.00								

Table 25 Multipliers for loss of pension commencing age 65 (males)

Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected r	nortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	123.47	100.34	81.64	54.23	44.27	36.18	29.60	24.24	16.31	11.02	7.48	5.09	3.48	0
1	120.85	98.48	80.33	53.64	43.91	35.97	29.51	24.24	16.39	11.13	7.59	5.19	3.57	1
2	117.91	96.33	78.79	52.89	43.40	35.66	29.33	24.15	16.42	11.20	7.68	5.29	3.65	2
3 4	112.00	94.21 92.12	75 75	52.14 51 39	42.90 42 39	35.33	29.13	24.05 23.95	16.43	11.27	7.77	5.37 5.46	3.73	3 4
5	109.38	90.08	74.27	50.64	41.89	34.68	28.75	23.85	16.47	11.42	7.95	5.55	3.89	5
6	106.67	88.08	72.82	49.92	41.39	34.36	28.56	23.75	16.49	11.49	8.03	5.65	3.98	6
7	104.03	86.13	71.39	49.20	40.91	34.05	28.37	23.66	16.51	11.56	8.13	5.74	4.06	7
8	101.45	84.22	69.98	48.48	40.42	33.73	28.17	23.56	16.53	11.63	8.22	5.83	4.15	8
<u> </u>	98.92	82.33	68.60	47.78	39.94	33.41	27.98	23.47	16.54	11.70	8.31	5.93	4.24	9 10
10	90.40 94.05	78 70	65.92	47.00	38.98	32 79	27.60	23.30	16.55	11.77	8.50	6.02	4.33	10
12	91.70	76.93	64.61	45.71	38.51	32.48	27.41	23.16	16.58	11.91	8.59	6.22	4.52	12
13	89.41	75.21	63.34	45.05	38.05	32.17	27.22	23.06	16.59	11.99	8.69	6.32	4.62	13
14	87.17	73.52	62.07	44.39	37.59	31.87	27.04	22.96	16.61	12.06	8.79	6.42	4.72	14
15	84.98	71.86	60.84	43.74	37.14	31.56	26.85	22.86	16.63	12.13	8.88	6.53	4.82	15
16 17	82.85	70.25	59.63 59.45	43.09	36.68	31.26	26.67	22.76	16.64	12.20	8.98	6.63	4.91	16 17
18	00.76 78.75	67.14	56.45	42.40	35.81	30.90	26.40	22.07	16.67	12.20	9.08	6.86	5.02	18
19	76.78	65.62	56.15	41.22	35.37	30.38	26.11	22.47	16.68	12.43	9.28	6.96	5.24	19
20	74.86	64.16	55.04	40.62	34.94	30.09	25.93	22.37	16.70	12.50	9.39	7.08	5.35	20
21	72.99	62.72	53.95	40.03	34.53	29.81	25.75	22.28	16.71	12.58	9.49	7.19	5.47	21
22	71.16	61.31	52.87	39.44	34.11	29.52	25.58	22.18	16.73	12.65	9.60	7.31	5.58	22
23	69.38	59.94	51.83	38.86	33.70	29.25	25.40	22.08	16.74	12.73	9.71	7.43	5./1	23
24	65.05	57.00	50.81	38.29	33.29	28.97	25.23	21.99	16.75	12.80	9.82	7.55	5.82	24
25	64.30	55.99	49.79	37.14	32.09	28.70	23.03	21.90	16.77	12.00	10.03	7.80	5.95 6.07	25
27	62.69	54.73	47.84	36.63	32.10	28.15	24.72	21.71	16.79	13.04	10.15	7.93	6.21	27
28	61.12	53.51	46.89	36.10	31.71	27.88	24.55	21.61	16.81	13.12	10.26	8.06	6.34	28
29	59.59	52.31	45.96	35.57	31.33	27.62	24.37	21.53	16.82	13.19	10.38	8.19	6.47	29
30	58.10	51.14	45.04	35.05	30.95	27.36	24.20	21.43	16.84	13.27	10.49	8.32	6.62	30
31	56.65	49.99	44.16	34.54	30.59	27.11	24.04	21.34	16.85	13.35	10.61	8.46	6.76	31
32 33	53.24 53.86	48.88 47.70	43.29	34.04 33.55	30.21	26.85	23.88	21.20	16.80	13.44	10.73	8.59 8.74	6.91 7.06	32 33
34	52.52	46.73	41.60	33.06	29.50	26.35	23.56	21.08	16.91	13.60	10.98	8.89	7.21	34
35	51.23	45.69	40.78	32.58	29.16	26.11	23.41	20.99	16.93	13.69	11.10	9.03	7.36	35
36	49.95	44.68	39.98	32.12	28.82	25.87	23.25	20.91	16.95	13.78	11.23	9.19	7.53	36
37	48.72	43.69	39.21	31.66	28.48	25.64	23.10	20.83	16.97	13.86	11.37	9.34	7.69	37
38	47.52	42.73	38.45	31.21	28.15	25.41	22.95	20.74	17.00	13.96	11.49	9.50	7.86	38
39	46.36	41.79	37.71	30.77	27.83	25.18	22.81	20.67	17.01	14.05	11.64	9.65	8.04	39
40 41	40.23 44 13	40.00	36.28	30.33 20.01	27.50	24.90 24 74	22.00	20.60	17.04	14.14	11.77	9.02 9.02	0.21 8.40	40 41
42	43.06	39.13	35.59	29.51	26.90	24.53	22.40	20.32	17.10	14.34	12.06	10.16	8.59	42
43	42.02	38.29	34.92	29.10	26.59	24.32	22.26	20.39	17.14	14.44	12.20	10.34	8.78	43
44	41.02	37.47	34.26	28.71	26.31	24.11	22.13	20.33	17.17	14.54	12.35	10.52	8.98	44
45	40.03	36.67	33.63	28.32	26.02	23.92	22.01	20.26	17.21	14.65	12.51	10.70	9.18	45
46	39.09	35.90	33.00	27.94	25.74	23.73	21.88	20.20	17.24	14.76	12.66	10.89	9.39	46
47 48	38.17	35.15	32.39	27.57	25.47	23.54	21.77	20.14	17.28	14.88	12.83	11.09	9.61	47 48
49	36.39	33.71	31.23	26.86	24.94	23.33	21.54	20.03	17.38	15.11	13.16	11.49	10.06	49
50	35.56	33.01	30.66	26.52	24.69	22.99	21.43	20.00	17.43	15.23	13.34	11.70	10.29	50
51	34.73	32.34	30.12	26.19	24.44	22.83	21.33	19.95	17.48	15.35	13.51	11.93	10.54	51
52	33.94	31.68	29.59	25.86	24.20	22.67	21.24	19.91	17.54	15.48	13.69	12.15	10.79	52
53	33.18	31.05	29.08	25.55	23.97	22.51	21.14	19.88	17.59	15.62	13.88	12.38	11.05	53
54	32.43	30.43	28.58	25.24	23.75	22.36	21.06	19.85	17.00	15./6	14.09	12.62	11.33	54
56	31.72	29.00 29.28	20.10	24.90 24 68	23.34 23.34	22.22 22.08	20.90	19.00	17.74	16.90	14.29	12.00 13.12	11.01	56
57	30.38	28.73	27.20	24.42	23.15	21.97	20.85	19.81	17.91	16.21	14.72	13.40	12.21	57
58	29.76	28.22	26.78	24.16	22.98	21.86	20.80	19.81	18.00	16.39	14.96	13.68	12.53	58
59	29.15	27.73	26.38	23.93	22.82	21.76	20.77	19.83	18.11	16.57	15.20	13.97	12.86	59
60	28.59	27.27	26.01	23.72	22.68	21.68	20.75	19.86	18.23	16.78	15.46	14.28	13.22	60
61	28.05	26.83	25.66	23.53	22.55	21.62	20.74	19.91	18.37	16.98	15.74	14.61	13.59	61
63 63	∠1.୦୦ ୧୮.୦୦	20.41	20.33 25.04	23.30 23.20	22.44 22 21	21.57 21.57	20.75	19.97 20.04	10.52	17.21	16.04	14.90	13.99	62 63
64	26.65	25.68	24.76	23.06	22.28	21.53	20.81	20.14	18.88	17.73	16.68	15.72	14.85	64
65	26.23	25.35	24.51	22.95	22.23	21.54	20.88	20.25	19.08	18.02	17.04	16.14	15.32	65

Table 26 Multipliers for loss of pension commencing age 65 (females)

A = = = +	M Itim Ii		مطايب المصالم					0 haaad						A ma at
Age at		er calculate	ed with allo	wance for	projected i	nortality fro	om the 201	8-based	population	n projectio	ons			Age at
trial	anu late	e or return	01											trial
uiai	2 000/	1 750/	4 500/	1 000/	0 750/	0 500/	0.250/	0.000/	0 500/	1 000/	1 500/	2 000/	2 500/	uiai
_	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	136.44	110.71	89.93	59.53	48.53	39.59	32.35	26.45	17.74	11.95	8.09	5.49	3.75	0
1	133.58	108.66	88.50	58.90	48.14	39.38	32.25	26.45	17.84	12.08	8.22	5.61	3.84	1
2	130.43	106.38	86.86	58.12	47.62	39.06	32.07	26.37	17.87	12.17	8.31	5.71	3.94	2
3	127.32	104.12	85.25	57.33	47.10	38.73	31.88	26.28	17.90	12.26	8.42	5.81	4.02	3
4	124.29	101.90	83.65	56.56	46.59	38.41	31.70	26.19	17.94	12.33	8.52	5.91	4.11	4
5	121.31	99.74	82.09	55.79	46.07	38.08	31.52	26.11	17.98	12.43	8.63	6.01	4.21	5
6	118.41	97.60	80.55	55.03	45.57	37.76	31.33	26.03	18.00	12.52	8.73	6.11	4.30	6
1		95.52	79.03	54.20	43.00	37.44	31.13	25.94	10.04	12.00	0.03	0.22	4.39	/
0	112.01	93.40	77.55	53.54	44.00	37.13	30.90	20.00	10.07	12.09	0.94	0.33	4.49	0
9	107.45	91.40	70.09	52.01	44.00	26.40	20.60	25.70	10.10	12.70	9.05	6.43	4.09	9
10	107.43	97.50	74.04	52.09	43.37	26 19	20.00	25.07	10.14	12.00	9.15	6.66	4.09	10
12	104.07	85 71	73.24	50.67	43.09	35.87	30.41	25.59	18.20	12.95	9.20	6 77	4.00	12
12	00.87	83.86	71.05	10.07	42.01	35.56	30.22	25.50	18.20	13.04	9.37	6.88	4.90 5.01	12
14	99.07	82.00	69 16	49.97	41 65	35.26	29.87	25.41	18.26	13.13	9.49	7.00	5.01	14
15	05.11	80.20	67.84	49.20	/1 20	3/ 05	20.68	25.02	18.20	13.22	0.72	7.00	5.24	15
16	02.82	78 56	66 56	40.00	41.20	34.55	29.00	25.24	18.32	13.31	0.83	7.12	5 36	16
17	92.02	76.30	65 30	47.52	40.73	34.00	20.30	25.15	18.32	13.00	0.05	7.24	5.30	17
18	88 38	75.21	64.05	46.61	30.82	34.05	29.55	23.00	18.35	13.45	10.07	7.30	5 59	18
10	86.25	73.58	62.84	45.07	30.02	33.76	28.07	24.88	18.41	13.50	10.07	7.43	5 71	10
20	84 16	72.00	61 65	45 33	38.03	33.46	28.80	24.00	18 44	13.07	10.13	7.02	5.84	20
20	82 13	70.44	60 47	44 70	38 49	33.18	28.61	24.75	18 47	13.85	10.01	7.88	5 97	20
22	80 14	68.92	59.33	44.09	38.06	32.89	28.45	24.62	18.50	13.96	10.40	8.01	6 11	22
23	78 20	67 43	58.19	43.47	37.62	32 60	28.27	24.52	18.53	14 04	10.68	8 15	6.24	23
24	76.30	65.97	57.08	42.87	37.20	32.31	28.09	24.45	18.56	14.14	10.81	8.29	6.38	24
25	74 46	64.54	56.00	42.28	36.78	32.03	27.92	24.36	18.59	14 23	10.94	8 44	6.52	25
26	72.65	63.14	54.93	41.69	36.36	31.75	27.75	24.27	18.61	14.33	11.07	8.58	6.67	26
27	70.89	61.77	53.88	41.11	35.95	31.47	27.58	24.19	18.65	14.42	11.19	8.72	6.81	27
28	69.17	60.43	52.85	40.54	35.54	31.20	27.41	24.09	18.68	14.52	11.33	8.87	6.96	28
29	67.48	59.13	51.84	39.97	35.14	30.93	27.24	24.01	18.70	14.62	11.46	9.02	7.12	29
30	65.85	57.84	50.85	39.41	34.74	30.65	27.07	23.93	18.74	14.72	11.61	9.17	7.27	30
31	64.26	56.59	49.89	38.86	34.35	30.39	26.90	23.84	18.77	14.82	11.74	9.33	7.43	31
32	62.70	55.36	48.94	38.33	33.96	30.13	26.74	23.75	18.80	14.92	11.88	9.49	7.60	32
33	61.18	54.17	48.01	37.80	33.59	29.86	26.58	23.68	18.83	15.02	12.02	9.65	7.77	33
34	59.70	53.00	47.10	37.28	33.20	29.60	26.42	23.59	18.85	15.13	12.16	9.82	7.94	34
35	58.26	51.86	46.20	36.76	32.84	29.35	26.26	23.51	18.89	15.23	12.31	9.98	8.11	35
36	56.86	50.74	45.33	36.26	32.47	29.10	26.10	23.43	18.92	15.33	12.46	10.16	8.30	36
37	55.48	49.65	44.46	35.76	32.10	28.85	25.94	23.35	18.95	15.44	12.61	10.33	8.48	37
38	54.14	48.58	43.62	35.27	31.75	28.60	25.79	23.27	19.00	15.55	12.76	10.50	8.68	38
39	52.84	47.54	42.81	34.79	31.39	28.36	25.63	23.19	19.02	15.66	12.92	10.69	8.86	39
40	51.58	46.53	42.00	34.31	31.05	28.12	25.48	23.12	19.06	15.76	13.08	10.87	9.06	40
41	50.34	45.53	41.21	33.85	30.71	27.89	25.34	23.04	19.10	15.88	13.23	11.06	9.28	41
42	49.14	44.56	40.44	33.39	30.37	27.65	25.19	22.97	19.14	15.99	13.40	11.25	9.48	42
43	47.96	43.62	39.69	32.94	30.04	27.42	25.05	22.90	19.18	16.11	13.56	11.45	9.70	43
44	46.82	42.69	38.95	32.49	29.71	27.20	24.91	22.83	19.21	16.22	13.73	11.66	9.92	44
45	45.71	41.79	38.22	32.07	29.40	26.98	24.77	22.76	19.26	16.34	13.91	11.86	10.15	45
46	44.64	40.91	37.53	31.64	29.09	26.76	24.64	22.69	19.30	16.46	14.08	12.07	10.38	46
47	43.59	40.05	36.84	31.23	28.78	26.54	24.50	22.63	19.34	16.59	14.26	12.29	10.61	47
48	42.57	39.22	36.16	30.82	28.48	26.34	24.38	22.57	19.40	16.71	14.44	12.50	10.86	48
49	41.57	38.41	35.51	30.42	28.19	26.13	24.25	22.51	19.44	16.84	14.63	12.73	11.11	49
50	40.61	37.62	34.87	30.03	27.89	25.94	24.13	22.46	19.50	16.98	14.82	12.96	11.37	50
51	39.68	30.85	34.25	29.65	27.02	25.74	24.01	22.41	19.50	17.12	15.02	13.20	11.03	51
52	38.77	36.10	33.04	29.29	27.30	25.50	23.90	22.30	19.62	17.20	15.21	13.45	10.00	52
ວຽ 54	31.09 27.02	30.30 24.60	33.00	20.92 20 57	21.00	20.31 25.20	23.19	22.32	19.00	17.40	15.43	13.70	12.20	ວຽ E1
55	36.00	34.00	24 04	20.01	20.02	20.20	23.09	22.29	10.00	17 71	15.04	14.00	12.00	54
55	35.42	32.21	31.94	20.23 27 02	20.37	20.00	23.00	∠∠.∠Ə 22.2Э	10.00	17 99	10.00	14.23	12.00	50
57	30.42	33.34 32 70	31.40	27.92	20.04	24.01 21 72	23.00	22.22	10.00	18 04	16.09	1/ 20	12.11	50
52	33 00	32.10	20.03	27.00	20.12	24.13	23.43	22.21 22.10	20 00	10.04	16.55	14.00	13.44	52
50	33 21	31 51	20.35	27.30	25.50	24.00	23.33	22.19	20.09	18 41	16.97	15.10	14 14	50
60	32 53	30 0/	20.01	26.74	25.03	24 33	23.23	22.20	20.20	18.61	17 00	15.73	14 51	60
61	31 87	30.04	29.01	26.74	25.30	24.00	23.19	22.21	20.01	18 81	17 37	16.75	14 89	61
62	31.24	29.89	28.60	26.24	25.15	24.13	23.17	22.25	20.56	19.03	17.66	16.42	15.30	62
63	30.65	29.40	28.20	26.01	25.01	24.05	23.15	22.28	20.70	19.26	17.97	16.79	15.72	63
64	30.08	28.92	27.83	25.81	24.87	23.98	23.14	22.34	20.86	19.51	18.29	17.18	16.17	64
65	29.55	28.48	27.48	25.61	24.75	23.93	23.15	22.41	21.03	19.77	18.63	17.59	16.64	65

Table 27 Multipliers for loss of pension commencing age 68 (males)

Age at	Multiplie	er calculate	ed with allo	wance for	projected r	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at
date of trial	and rate	e of return	Of											date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	112.83	91.37	74.06	48.81	39.69	32.31	26.32	21.47	14.32	9.59	6.45	4.35	2.95	0
1	107.67	89.64 87.64	72.84	48.27	39.35	32.11	20.23	21.45	14.39	9.68	6.54 6.62	4.43	3.02	1
3	104.98	85.68	70.00	46.88	38.42	31.51	25.87	21.37	14.40	9.80	6.69	4.58	3.15	3
4	102.35	83.75	68.61	46.19	37.95	31.21	25.69	21.17	14.42	9.86	6.76	4.65	3.21	4
5	99.77	81.87	67.25	45.50	37.48	30.91	25.51	21.08	14.43	9.92	6.84	4.73	3.28	5
6	97.26	80.02	65.90	44.83	37.02	30.61	25.33	20.98	14.44	9.97	6.91	4.81	3.36	6
7	94.81	78.22	64.58	44.16	36.58	30.32	25.16	20.89	14.45	10.03	6.99	4.89	3.43	7
o Q	92.43 90.09	76.45	62 01	43.50	35.13	30.02 29.72	24.97	20.79	14.40	10.06	7.00	4.90 5.04	3.49 3.58	o Q
10	87.82	73.02	60.76	42.21	35.23	29.43	24.62	20.60	14.47	10.20	7.22	5.12	3.64	10
11	85.58	71.35	59.54	41.57	34.79	29.15	24.43	20.51	14.47	10.25	7.29	5.20	3.72	11
12	83.42	69.72	58.33	40.95	34.36	28.86	24.26	20.41	14.48	10.31	7.37	5.29	3.80	12
13	81.30	68.13	57.16	40.34	33.93	28.57	24.08	20.31	14.49	10.37	7.45	5.37	3.88	13
14	79.22	66.58	56.00	39.73	33.51	28.29	23.90	20.21	14.49	10.43	7.53	5.45	3.97	14
15	77.20	63.05	54.80 53.74	39.13	33.09	28.01	23.72	20.12	14.50	10.48	7.61	5.54 5.62	4.05 4.13	15
17	73.32	62.11	52.66	37.95	32.07	27.45	23.38	19.92	14.50	10.60	7.03	5.72	4.13	17
18	71.45	60.69	51.59	37.38	31.86	27.18	23.21	19.83	14.52	10.66	7.85	5.81	4.30	18
19	69.64	59.29	50.54	36.81	31.46	26.91	23.03	19.74	14.52	10.72	7.93	5.90	4.39	19
20	67.87	57.94	49.52	36.26	31.06	26.64	22.86	19.64	14.53	10.78	8.02	5.99	4.48	20
21	66.14	56.62	48.52	35.71	30.68	26.37	22.69	19.55	14.53	10.84	8.10	6.08	4.58	21
22	62.81	55.32 54.06	47.53	35.17	30.30 20.01	26.11	22.53	19.45	14.54 14.54	10.90	8.19	6.18	4.67	22
24	61.21	52.82	45.62	34.11	29.54	25.60	22.20	19.27	14.54	11.02	8.37	6.38	4.87	24
25	59.65	51.61	44.69	33.60	29.16	25.34	22.03	19.17	14.55	11.08	8.45	6.47	4.97	25
26	58.13	50.43	43.78	33.09	28.80	25.08	21.87	19.08	14.55	11.14	8.54	6.58	5.07	26
27	56.65	49.27	42.90	32.59	28.44	24.84	21.71	18.99	14.56	11.20	8.64	6.68	5.18	27
28	55.21	48.15	42.03	32.10	28.08	24.59	21.55	18.90	14.57	11.26	8.73	6.79	5.29	28
29	52.60	47.04	41.17	31.01	27.73	24.33	21.39	18.71	14.57	11.32	8.92	7.00	5.40	<u>29</u> 30
31	51.09	44.92	39.52	30.67	27.05	23.87	21.08	18.63	14.58	11.45	9.01	7.11	5.63	31
32	49.80	43.90	38.73	30.20	26.70	23.63	20.93	18.55	14.59	11.51	9.11	7.22	5.75	32
33	48.53	42.89	37.94	29.75	26.37	23.40	20.78	18.45	14.60	11.58	9.21	7.34	5.87	33
34	47.30	41.92	37.18	29.31	26.04	23.16	20.62	18.37	14.61	11.64	9.31	7.46	6.00	34
35 36	46.11 11 01	40.97	36.42	28.87	25.72	22.94	20.48	18.29	14.61	11.71	9.41	7.58	6.12 6.25	35
37	43.81	39.14	34.99	28.02	25.10	22.72	20.33	18.12	14.63	11.84	9.62	7.83	6.38	37
38	42.71	38.26	34.29	27.61	24.79	22.29	20.05	18.04	14.65	11.92	9.72	7.96	6.52	38
39	41.65	37.39	33.61	27.20	24.50	22.08	19.91	17.97	14.65	12.00	9.84	8.08	6.66	39
40	40.61	36.56	32.95	26.80	24.20	21.87	19.77	17.89	14.67	12.06	9.94	8.22	6.81	40
41	39.59	35.75	32.30	26.41	23.92	21.67	19.64	17.81	14.69	12.14	10.05	8.35	6.96	41
42 43	37.67	34.95 34 19	31.00	26.04 25.67	23.04	21.47	19.52	17.74	14.71	12.22	10.17	8.50 8.64	7.11	42 43
44	36.75	33.44	30.45	25.31	23.09	21.08	19.26	17.61	14.75	12.38	10.41	8.78	7.42	44
45	35.84	32.70	29.87	24.95	22.83	20.90	19.14	17.55	14.77	12.46	10.53	8.93	7.59	45
46	34.98	32.00	29.29	24.60	22.57	20.72	19.02	17.48	14.79	12.55	10.66	9.08	7.76	46
47	34.13	31.31	28.74	24.26	22.32	20.54	18.92	17.42	14.82	12.64	10.79	9.24	7.93	47
48 49	33.30	30.63 20.00	28.20	23.93 23.61	22.07	20.36	18.80	17.37	14.84	12.72	11.92	9.40	8.10	48 ⊿0
50	31.74	29.35	27.15	23.29	21.59	20.03	18.59	17.26	14.91	12.91	11.20	9.73	8.48	50
51	30.99	28.74	26.66	22.99	21.36	19.87	18.49	17.21	14.94	13.00	11.34	9.91	8.67	51
52	30.27	28.13	26.17	22.69	21.14	19.72	18.39	17.17	14.99	13.11	11.48	10.09	8.88	52
53	29.57	27.56	25.70	22.40	20.93	19.57	18.30	17.13	15.02	13.21	11.64	10.27	9.08	53
54	28.88	27.00	25.25	22.12	20.72	19.43	18.22	17.09	15.07	13.32	11.80	10.47	9.30	54
ວວ 56	20.23 27.60	20.40 25 91	24.81 24 38	21.85	20.52	19.29	18.13 18.07	17.07 17.04	15.12 15.18	13.44 13.55	12 12	10.66	9.52 9.76	55 56
57	27.00	25.44	23.98	21.35	20.16	19.05	17.99	17.02	15.25	13.68	12.30	11.09	10.01	57
58	26.43	24.97	23.60	21.12	19.99	18.94	17.94	17.01	15.32	13.82	12.49	11.31	10.26	58
59	25.88	24.52	23.23	20.90	19.84	18.84	17.90	17.02	15.40	13.96	12.69	11.55	10.52	59
60	25.37	24.09	22.89	20.70	19.71	18.75	17.87	17.03	15.49	14.13	12.90	11.79	10.81	60
61	24.87	23.69	22.56	20.52	19.58	18.69	17.85	17.06	15.60	14.29	13.12	12.05	11.11	61
62 63	24.41 23 QR	23.37 22 QR	22.20	20.36	19.4/	18.64	17.85	17.10	15.72	14.47 14.67	13.35	12.33	11.42	62 63
64	23.58	22.63	21.73	20.20	19.30	18.58	17.88	17.22	16.00	14.88	13.87	12.05	12.10	64
65	23.19	22.32	21.50	19.96	19.25	18.57	17.92	17.30	16.15	15.12	14.16	13.28	12.48	65
66	22.85	22.05	21.29	19.88	19.22	18.59	17.99	17.41	16.34	15.36	14.46	13.64	12.88	66
67	22.55	21.82	21.12	19.82	19.21	18.63	18.08	17.55	16.55	15.64	14.80	14.03	13.32	67
68	22.27	21.61	20.97	19.79	19.23	18.70	18.19	17.70	16.79	15.94	15.17	14.45	13.78	68

Table 28 Multipliers for loss of pension commencing age 68 (females)

Age at date of	Multiplie and rate	er calculate	ed with allo	wance for	projected r	nortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of
trial														trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	125.52	101.49	82.14	53.97	43.83	35.62	28.98	23.60	15.70	10.48	7.03	4.73	3.20	0
1	122.86	99.58	80.81	53.39	43.46	35.41	28.89	23.59	15.78	10.59	7.14	4.82	3.27	1
2	119.92	97.46	79.29	52.66	42.98	35.11	28.72	23.51	15.80	10.66	7.22	4.91	3.36	2
3	117.03	95.37	76.32	51.93	42.49	34.81	28.54	23.42	15.82	10.74	7.31	5.00	3.43	3 1
5	114.20	93.30	74.87	50.50	42.02	34.30	28.37	23.34	15.88	10.80	7.39	5.00	3.50	4 5
6	108.74	89.31	73.44	49.80	41.07	33.90	28.01	23.18	15.90	10.95	7.57	5.25	3.66	6
7	106.11	87.38	72.03	49.10	40.60	33.60	27.85	23.09	15.92	11.02	7.66	5.34	3.74	7
8	103.53	85.48	70.66	48.42	40.14	33.31	27.66	23.01	15.95	11.10	7.75	5.43	3.82	8
9	101.00	83.63	69.31	47.74	39.68	33.01	27.49	22.91	15.97	11.17	7.84	5.52	3.91	9
10	98.54	81.80	67.97	47.07	39.22	32.72	27.32	22.83	15.99	11.24	7.93	5.61	3.99	10
11	96.15	80.02	65.07	46.40	38.78	32.43	27.14	22.75	16.01	11.31	8.02 9.11	5.71	4.08	11
12	93.00 91.51	76.20	64.12	45.70	37.89	31 85	26.80	22.00	16.05	11.39	8.21	5.00	4.17	12
14	89.27	74.89	62.89	44.47	37.44	31.57	26.63	22.49	16.08	11.53	8.30	6.00	4.35	14
15	87.09	73.25	61.67	43.84	37.02	31.28	26.46	22.40	16.10	11.61	8.40	6.10	4.44	15
16	84.96	71.65	60.48	43.22	36.58	31.00	26.29	22.32	16.12	11.68	8.50	6.20	4.54	16
17	82.88	70.09	59.32	42.61	36.17	30.72	26.12	22.23	16.14	11.76	8.60	6.30	4.64	17
18	80.85	68.55	58.17	42.01	35.74	30.44	25.95	22.14	16.16	11.84	8.70	6.41	4.74	18
19	78.87	67.04	57.04	41.41	35.33	30.17	25.78	22.06	16.18	11.91	8.79	6.52	4.84	19
20 21	76.94	64 14	50.94 54 85	40.83	34.92 34 51	29.69	25.62	21.97	16.20	12.06	0.09 8 00	0.03 6.74	4.95	20 21
22	73.21	62.73	53.80	39.68	34.12	29.36	25.29	21.80	16.22	12.00	9.10	6.84	5.17	22
23	71.41	61.35	52.75	39.11	33.71	29.09	25.12	21.71	16.26	12.21	9.21	6.96	5.28	23
24	69.65	60.00	51.72	38.55	33.32	28.82	24.96	21.63	16.28	12.29	9.31	7.08	5.39	24
25	67.94	58.68	50.73	38.00	32.93	28.56	24.79	21.54	16.30	12.37	9.42	7.20	5.51	25
26	66.26	57.38	49.74	37.46	32.54	28.30	24.63	21.45	16.31	12.45	9.53	7.32	5.63	26
27	64.64	56.12	48.76	36.92	32.16	28.04	24.47	21.37	16.34	12.52	9.63	7.43	5.75	27
28 20	63.04 61.49	53.67	47.82	36.39	31.78	27.79	24.31	21.28	16.30	12.01	9.74	7.50	5.87	28 20
	59.97	52 49	45.97	35.36	31.05	27.33	23.99	21.20	16.39	12.00	9.00	7.80	6.13	30
31	58.50	51.33	45.08	34.85	30.68	27.04	23.83	21.03	16.41	12.85	10.08	7.93	6.26	31
32	57.06	50.20	44.21	34.36	30.32	26.79	23.68	20.95	16.44	12.93	10.20	8.07	6.40	32
33	55.65	49.10	43.35	33.87	29.98	26.54	23.52	20.87	16.45	13.01	10.31	8.20	6.54	33
34	54.29	48.02	42.51	33.39	29.62	26.30	23.37	20.78	16.47	13.10	10.43	8.34	6.68	34
35	52.96	46.97	41.68	32.91	29.28	26.07	23.22	20.70	16.49	13.18	10.55	8.48	6.82	35
30	51.66	45.93	40.88	32.44	28.94	25.83	23.07	20.63	16.51	13.26	10.68	8.62	6.98 7.12	30 27
38	49 16	44.93	39.31	31.53	28.28	25.00	22.92	20.54	16.55	13.33	10.80	8.70	7.13	38
39	47.95	42.98	38.56	31.09	27.95	25.14	22.63	20.39	16.58	13.52	11.06	9.06	7.44	39
40	46.79	42.05	37.82	30.65	27.62	24.92	22.49	20.32	16.60	13.61	11.19	9.21	7.61	40
41	45.64	41.13	37.09	30.22	27.31	24.70	22.35	20.24	16.63	13.70	11.31	9.37	7.78	41
42	44.54	40.24	36.38	29.80	27.00	24.48	22.21	20.16	16.66	13.79	11.45	9.52	7.95	42
43	43.45	39.37	35.69	29.39	26.69	24.26	22.08	20.10	16.69	13.89	11.59	9.69	8.13	43
44	42.40	37.60	30.01	20.90	26.39	23.85	21.94	20.03	16.71	13.90	11.72	9.00	8.40	44
46	40.39	36.88	33.70	28.19	25.81	23.65	21.68	19.89	16.77	14.00	12.01	10.02	8.68	46
47	39.42	36.09	33.07	27.81	25.52	23.44	21.55	19.82	16.79	14.27	12.16	10.38	8.87	47
48	38.48	35.32	32.44	27.43	25.25	23.25	21.43	19.76	16.84	14.37	12.31	10.55	9.08	48
49	37.56	34.57	31.85	27.07	24.98	23.06	21.30	19.70	16.86	14.48	12.46	10.74	9.28	49
50	36.68	33.85	31.25	26.71	24.70	22.88	21.19	19.64	16.90	14.59	12.61	10.93	9.49	50
51	35.82	33.14	30.68	26.35	24.45	22.70	21.08	19.59	16.95	14.70	12.78	11.13	9.71	51
52 53	34.90 34 17	32.43	20.13	20.02	24.20	22.32	20.97	19.55	10.99	14.02	12.94	11.33	9.94	52 53
54	33.39	31.14	29.06	25.36	23.71	22.18	20.76	19.45	17.09	15.05	13.28	11.75	10.17	54
55	32.63	30.52	28.56	25.05	23.48	22.02	20.67	19.41	17.15	15.18	13.47	11.97	10.66	55
56	31.90	29.91	28.06	24.75	23.26	21.87	20.58	19.38	17.21	15.31	13.65	12.20	10.91	56
57	31.19	29.32	27.59	24.45	23.05	21.74	20.51	19.35	17.27	15.44	13.85	12.43	11.18	57
58	30.51	28.76	27.13	24.18	22.85	21.59	20.43	19.33	17.35	15.59	14.04	12.67	11.46	58
59	29.86	28.22	26.69	23.92	22.65	21.48	20.37	19.32	17.43	15.74	14.25	12.93	11./5	59
61	29.24 28.63	27.71	20.21	23.00 23.12	22.47 22.20	21.30 21.25	20.30	19.32	17.51	15.90	14.47	13.19	12.00	6U 61
62	28.06	26.73	25.48	23.42	22.14	21.20	20.20	19.33	17.71	16.25	14.94	13.76	12.30	62
63	27.51	26.28	25.12	22.98	22.00	21.07	20.19	19.35	17.83	16.43	15.19	14.06	13.03	63
64	26.98	25.85	24.77	22.79	21.87	21.00	<u>20.18</u>	19.40	17.95	16.63	15.45	14.38	13.39	64
65	26.49	25.44	24.45	22.60	21.75	20.94	20.17	19.44	18.09	16.85	15.73	14.71	13.78	65
66	26.03	25.06	24.14	22.44	21.65	20.90	20.18	19.51	18.24	17.09	16.03	15.07	14.18	66
67	25.58	24.70	23.86	22.30	21.57	20.88	20.21	19.58	18.41	17.33	16.34	15.43	14.61	67
68	25.18	24.37	23.61	22.18	21.51	20.87	20.26	19.68	18.59	17.59	16.68	15.84	15.06	68

Table 29 Multipliers for loss of pension commencing age 70 (males)

Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected ı	mortality fro	om the 201	18-based	populatior	n projectio	ons			Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	105.49	85.21	68.89	45.17	36.63	29.73	24.16	19.64	13.03	8.67	5.80	3.88	2.61	0
1	103.19	83.57	67.74	44.65	36.31	29.54	24.06	19.63	13.09	8.75	5.88	3.96	2.68	1
2	100.60	81.69	66.40	43.99	35.86	29.27	23.90	19.54	13.09	8.80	5.95	4.03	2.74	2
3	98.06 05.59	79.84	65.06	43.34	35.42	28.97	23.72	19.45	13.10	8.85	6.00	4.09	2.79	3
<u>4</u> 5	95.56	76.01	62.46	42.09	34.90	28.00	23.00	19.55	13.10	8.90	6.14	4.15	2.00	4 5
6	90.77	74.49	61.19	41.41	34.10	28.12	23.20	19.16	13.11	9.00	6.20	4.29	2.97	6
7	88.46	72.79	59.95	40.78	33.68	27.84	23.04	19.07	13.12	9.05	6.27	4.35	3.03	7
8	86.21	71.12	58.73	40.15	33.26	27.56	22.86	18.98	13.12	9.10	6.33	4.42	3.09	8
9	84.01	69.48	57.53	39.55	32.83	27.28	22.69	18.89	13.12	9.14	6.39	4.49	3.16	9
10	81.80 79.75	66 32	55.35 55.10	38.94	32.41	27.00	22.52	18.80	13.12	9.19	6.47 6.53	4.56	3.22	10
12	77.71	64.78	54.06	37.75	31.58	26.46	22.17	18.60	13.12	9.29	6.59	4.70	3.36	12
13	75.71	63.28	52.96	37.17	31.18	26.18	22.00	18.51	13.12	9.34	6.67	4.77	3.43	13
14	73.76	61.82	51.86	36.60	30.79	25.92	21.84	18.41	13.12	9.39	6.74	4.84	3.50	14
15	71.85	60.38	50.79	36.03	30.39	25.65	21.67	18.32	13.13	9.43	6.80	4.93	3.57	15
16 17	70.00	58.98 57.62	49.74	35.47	29.99	25.38	21.50	18.22	13.13	9.48	6.87	4.99	3.64	16 17
18	66 43	56.28	40.72	34.93	29.01	23.12	21.33	18.13	13.13	9.55	7 01	5.00	3 79	18
19	64.72	54.97	46.73	33.85	28.85	24.61	21.00	17.95	13.12	9.63	7.08	5.23	3.87	19
20	63.06	53.70	45.77	33.33	28.47	24.36	20.84	17.85	13.13	9.68	7.16	5.31	3.95	20
21	61.43	52.45	44.83	32.82	28.12	24.10	20.68	17.76	13.13	9.73	7.23	5.39	4.04	21
22	59.84	51.23	43.90	32.31	27.76	23.85	20.53	17.66	13.13	9.78	7.31	5.48	4.11	22
23 24	56.30 56.79	50.04 48.88	42.99	31.01	27.39	23.01	20.30	17.57	13.12	9.63	7.30	5.50 5.65	4.20 4.28	23 24
25	55.32	47.74	41.24	30.84	26.69	23.13	20.05	17.40	13.12	9.93	7.53	5.73	4.37	25
26	53.90	46.64	40.38	30.35	26.34	22.88	19.89	17.31	13.12	9.98	7.61	5.82	4.46	26
27	52.50	45.55	39.55	29.88	26.01	22.64	19.74	17.21	13.12	10.03	7.69	5.91	4.55	27
28	51.15	44.49	38.73	29.42	25.67	22.41	19.59	17.12	13.12	10.08	7.76	6.00	4.65	28
29	49.82	43.45	37.93	28.97	25.34	22.18	19.43	16.04	13.12	10.13	7.85	6.09	4.74	29
31	47.28	41.46	36.38	28.08	24.69	21.33	19.20	16.86	13.12	10.13	8.01	6.28	4.94	31
32	46.07	40.50	35.63	27.64	24.37	21.50	18.99	16.78	13.12	10.29	8.09	6.38	5.04	32
33	44.88	39.56	34.89	27.22	24.06	21.28	18.84	16.69	13.13	10.35	8.18	6.48	5.15	33
34	43.72	38.65	34.18	26.80	23.75	21.06	18.69	16.61	13.12	10.39	8.26	6.58	5.25	34
35	42.61	37.75	33.48	26.38	23.45	20.85	18.56	16.52	13.12	10.46	8.34	6.68	5.36	35
37	40.44	36.04	32.19	25.58	22.86	20.04	18.27	16.36	13.13	10.51	8.53	6.90	5.58	30 37
38	39.41	35.21	31.48	25.20	22.57	20.23	18.14	16.28	13.14	10.63	8.61	7.00	5.70	38
39	38.42	34.40	30.84	24.82	22.29	20.03	18.01	16.20	13.14	10.69	8.71	7.11	5.82	39
40	37.44	33.62	30.22	24.44	22.01	19.83	17.88	16.13	13.15	10.75	8.80	7.23	5.94	40
41	36.49	32.86	29.61	24.08	21.75	19.64	17.75	16.05	13.16	10.81	8.89	7.34	6.08	41
42 43	33.57 34.69	32.12	29.01	23.73	21.40	19.40	17.03	15.90	13.17	10.67	9.00	7.40	6 34	42 43
44	33.83	30.70	27.88	23.04	20.97	19.08	17.39	15.85	13.19	11.00	9.19	7.70	6.47	44
45	32.98	30.01	27.34	22.71	20.72	18.91	17.27	15.79	13.20	11.07	9.30	7.83	6.61	45
46	32.17	29.35	26.80	22.38	20.47	18.74	17.15	15.72	13.22	11.14	9.41	7.96	6.76	46
47	31.38	28.71	26.28	22.06	20.23	18.56	17.05	15.66	13.23	11.22	9.52	8.09	6.90	47
40	29.86	20.07	25.28	21.75	19.77	18.24	16.83	15.55	13.23	11.37	9.03	8.37	7.03	40 49
50	29.14	26.87	24.79	21.15	19.55	18.08	16.73	15.49	13.30	11.44	9.86	8.51	7.37	50
51	28.44	26.30	24.33	20.87	19.33	17.93	16.63	15.44	13.32	11.52	9.98	8.67	7.54	51
52	27.76	25.73	23.87	20.58	19.12	17.78	16.54	15.39	13.35	11.61	10.10	8.82	7.71	52
53	27.11	25.19	23.44	20.31	18.92	17.64	16.44	15.34	13.38	11.69	10.23	8.98	7.88	53 54
55	25.86	24.07	22.01	20.04	18.54	17.30	16.30	15.31	13.42	11.70	10.57	9.14	8.26	55
56	25.27	23.68	22.20	19.55	18.36	17.24	16.21	15.24	13.50	11.97	10.64	9.48	8.45	56
57	24.71	23.21	21.82	19.32	18.18	17.13	16.14	15.22	13.55	12.08	10.79	9.67	8.67	57
58	24.18	22.77	21.46	19.10	18.03	17.03	16.08	15.20	13.61	12.20	10.96	9.86	8.88	58
59	23.66	22.35	21.12	18.89	17.88	16.93	16.04	15.20	13.67	12.32	11.12	10.06	9.10	59
о0 61	∠3.18 22.71	21.95 21.57	20.80 2∩ 40	18.70 18.53	17.75	16.84 16.78	10.00	15.20	13.74 13.83	12.45 12 50	11.30 11.40	10.26 10.48	9.34 9.60	ю0 61
62	22.28	21.21	20.21	18.37	17.52	16.72	15.97	15.25	13.93	12.74	11.68	10.72	9.86	62
63	21.87	20.88	19.95	18.22	17.42	16.67	15.96	15.28	14.04	12.91	11.90	10.97	10.14	63
64	21.49	20.57	19.70	18.09	17.35	16.65	15.97	15.34	14.16	13.09	12.12	11.24	10.44	64
65 65	21.13	20.28	19.48	17.98	17.29	16.63	16.00	15.40	14.29	13.29	12.37	11.52	10.76	65
67	20.81	20.02	19.29 10.12	17.90 17.94	17.26	16.64 16.67	16.05	15.49 15.60	14.45 14 62	13.50 13.74	12.63	11.83	11.10 11.47	67
68	20.32	19.60	18.97	17.80	17.24	16.72	16.21	15.73	14.83	13.99	13.23	12.52	11.86	68
69	20.04	19.44	18.86	17.78	17.28	16.80	16.34	15.89	15.05	14.27	13.57	12.90	12.29	69
70	19.84	19.30	18.78	17.80	17.34	16.90	16.48	16.07	15.30	14.59	13.93	13.32	12.75	70

Table 30 Multipliers for loss of pension commencing age 70 (females)

Age at	Multiplie	er calculate	ed with allo	wance for	projected r	nortality fro	om the 201	8-based	populatio	n projectio	ons			Age at
date of trial	and rate	e of return	of											date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	117.94	95.13	76.81	50.21	40.67	32.96	26.75	21.72	14.37	9.54	6.36	4.25	2.86	0
1	115.41 112.63	93.32 91.31	75.54 74 11	49.65 48 97	40.32 39.86	32.76 32.48	26.66 26.49	21.71	14.43 14.45	9.63 9.70	6.46 6.53	4.33 4.41	2.92	1
3	109.89	89.33	72.70	48.27	39.40	32.19	26.32	21.54	14.47	9.76	6.61	4.49	3.06	3
4	107.21	87.38	71.29	47.60	38.95	31.90	26.15	21.46	14.49	9.82	6.68	4.56	3.12	4
5	104.58	85.48	69.92	46.92	38.50	31.61	25.98	21.38	14.51	9.89	6.76	4.63	3.19	5
7	99.54	81.77	67.24	46.20	37.61	31.02	25.62	21.30	14.53	9.95	6.91	4.71	3.33	7
8	97.10	79.98	65.94	44.95	37.17	30.77	25.48	21.13	14.56	10.08	6.99	4.87	3.40	8
9	94.70	78.22	64.66	44.32	36.73	30.48	25.31	21.04	14.58	10.14	7.07	4.95	3.48	9
10	92.38 90.11	76.49 74.81	63.40 62.17	43.68 43.05	35.30	30.20 29.92	25.15 24.98	20.96	14.60 14.61	10.20	7.15	5.03 5.12	3.55	10 11
12	87.88	73.16	60.96	42.44	35.45	29.65	24.81	20.79	14.63	10.33	7.31	5.20	3.71	12
13	85.72	71.54	59.76	41.83	35.04	29.38	24.65	20.70	14.65	10.39	7.40	5.28	3.79	13
14	83.60	69.96	58.60	41.22	34.62	29.11	24.49	20.62	14.66	10.45	7.48	5.37	3.87	14
16	79.52	66.90	56.33	40.03	33.81	28.57	24.33	20.34	14.69	10.52	7.65	5.55	4.04	16
17	77.55	65.42	55.23	39.47	33.41	28.31	24.00	20.37	14.70	10.65	7.74	5.63	4.12	17
18	75.63	63.96	54.14	38.90	33.01	28.04	23.84	20.28	14.72	10.72	7.83	5.73	4.21	18
<u> </u>	73.76	62.54	53.08	38.34	32.62	27.78	23.67	20.19	14.73	10.77	7.91	5.83	4.30	<u>19</u> 20
20	70.15	59.80	51.02	37.23	31.85	27.27	23.32	20.03	14.74	10.00	8.09	6.02	4.49	20
22	68.41	58.47	50.02	36.70	31.47	27.01	23.20	19.94	14.77	10.98	8.18	6.11	4.59	22
23	66.71	57.17	49.03	36.16	31.09	26.76	23.04	19.86	14.78	11.04	8.27	6.21	4.69	23
24	63.43	54 65	40.00	35.04	30.72	26.50	22.00	19.78	14.60	11.11	8 46	6.32	4.78	24
26	61.85	53.43	46.19	34.60	29.99	26.01	22.57	19.60	14.82	11.24	8.55	6.53	4.99	26
27	60.32	52.24	45.27	34.10	29.63	25.76	22.42	19.52	14.84	11.31	8.64	6.63	5.09	27
28	58.81	51.07	44.38	33.60	29.27	25.52	22.27	19.43	14.85	11.38	8.74	6.74	5.20	28
30	55.91	49.93	43.50	32.63	28.57	25.03	21.95	19.33	14.80	11.52	8.94	6.95	5.42	30
31	54.53	47.72	41.81	32.15	28.22	24.80	21.80	19.19	14.89	11.59	9.03	7.06	5.54	31
32	53.16	46.66	40.98	31.68	27.89	24.57	21.66	19.10	14.90	11.65	9.14	7.19	5.66	32
33 34	51.84 50.55	45.62 44.60	40.18 39 38	31.22 30.77	27.56	24.33 24.10	21.51 21.36	19.03 18.94	14.91 14 92	11.72 11.80	9.24 9.34	7.30 7.42	5.78 5.91	33
35	49.30	43.61	38.61	30.32	26.90	23.88	21.22	18.86	14.94	11.87	9.44	7.54	6.03	35
36	48.08	42.63	37.85	29.88	26.58	23.66	21.08	18.78	14.95	11.94	9.55	7.67	6.16	36
37	46.88	41.69	37.10	29.45	26.26	23.44	20.93	18.70	14.96	12.01	9.66	7.78	6.29	37
30 39	45.72 44.58	40.76 39.86	36.37	29.02	25.95 25.64	23.22	20.79	18.55	14.99	12.06	9.77 9.88	8.05	6.43 6.57	30 39
40	43.49	38.98	34.97	28.19	25.34	22.80	20.51	18.48	15.01	12.23	9.99	8.17	6.71	40
41	42.41	38.11	34.28	27.79	25.04	22.58	20.38	18.40	15.04	12.31	10.10	8.31	6.86	41
42 43	41.37 40.35	37.28	33.61	27.39	24.75	22.38	20.24	18.33	15.05 15.07	12.38 12.47	10.22	8.45 8.59	7.01	42 43
44	39.36	35.65	32.33	26.61	24.17	21.98	19.98	18.19	15.08	12.54	10.46	8.74	7.32	44
45	38.39	34.88	31.70	26.24	23.90	21.78	19.86	18.12	15.11	12.63	10.58	8.88	7.48	45
46	37.46	34.12	31.10	25.87	23.63	21.58	19.73	18.05	15.13	12.71	10.71	9.03	7.64	46
47	35.67	32.66	29.91	25.51	23.35	21.39	19.61	17.90	15.15	12.80	10.05	9.19	7.98	47
49	34.80	31.95	29.35	24.81	22.83	21.02	19.37	17.85	15.20	12.97	11.09	9.50	8.16	49
50	33.97	31.27	28.79	24.48	22.58	20.85	19.26	17.80	15.23	13.06	11.22	9.66	8.34	50
51 52	33.16 32.37	30.60 29.96	28.26 27 74	24.14	22.34 22.10	20.68 20.51	19.15 19.04	17.75	15.26 15.20	13.16 13.26	11.36 11.50	9.84 10.01	8.53 8.72	51 52
53	31.61	29.30	27.23	23.55	21.86	20.31	18.93	17.64	15.23	13.35	11.65	10.01	8.93	53
54	30.88	28.73	26.74	23.20	21.63	20.18	18.84	17.60	15.37	13.45	11.80	10.37	9.13	54
55	30.17	28.14	26.26	22.91	21.41	20.03	18.75	17.55	15.42	13.56	11.96	10.56	9.35	55
56 57	29.48	27.57	25.80 25.35	22.63	21.21	19.89	18.58	17.52	15.46	13.68	12.12	10.76	9.56	50 57
58	28.18	26.49	24.92	22.09	20.81	19.62	18.50	17.46	15.57	13.92	12.46	11.17	10.03	58
59	27.57	25.99	24.51	21.84	20.63	19.50	18.44	17.45	15.64	14.04	12.64	11.39	10.29	59
60 61	26.98	25.50	24.11 22 72	21.60	20.46	19.38 10.29	18.38 18.22	17.44 17.44	15.71	14.18 14 22	12.83	11.62	10.54	60 61
62	25.87	23.03	23.37	21.16	20.30	19.20	18.29	17.43	15.88	14.47	13.23	12.10	11.10	62
63	25.35	24.16	23.02	20.95	20.00	19.10	18.26	17.44	15.97	14.63	13.44	12.36	11.39	63
64	24.86	23.75	22.70	20.77	19.87	19.03	18.23	17.48	16.07	14.81	13.67	12.64	11.70	64
65 66	24.40 23.96	23.36 23.01	22.39 22.10	20.59	19.76 19.66	18.97 18.92	18.22 18.22	17.51 17.56	16.19 16 32	14.99 15 20	13.91 14 16	12.92 13.23	12.03	65 66
67	23.54	22.66	21.83	20.40	19.58	18.90	18.24	17.62	16.46	15.41	14.44	13.55	12.74	67
68	23.16	22.35	21.60	20.18	19.52	18.88	18.27	17.70	16.62	15.63	14.73	13.90	13.13	68
69	22.81	22.08	21.38	20.08	19.47	18.89	18.33	17.81	16.80	15.88	15.04	14.27	13.54	69
10	22.40	Z1.0Z	∠I.I9	20.00	13.45	10.92	10.41	17.92	17.00	10.10	10.00	14.00	10.90	10

Table 31Multipliers for loss of pension commencing age 75 (males)

Age at	Multiplie	er calculate	ed with allo	wance for	projected i	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at
trial	anu rate		0											trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	86.33	69.28	55.64	35.99	28.99	23.36	18.85	15.22	9.94	6.52	4.29	2.83	1.87	0
1	84.37	67.89	54.66	35.55	28.70	23.19	18.76	15.19	9.98	6.57	4.34	2.88	1.92	1
2	82.18	66.30	53.53	34.99	28.32	22.95	18.61	15.11	9.97	6.60	4.39	2.93	1.96	2
3 ⊿	80.03 77.04	64.74 63.20	52.40 51 30	34.44	27.95	22.70	18.45	15.02	9.97	6.63 6.66	4.43	2.97	2.00	3
5	75.88	61.70	50.21	33.34	27.20	22.43	18.15	14.85	9.95	6.70	4.52	3.05	2.03	5
6	73.88	60.23	49.15	32.81	26.83	21.97	18.00	14.75	9.95	6.72	4.56	3.10	2.12	6
7	71.93	58.80	48.10	32.28	26.47	21.73	17.85	14.67	9.94	6.76	4.61	3.15	2.16	7
8	70.03	57.40	47.08	31.75	26.11	21.48	17.69	14.58	9.94	6.78	4.65	3.19	2.20	8
9	68.18	56.02	46.07	31.24	25.75	21.24	17.54	14.50	9.93	6.81	4.69	3.24	2.25	9
10	64.60	54.68	45.08	30.73	25.40	21.01	17.40	14.41	9.91	6.84 6.97	4.74	3.29	2.29	10
12	62.88	52.08	44.11	29.73	23.03	20.77	17.09	14.55	9.90	6.89	4.70	3.34	2.33	12
13	61.20	50.82	42.24	29.25	24.36	20.31	16.94	14.15	9.88	6.93	4.87	3.43	2.42	13
14	59.56	49.59	41.32	28.76	24.03	20.08	16.80	14.06	9.87	6.95	4.91	3.48	2.47	14
15	57.96	48.39	40.43	28.29	23.69	19.85	16.65	13.97	9.86	6.98	4.95	3.53	2.52	15
16	56.41	47.22	39.55	27.82	23.35	19.62	16.50	13.88	9.85	7.01	5.00	3.57	2.56	16
17	54.90	46.07	38.70	27.36	23.03	19.40	16.36	13.80	9.84	7.04	5.04	3.63	2.61	17
10	51 99	44.90 43.86	37.00	26.91	22.71	18.10	16.21	13.71	9.03	7.00	5.09	3.00	2.00	10
20	50.60	42.80	36.23	26.02	22.07	18.75	15.92	13.54	9.81	7.12	5.18	3.79	2.77	20
21	49.24	41.76	35.45	25.60	21.77	18.53	15.78	13.46	9.80	7.15	5.23	3.84	2.83	21
22	47.91	40.75	34.67	25.17	21.47	18.31	15.65	13.36	9.79	7.17	5.28	3.89	2.87	22
23	46.63	39.76	33.92	24.75	21.16	18.11	15.50	13.28	9.77	7.21	5.32	3.95	2.94	23
24	45.37	38.79	33.19	24.34	20.87	17.90	15.37	13.20	9.76	7.23	5.38	4.01	2.99	24
25	44.15	37.84	32.40	23.94	20.57	17.70	15.23	13.11	9.75	7.26	5.42	4.06	3.05	25
20	41.80	36.02	31.06	23.14	20.20	17.28	14.96	12.95	9.72	7.32	5.52	4.12	3.16	20
28	40.67	35.14	30.38	22.76	19.71	17.08	14.82	12.86	9.71	7.35	5.56	4.24	3.22	28
29	39.57	34.28	29.72	22.38	19.43	16.89	14.68	12.78	9.69	7.37	5.62	4.29	3.28	29
30	38.51	33.45	29.06	22.00	19.15	16.69	14.55	12.69	9.68	7.40	5.67	4.35	3.35	30
31	37.47	32.63	28.43	21.64	18.89	16.50	14.42	12.61	9.67	7.43	5.72	4.41	3.41	31
32 33	36.40	31.84	27.82	21.27	18.02	16.31	14.30	12.54	9.66	7.40	5.77	4.47	3.48	32 33
34	34.52	30.30	26.62	20.52	18.10	15.93	14.04	12.43	9.63	7.51	5.88	4.61	3.62	34
35	33.60	29.56	26.03	20.23	17.85	15.76	13.92	12.30	9.62	7.55	5.92	4.67	3.68	35
36	32.69	28.85	25.47	19.89	17.60	15.57	13.80	12.22	9.61	7.58	5.98	4.74	3.75	36
37	31.81	28.15	24.92	19.56	17.35	15.40	13.67	12.14	9.60	7.60	6.04	4.81	3.82	37
38	30.96	27.47	24.38	19.24	17.11	15.22	13.55	12.06	9.59	7.64	6.09	4.87	3.90	38
39	30.14	26.80	23.80	18.93	16.64	11.05	13.43	12.00	9.58	7.67	6.15	4.94	3.98	39
40 41	29.34	25.15	23.34	18.31	16.42	14.00	13.32	11.92	9.57	7.70	6.20	5.02	4.00	40
42	27.79	24.92	22.35	18.02	16.19	14.56	13.10	11.78	9.56	7.77	6.33	5.16	4.22	42
43	27.07	24.33	21.89	17.73	15.97	14.39	12.98	11.72	9.56	7.80	6.39	5.24	4.31	43
44	26.36	23.75	21.42	17.45	15.76	14.24	12.88	11.65	9.55	7.84	6.44	5.31	4.39	44
45	25.66	23.19	20.97	17.17	15.55	14.09	12.77	11.59	9.54	7.88	6.51	5.39	4.48	45
46 47	25.00	22.64	20.53	16.90	15.34	13.94	12.66	11.52	9.54	7.91	6.57 6.64	5.48	4.57	46 47
47	24.33	22.12	19.69	16.03	14.95	13.79	12.37	11.40	9.53	7.90	6 71	5.50	4.00	47
49	23.10	21.11	19.28	16.12	14.76	13.51	12.37	11.34	9.53	8.04	6.78	5.73	4.85	49
50	22.51	20.61	18.88	15.87	14.56	13.37	12.28	11.28	9.54	8.07	6.85	5.82	4.95	50
51	21.94	20.15	18.50	15.64	14.38	13.24	12.19	11.23	9.54	8.12	6.92	5.91	5.05	51
52	21.38	19.68	18.13	15.40	14.20	13.11	12.10	11.17	9.54	8.17	6.99	6.00	5.16	52
53	20.85	19.24	17.77	15.18	14.03	12.99	12.01	11.12	9.55	8.21	7.07	6.10	5.27	53
55 55	20.32	18.01	17.42	14.95	13.00	12.00	11.93	11.08	9.50	0.20 8.32	7.10	6.20	5.39	54
56	19.00	18.00	16.75	14.74	13.55	12.74	11.79	11.04	9.57 9.59	0.32 8.37	7.32	6.41	5.62	56
57	18.88	17.62	16.44	14.34	13.40	12.53	11.71	10.96	9.61	8.43	7.41	6.53	5.76	57
58	18.45	17.26	16.14	14.15	13.26	12.43	11.65	10.93	9.63	8.49	7.51	6.64	5.89	58
59	18.02	16.91	15.86	13.98	13.14	12.34	11.60	10.91	9.66	8.56	7.61	6.77	6.02	59

continued

Table 31 Multipliers for loss of pension commencing age 75 (males) continued

Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected ı	mortality fro	om the 201	18-based	populatio	n projectio	ons			Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
60	17.63	16.58	15.59	13.82	13.02	12.25	11.56	10.89	9.69	8.65	7.72	6.89	6.17	60
61	17.25	16.26	15.33	13.66	12.90	12.19	11.52	10.89	9.74	8.72	7.83	7.03	6.33	61
62	16.89	15.96	15.10	13.52	12.80	12.12	11.49	10.89	9.79	8.81	7.95	7.17	6.49	62
63	16.55	15.69	14.88	13.39	12.71	12.07	11.47	10.89	9.85	8.91	8.08	7.33	6.66	63
64	16.24	15.43	14.67	13.27	12.64	12.03	11.45	10.91	9.92	9.02	8.22	7.50	6.84	64
65	15.94	15.19	14.48	13.17	12.57	12.00	11.45	10.94	9.99	9.14	8.37	7.67	7.04	65
66	15.67	14.97	14.31	13.08	12.52	11.98	11.47	10.98	10.08	9.27	8.53	7.86	7.25	66
67	15.43	14.78	14.16	13.02	12.49	11.98	11.50	11.04	10.18	9.41	8.71	8.06	7.48	67
68	15.20	14.60	14.03	12.97	12.47	12.00	11.54	11.11	10.31	9.57	8.90	8.29	7.71	68
69	15.01	14.46	13.92	12.93	12.47	12.03	11.61	11.20	10.44	9.74	9.11	8.52	7.98	69
70	14.84	14.33	13.84	12.92	12.49	12.08	11.69	11.31	10.60	9.94	9.34	8.78	8.27	70
71	14.70	14.23	13.78	12.94	12.54	12.16	11.79	11.44	10.77	10.16	9.60	9.07	8.58	71
72	14.59	14.16	13.75	12.98	12.61	12.26	11.92	11.59	10.98	10.40	9.87	9.38	8.91	72
73	14.52	14.12	13.75	13.05	12.71	12.39	12.07	11.78	11.21	10.68	10.19	9.73	9.30	73
74	14.47	14.12	13.79	13.15	12.85	12.55	12.27	11.99	11.48	10.99	10.54	10.11	9.71	74
75	14.48	14.17	13.87	13.29	13.02	12.76	12.50	12.25	11.78	11.34	10.93	10.54	10.17	75

Table 32 Multipliers for loss of pension commencing age 75 (females)

Age at	Multiplie	er calculate	ed with allo	wance for	projected i	mortality fro	om the 201	8-based	population	n projectio	ons			Age at
trial		orietuin	01											trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	97.99	78.54	63.01	40.65	32.71	26.33	21.22	17.11	11.15	7.30	4.79	3.15	2.09	0
1	95.82	76.99	61.93	40.17	32.40	26.15	21.13	17.09	11.20	7.37	4.86	3.21	2.13	1
2	93.44 91 10	73.20	59.51	39.59	31.62	25.90	20.90	16.93	11.20	7.41	4.91	3.27	2.10	2
4	88.81	71.93	58.32	38.43	31.23	25.40	20.68	16.85	11.22	7.49	5.01	3.38	2.27	4
5	86.58	70.31	57.15	37.85	30.85	25.15	20.53	16.78	11.22	7.53	5.08	3.42	2.32	5
6	84.39	68.72	56.00	37.28	30.47	24.90	20.38	16.70	11.22	7.58	5.12	3.48	2.37	6
7	82.27	67.16	54.87	36.72	30.08	24.66	20.24	16.62	11.23	7.62	5.18	3.54	2.42	7
8	80.19 78.16	67.04 67.15	52.60	35.17	29.71	24.42 24.18	20.08	16.54	11.23	7.00	5.23 5.20	3.59	2.47	8
10	76.18	62.68	51.62	35.10	28.97	23.93	19.79	16.38	11.24	7.74	5.34	3.70	2.57	10
11	74.25	61.25	50.57	34.56	28.61	23.69	19.64	16.30	11.24	7.78	5.40	3.76	2.63	11
12	72.36	59.85	49.55	34.04	28.24	23.46	19.49	16.22	11.24	7.82	5.45	3.82	2.68	12
13	70.52	58.48	48.54	33.53	27.89	23.22	19.35	16.13	11.25	7.87	5.51	3.87	2.74	13
14	68.72	57.14	47.55	33.01	27.53	22.99	19.21	16.06	11.25	7.90	5.57	3.93	2.79	14
15	65.97	50.83 54.55	40.08	32.50	27.19	22.75	19.00	15.98	11.25	7.95	5.63	4.00	2.85	15
10	63.59	53.30	44.70	31.52	26.50	22.32	18.78	15.82	11.25	8.03	5.75	4.12	2.97	10
18	61.96	52.07	43.79	31.04	26.16	22.07	18.63	15.74	11.25	8.07	5.81	4.18	3.02	18
19	60.38	50.87	42.89	30.57	25.83	21.84	18.48	15.65	11.25	8.11	5.86	4.25	3.08	19
20	58.83	49.70	42.01	30.10	25.50	21.62	18.35	15.57	11.25	8.16	5.92	4.32	3.15	20
21	57.32	48.55	41.15	29.63	25.17	21.40	18.20	15.50	11.25	8.19	5.98	4.38	3.21	21
22	52.65 54.42	47.43	40.31 39.48	29.10	24.00	21.10	10.07	15.42	11.20	0.24 8.28	6.04 6.11	4.44 4 51	3.20 3.35	22
24	53.01	45.26	38.66	28.28	24.21	20.74	17.78	15.26	11.25	8.32	6.16	4.59	3.42	24
25	51.65	44.21	37.87	27.85	23.90	20.53	17.64	15.18	11.25	8.36	6.23	4.66	3.49	25
26	50.31	43.18	37.09	27.41	23.59	20.32	17.51	15.09	11.24	8.40	6.29	4.73	3.56	26
27	49.02	42.18	36.32	26.99	23.28	20.10	17.37	15.02	11.25	8.44	6.35	4.80	3.62	27
28	47.76	41.20	35.57	26.57	22.98	19.90	17.24	14.93	11.25	8.49	6.42	4.87	3.70	28
30	40.02	39 31	34.03	20.15	22.00	19.09	16.96	14.00	11.24	8.57	6 55	<u>4.94</u> 5.01	3.70	<u>29</u> 30
31	44.15	38.39	33.41	25.34	22.09	19.28	16.83	14.70	11.24	8.62	6.61	5.09	3.93	31
32	43.01	37.49	32.71	24.95	21.81	19.08	16.70	14.62	11.24	8.65	6.69	5.18	4.01	32
33	41.89	36.63	32.04	24.56	21.53	18.88	16.56	14.55	11.23	8.70	6.75	5.25	4.09	33
34	40.81	35.77	31.38	24.18	21.24	18.68	16.44	14.47	11.23	8.74	6.82	5.33	4.18	34
35	39.76	34.94	30.73	23.80	20.97	18.49	16.31	14.39	11.23	8.79	6.06	5.41	4.26	35
37	37.74	33.34	29.46	23.43	20.43	18.10	16.05	14.24	11.23	8.87	7.03	5.57	4.43	37
38	36.76	32.56	28.86	22.71	20.17	17.91	15.93	14.16	11.23	8.92	7.09	5.66	4.53	38
39	35.81	31.80	28.27	22.37	19.90	17.73	15.80	14.09	11.22	8.96	7.17	5.75	4.61	39
40	34.90	31.07	27.69	22.01	19.65	17.55	15.68	14.02	11.22	9.01	7.24	5.83	4.71	40
41	33.99	30.35	27.11	21.68	19.40	17.37	15.56	13.95	11.23	9.05	7.31	5.92	4.81	41
42	32 27	29.05	26.00	21.34	18.90	17.19	15.44	13.81	11.23	9.10	7.39	6.01	4.91 5.01	42
44	31.44	28.30	25.48	20.69	18.66	16.85	15.21	13.74	11.22	9.19	7.54	6.21	5.11	44
45	30.64	27.65	24.96	20.38	18.43	16.67	15.09	13.67	11.23	9.24	7.63	6.30	5.22	45
46	29.87	27.02	24.46	20.07	18.20	16.50	14.98	13.60	11.23	9.29	7.71	6.39	5.32	46
47	29.11	26.40	23.96	19.77	17.96	16.34	14.87	13.54	11.23	9.34	7.79	6.50	5.43	47
48 49	28.37	25.80 25.22	23.47	19.47	17.75	16.18	14.76	13.47	11.24	9.39	7.87	6.60 6.70	5.55 5.67	48 49
50	26.96	24.65	22.54	18.90	17.31	15.87	14.55	13.35	11.24	9.51	8.04	6.81	5.78	50
51	26.29	24.09	22.10	18.62	17.10	15.72	14.45	13.29	11.26	9.56	8.13	6.92	5.90	51
52	25.63	23.56	21.66	18.35	16.90	15.57	14.35	13.23	11.27	9.62	8.22	7.04	6.04	52
53	25.00	23.04	21.24	18.08	16.70	15.43	14.25	13.18	11.28	9.68	8.31	7.16	6.17	53
54	24.39	22.54	20.83	17.83	16.50	15.28	14.16	13.13	11.30	9.74	8.41	7.27	6.30	54
50 56	∠3.80 23.22	22.05 21.59	20.44 20.05	17.58	16.31	15.15	14.08	13.08	11.32	9.80 9.87	0.51 8 61	7.40	0.44 6 59	55 56
57	22.68	21.12	19.68	17.11	15.97	14.90	13.92	13.00	11.36	9.94	8.72	7.65	6.73	57
58	22.15	20.68	19.32	16.88	15.80	14.78	13.84	12.96	11.39	10.02	8.83	7.79	6.88	58
59	21.64	20.26	18.98	16.68	15.64	14.68	13.78	12.94	11.42	10.10	8.94	7.93	7.05	59

continued

Table 32 Multipliers for loss of pension commencing age 75 (females) continued

Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected ı	mortality fro	om the 201	8-based	populatior	n projectio	ons			Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
60	21.15	19.86	18.65	16.47	15.48	14.56	13.71	12.91	11.46	10.18	9.07	8.08	7.21	60
61	20.68	19.47	18.33	16.27	15.34	14.47	13.65	12.89	11.50	10.27	9.19	8.23	7.38	61
62	20.23	19.09	18.02	16.09	15.20	14.38	13.60	12.87	11.55	10.36	9.32	8.39	7.57	62
63	19.80	18.74	17.73	15.91	15.08	14.30	13.56	12.86	11.60	10.46	9.46	8.56	7.76	63
64	19.39	18.40	17.46	15.75	14.96	14.22	13.53	12.87	11.66	10.57	9.61	8.74	7.96	64
65	19.01	18.07	17.20	15.59	14.86	14.16	13.50	12.88	11.73	10.69	9.76	8.93	8.17	65
66	18.64	17.78	16.95	15.45	14.76	14.10	13.48	12.89	11.80	10.82	9.93	9.12	8.40	66
67	18.29	17.48	16.73	15.33	14.68	14.07	13.48	12.92	11.89	10.95	10.10	9.33	8.63	67
68	17.97	17.22	16.53	15.22	14.61	14.03	13.48	12.96	11.98	11.10	10.29	9.56	8.88	68
69	17.67	16.99	16.33	15.13	14.56	14.02	13.51	13.02	12.10	11.26	10.50	9.80	9.14	69
70	17.40	16.77	16.17	15.04	14.52	14.02	13.55	13.09	12.22	11.44	10.72	10.04	9.43	70
71	17.14	16.58	16.03	15.00	14.51	14.05	13.59	13.17	12.37	11.63	10.96	10.32	9.74	71
72	16.93	16.41	15.90	14.96	14.52	14.09	13.68	13.28	12.54	11.85	11.21	10.62	10.07	72
73	16.75	16.28	15.81	14.95	14.55	14.15	13.78	13.41	12.73	12.09	11.50	10.95	10.44	73
74	16.60	16.17	15.76	14.97	14.61	14.26	13.91	13.58	12.95	12.36	11.82	11.31	10.83	74
75	16.49	16.11	15.74	15.04	14.70	14.38	14.07	13.77	13.20	12.67	12.17	11.71	11.27	75

Table 33 Multipliers for loss of pension commencing age 80 (males)

Age at	Multiplie	er calculate	ed with allo	wance for	projected i	mortality fr	om the 201	8-based	population	n projectio	ons			Age at
date of trial	and rate	e of return	of											date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
0	66.35	52.88	42.17	26.89	21.50	17.21	13.78	11.04	7.10	4.59	2.97	1.93	1.26	0
1	64.76	51.75	41.38	26.53	21.27	17.05	13.69	11.01	7.12	4.62	3.00	1.96	1.29	1
2	63.00	50.47	40.47	26.08	20.96	16.86	13.57	10.93	7.11	4.63	3.04	1.99	1.31	2
3	61.27	49.22	39.56	25.63	20.66	16.65	13.43	10.86	7.09	4.65	3.06	2.02	1.33	3
<u>4</u> 5	57.94	47.99	30.00	23.19	20.34	16.45	13.31	10.77	7.06	4.00	3.00	2.04	1.30	5
6	56.34	45.61	36.96	24.32	19.74	16.05	13.05	10.62	7.05	4.69	3.13	2.10	1.41	6
7	54.78	44.47	36.12	23.89	19.46	15.85	12.93	10.54	7.03	4.71	3.16	2.13	1.43	7
8	53.26	43.35	35.30	23.47	19.16	15.65	12.79	10.46	7.02	4.72	3.18	2.15	1.45	8
9	51.78	42.25	34.50	23.06	18.87	15.45	12.66	10.39	7.00	4.73	3.21	2.18	1.49	9
10	50.34	41.18	33.71	22.65	18.59	15.26	12.54	10.31	6.98	4.74	3.24	2.21	1.51	10
11	48.92	40.13	32.94	22.24	18.30	15.07	12.41	10.23	6.96	4.76	3.25	2.24	1.54	11
12	47.56	39.11	32.19	21.85	18.02	14.88	12.29	10.16	6.95	4.//	3.28	2.27	1.57	12
13	40.22 11 92	30.11	31.45	21.40	17.74	14.00	12.10	10.06	6.93 6.91	4.70 4.70	। ব বব	2.29	1.59	13
15	43.65	36.18	30.01	20.70	17.40	14.30	11 91	9.92	6.90	4.80	3 35	2.32	1.65	15
16	42.42	35.25	29.32	20.70	16.93	14.12	11.79	9.84	6.88	4.81	3.38	2.38	1.68	16
17	41.22	34.35	28.64	19.96	16.67	13.94	11.67	9.77	6.86	4.83	3.40	2.41	1.70	17
18	40.05	33.47	27.98	19.60	16.42	13.76	11.55	9.69	6.84	4.84	3.43	2.44	1.74	18
19	38.92	32.60	27.33	19.24	16.16	13.59	11.42	9.62	6.82	4.85	3.45	2.47	1.77	19
20	37.82	31.76	26.69	18.89	15.90	13.41	11.30	9.54	6.80	4.86	3.48	2.50	1.80	20
21	36.75	30.94	26.08	18.55	15.66	13.23	11.18	9.46	6.78	4.87	3.50	2.53	1.84	21
22	35.70	30.14	25.40	18.22	15.42	13.05	11.07	9.38	6.76 6.74	4.88	3.53	2.56	1.86	22
23 24	34.00	29.30	24.07	17.00	10.10	12.09	10.95	9.31	6.74 6.72	4.69	3.50	2.59	1.90	23
25	32 73	27.86	23.72	17.33	14.70	12.72	10.72	9.16	6.70	4.92	3.61	2.00	1.96	25
26	31.80	27.13	23.16	16.91	14.47	12.38	10.60	9.09	6.68	4.93	3.63	2.70	1.99	26
27	30.89	26.42	22.62	16.60	14.24	12.22	10.49	9.01	6.66	4.93	3.67	2.73	2.03	27
28	30.01	25.74	22.09	16.30	14.01	12.05	10.38	8.93	6.64	4.95	3.68	2.76	2.07	28
29	29.15	25.07	21.57	16.00	13.79	11.90	10.26	8.87	6.62	4.95	3.72	2.79	2.10	29
30	28.32	24.42	21.06	15.71	13.57	11.74	10.15	8.79	6.59	4.96	3.74	2.82	2.14	30
31	27.50	23.77	20.56	15.42	13.36	11.58	10.04	8.71	6.57	4.97	3.77	2.86	2.17	31
32	26.71	23.10	20.09	15.13	13.14	11.43	9.94	8.65	0.50	4.98	3.79	2.89	2.21	32
34	25.94	22.55	19.00	14.00	12.54	11.27	9.03	8.51	6.52	5.00	3.85	2.93	2.23	34
35	24.48	21.39	18.69	14.31	12.53	10.98	9.62	8.43	6.49	5.01	3.87	3.00	2.33	35
36	23.78	20.83	18.25	14.05	12.33	10.82	9.52	8.36	6.47	5.02	3.90	3.04	2.37	36
37	23.10	20.29	17.83	13.79	12.13	10.68	9.41	8.30	6.46	5.03	3.93	3.08	2.41	37
38	22.43	19.76	17.41	13.54	11.94	10.54	9.31	8.23	6.44	5.05	3.96	3.11	2.45	38
39	21.80	19.24	17.01	13.29	11.76	10.40	9.21	8.16	6.41	5.06	3.99	3.15	2.50	39
40	21.18	18.74	16.61	13.04	11.57	10.26	9.11	8.10	6.40	5.06	4.01	3.19	2.54	40
41	20.57	18.26	16.22	12.80	11.39	10.14	9.02	8.03	6.38	5.07	4.04	3.23	2.59	41
42	19.99	17.79	15.04	12.00	11.22	9.87	0.93 8.83	7.97	6 35	5.09	4.00 4 11	3.27	2.03	42
44	18.88	16.89	15.12	12.00	10.87	9.74	8.74	7.85	6.33	5.10	4.13	3.35	2.72	44
45	18.34	16.45	14.77	11.91	10.71	9.62	8.65	7.79	6.31	5.13	4.17	3.40	2.77	45
46	17.84	16.03	14.43	11.70	10.54	9.50	8.56	7.72	6.29	5.14	4.20	3.44	2.82	46
47	17.34	15.63	14.10	11.49	10.38	9.38	8.48	7.67	6.28	5.16	4.23	3.48	2.87	47
48	16.85	15.23	13.78	11.28	10.22	9.26	8.39	7.61	6.26	5.17	4.27	3.53	2.92	48
49	16.38	14.85	13.47	11.09	10.07	9.15	8.31	7.56	6.25	5.18	4.30	3.57	2.98	49
50	15.93	14.48	13.16	10.89	9.91	9.03	8.23	7.50	6.24	5.20	4.34	3.62	3.03	50
51 52	15.49	14.12	12.80	10.71	9.//	8.92 2 2 2	0.15 2 07	7.45 7.40	0.22 6.22	5.21 5.22	4.37	3.68 3.72	3.09	51 52
53	14 66	13.70	12.37	10.02	9.03 9.40	0.02 8 71	7 99	7.40	6 20	5.20	4.40	3.72	3.14	53
54	14.25	13.09	12.03	10.00	9.35	8.61	7.93	7.30	6.20	5.27	4.49	3.83	3.27	54
55	13.87	12.78	11.77	10.00	9.22	8.51	7.85	7.26	6.19	5.29	4.53	3.88	3.33	55
56	13.51	12.47	11.52	9.84	9.10	8.42	7.79	7.21	6.18	5.31	4.57	3.93	3.39	56
57	13.15	12.18	11.28	9.69	8.98	8.33	7.72	7.17	6.19	5.33	4.61	4.00	3.47	57
58	12.82	11.90	11.05	9.54	8.87	8.25	7.66	7.13	6.19	5.36	4.67	4.06	3.54	58
59	12.50	11.64	10.82	9.40	8.76	8.17	7.61	7.10	6.18	5.39	4.72	4.13	3.61	59

continued

Table 33 Multipliers for loss of pension commencing age 80 (males) continued

Age at date of trial	Multiplie and rate	er calculate e of return	ed with allo of	wance for	projected i	mortality fr	om the 207	18-based	populatio	n projectio	ons			Age at date of trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	tital
60	12.20	11.38	10.62	9.27	8.66	8.09	7.57	7.07	6.19	5.43	4.77	4.19	3.69	60
61	11.90	11.14	10.42	9.14	8.56	8.02	7.52	7.05	6.20	5.47	4.83	4.26	3.77	61
62	11.62	10.90	10.23	9.03	8.47	7.96	7.48	7.04	6.22	5.51	4.89	4.33	3.86	62
63	11.36	10.69	10.06	8.91	8.39	7.91	7.45	7.02	6.24	5.55	4.96	4.42	3.95	63
64	11.13	10.49	9.89	8.81	8.32	7.86	7.42	7.01	6.27	5.61	5.03	4.51	4.04	64
65	10.89	10.30	9.74	8.72	8.25	7.82	7.40	7.01	6.30	5.67	5.10	4.60	4.15	65
66	10.68	10.12	9.60	8.64	8.20	7.78	7.39	7.02	6.34	5.73	5.19	4.70	4.26	66
67	10.49	9.97	9.48	8.58	8.16	7.77	7.39	7.04	6.39	5.81	5.28	4.81	4.38	67
68	10.31	9.83	9.36	8.52	8.13	7.76	7.40	7.07	6.45	5.89	5.39	4.93	4.51	68
69	10.15	9.70	9.27	8.47	8.11	7.76	7.43	7.11	6.52	5.98	5.50	5.05	4.66	69
70	10.01	9.59	9.19	8.44	8.10	7.77	7.46	7.16	6.59	6.09	5.62	5.20	4.81	70
71	9.89	9.50	9.13	8.44	8.11	7.80	7.50	7.21	6.68	6.20	5.76	5.35	4.97	71
72	9.80	9.43	9.09	8.44	8.13	7.84	7.56	7.29	6.80	6.33	5.91	5.52	5.15	72
73	9.72	9.38	9.06	8.46	8.18	7.91	7.64	7.39	6.92	6.48	6.08	5.71	5.36	73
74	9.67	9.36	9.06	8.51	8.25	7.99	7.75	7.51	7.07	6.65	6.28	5.92	5.58	74
75	9.65	9.37	9.10	8.57	8.33	8.10	7.87	7.65	7.23	6.85	6.49	6.15	5.83	75
76	9.66	9.40	9.15	8.67	8.45	8.23	8.03	7.82	7.43	7.08	6.73	6.42	6.12	76
77	9.70	9.47	9.25	8.81	8.61	8.41	8.21	8.02	7.67	7.33	7.02	6.72	6.44	77
78	9.79	9.58	9.37	8.98	8.80	8.61	8.44	8.27	7.94	7.63	7.34	7.07	6.81	78
79	9.93	9.74	9.57	9.21	9.04	8.88	8.72	8.56	8.27	7.99	7.72	7.47	7.22	79
80	10.14	9.97	9.81	9.50	9.35	9.20	9.06	8.92	8.66	8.40	8.16	7.94	7.72	80

Table 34Multipliers for loss of pension commencing age 80 (females)

22.00% -1.00% 0.278 0.50% 0.00% 0.50% 1.00% 1.50% 2.00% 2.50% 1 778.62 61.17 45.74 31.02 2.478 19.86 15.55 12.68 8.15 5.25 32 3.47 2.20 1.44 0.1 1 77.13 45.86 28.66 23.88 19.24 15.50 12.51 8.16 5.35 3.51 2.31 1.53 1.34 8.16 5.38 3.54 2.35 1.55 4 3.5 1.55 4.15 1.53 1.243 8.16 5.38 3.54 2.35 1.55 4 1.55 3.38 2.44 3.86 2.50 3.77 4.48 1.66 6.7 6.402 5.10 4.24 1.65 7.7 8.48 3.64 2.64 1.66 7 4.62 1.66 7 4.64 3.67 2.48 1.68 8 6.068 4.44 1.65 1.65 3.7 1.68 1.	Age at date of trial	Multiplie and rate	er calculate	ed with allo of	wance for	projected I	mortality fro	om the 201	8-based	populatio	n projectio	ons			Age at date of trial
0 78.82 61.17 46.74 91.00 24.78 19.80 75.85 12.88 115 5.25 12.80 12.00 1.44 0 1 75.00 68.80 46.86 30.14 24.20 19.44 15.66 12.58 81.16 5.32 3.47 2.27 15.50 2.3 5 67.51 54.47 43.97 28.72 22.24 18.61 15.12 12.30 81.41 5.36 3.54 2.35 1.65 4.6 1.66 1.64 3.56 3.56 2.41 1.82 1.52 1.23 8.14 5.42 3.60 2.41 1.82 1.86 1.57 1.23 8.14 5.44 3.64 2.45 1.85 1.66 1.66 1.64 1.68 1.64 1.62 1.60 8.14 5.64 1.62 1.86 1.66 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86 1.86	tital	-2 00%	-1 75%	-1.50%	-1 00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1 00%	1 50%	2 00%	2 50%	that
1 75.04 59.09 47.86 30.82 24.52 19.65 15.76 12.66 81.7 5.30 3.44 2.24 1.44 1 3 77.19 57.13 45.86 23.88 19.24 15.50 12.51 8.16 5.35 3.57 2.43 1.53 1.33 1.33 3 4 60.33 55.78 4.497 23.87 23.56 19.02 15.38 12.33 8.14 5.44 3.60 2.41 1.62 6 6.7 64.02 5.317 45.04 2.82 22.93 18.61 15.12 1.20 8.14 5.44 3.66 2.41 1.66 7 6 2.33 1.81 11.86 8.11 5.25 3.61 1.82 1.78	0	76.82	61 17	48 74	31.02	24 78	19.80	15.85	12 68	8 15	5 25	3 39	2 20	1 44	0
2 73.10 88.60 46.86 90.14 22.69 19.44 15.64 12.68 8.16 5.35 3.47 2.27 15.00 2 4 60.33 55.78 44.92 29.19 23.56 19.02 15.38 12.43 8.16 5.39 3.58 2.37 1.59 5 6 65.74 53.17 43.07 28.72 23.24 18.82 15.25 1.23 8.16 5.44 3.60 2.41 1.62 6 7 64.02 51.91 44.02 2.200 18.00 1.44 1.466 1.215 8.14 5.40 3.74 2.55 1.77 1 9 0.56.08 49.42 2.036 1.60.2 1.400 1.446 11.98 8.11 5.53 3.74 2.55 1.77 1 11 57.56 47.13 3.66 22.07 1.62 1.62 1.66 6.53 3.89 2.66 1.78 1.66 1.	1	75.04	59.90	47.85	30.62	24.52	19.65	15.76	12.66	8.17	5.30	3.44	2.24	1.46	1
3 71.19 67.13 45.88 29.66 23.88 19.24 15.50 12.44 8.16 5.36 3.54 2.31 1.5.3 3 6 67.51 64.47 43.97 23.72 23.24 18.82 15.25 12.30 8.14 5.46 3.54 2.37 1.58 6 7 64.02 51.91 42.12 27.80 22.23 18.41 15.00 12.23 8.14 5.46 3.67 2.44 1.68 8 9 60.68 49.47 40.36 29.92 22.00 18.00 14.74 12.07 8.12 5.48 3.67 2.55 1.77 10 11 57.52 47.13 38.65 20.42 21.11 17.40 14.48 11.98 8.10 5.56 3.81 2.26 1.81 11 1.12 5.69 3.74 2.56 1.77 1.60 14.42 11.78 8.10 5.56 3.81 2.26 1.78 11 1.86 5.10 3.74 2.56 1.77 1.11 1.11 1.11<	2	73.10	58.50	46.86	30.14	24.20	19.44	15.64	12.58	8.16	5.32	3.47	2.27	1.50	2
4 60:33 55.78 44.92 29:19 23.56 19.02 15.38 12.43 8.16 5.54 3.554 2.35 1.55 4 6 66:74 53.17 43.04 28.26 22.33 18.64 15.12 1.23 8.16 5.44 3.640 2.41 1.62 6 7 64.02 51.91 42.22 7.16 1.466 1.23 8.14 5.44 3.64 2.45 1.16 5.48 3.77 2.56 1.77 1 9 10 56.08 49.42 40.66 2.69 2.100 1.70 1.448 1.103 8.11 5.53 3.44 2.65 1.77 1 11 75.52 47.33 3.66 2.64 2.147 1.424 1.178 8.10 5.58 3.84 2.68 1.33 14 53.06 4.3.61 1.3.62 1.1.64 1.0.6 5.66 3.99 2.74 1.92 15	3	71.19	57.13	45.88	29.66	23.88	19.24	15.50	12.51	8.16	5.35	3.51	2.31	1.53	3
6 67.51 54.47 43.97 28.72 22.92 18.82 15.25 12.37 8.16 5.48 2.47 1.59 5 7 64.02 51.91 42.12 27.80 22.62 18.41 15.10 12.23 8.14 5.46 3.67 2.48 1.88 8 9 60.68 49.47 40.36 29.92 22.01 18.00 14.74 12.07 8.12 5.48 3.64 3.67 2.55 1.75 10 10 50.08 44.24 3.84 26.48 21.10 17.70 14.48 11.39 6.11 5.63 3.74 2.55 1.75 10 11 57.52 47.13 38.65 22.47 1.62 1.412 1.146 8.00 5.63 3.84 2.70 1.82 14 12 55.06 3.478 3.38 22.37 1.92 1.62 1.336 1.157 8.08 5.62 3.98 2.70 1.82 1.61 15 51.33 3.237 2.46 2.81 1.92 </td <td>4</td> <td>69.33</td> <td>55.78</td> <td>44.92</td> <td>29.19</td> <td>23.56</td> <td>19.02</td> <td>15.38</td> <td>12.43</td> <td>8.16</td> <td>5.36</td> <td>3.54</td> <td>2.35</td> <td>1.55</td> <td>4</td>	4	69.33	55.78	44.92	29.19	23.56	19.02	15.38	12.43	8.16	5.36	3.54	2.35	1.55	4
6 65.74 65.17 43.04 28.26 22.93 18.61 15.12 12.23 8.14 5.44 3.66 2.44 1.65 7 8 62.33 50.68 41.23 27.35 22.20 18.21 1.846 12.15 8.13 5.44 3.67 2.44 1.68 8 3.67 2.54 1.71 9 10 58.08 49.47 0.38.65 2.60 2.10 1.760 1.44.87 1.193 8.11 5.52 3.74 2.55 1.75 10 11 57.52 47.13 3.865 2.60 2.172 1.424 11.77 8.10 5.53 3.84 2.65 1.84 1.11 1.15 5.16.3 3.81 2.62 1.862 1.39 11.64 8.08 5.62 3.84 2.76 1.86 1.39 11.64 8.08 5.62 3.84 2.76 1.86 1.87 1.86 1.67 1.86 1.39 11.64 8.08 5.63 3.95 2.76 1.96 1.96 1.96 1.96 1.96 1	5	67.51	54.47	43.97	28.72	23.24	18.82	15.25	12.37	8.15	5.39	3.58	2.37	1.59	5
$ \begin{array}{c} 7 \\ 64.02 \\ 8 \\ 62.33 \\ 50.68 \\ 45.47 \\ 64.02 \\ 51.91 \\ 42.12 \\ 52.5 \\ 64.08 \\ 44.74 \\ 40.36 \\ 42.8 \\ 26.92 \\ 22.00 \\ 18.00 \\ 18.00 \\ 18.00 \\ 18.00 \\ 18.00 \\ 18.01 \\ $	6	65.74	53.17	43.04	28.26	22.93	18.61	15.12	12.30	8.14	5.42	3.60	2.41	1.62	6
B b2.33 50.083 41.23 2/.33 22.00 16.21 14.80 12.15 6.1.3 5.44 3.37 2.54 3.37 2.55 2.77 19 10 56.08 44.247 20.08 12.07 17.40 14.42 12.00 8.12 5.53 3.74 2.55 1.7.5 11 11 57.52 47.13 38.65 2.60 21.40 17.76 14.42 11.78 8.10 5.55 3.84 2.65 1.7.6 14.42 11.71 8.10 5.56 3.84 2.66 1.85 13 14 53.05 44.84 3.700 2.52 17.02 14.12 11.71 8.09 5.56 3.88 2.70 1.88 14 15 51.63 3.47 3.46 2.3.91 19.46 16.62 1.3.91 11.47 8.00 5.77 4.06 2.02 7.77 1.17 1.17 1.17 1.17 1.17 1.17 1.17	(64.02	51.91	42.12	27.80	22.62	18.41	15.00	12.23	8.14	5.44	3.64	2.45	1.65	1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	8	60.68	50.68 40.47	41.23	27.35	22.31	18.21	14.80	12.15	8.13 9.12	5.40 5.49	3.07	2.48	1.68	8
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	10	59.08	48.28	39.49	26.32	21.00	17.80	14.62	12.07	8.12	5 50	3.74	2.51	1.71	10
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	11	57.52	47.13	38.65	26.04	21.40	17.60	14.48	11.93	8.11	5.52	3.78	2.59	1.78	11
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	12	55.99	46.00	37.82	25.62	21.11	17.40	14.36	11.86	8.10	5.55	3.81	2.63	1.81	12
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	13	54.50	44.89	37.00	25.21	20.82	17.21	14.24	11.78	8.10	5.58	3.84	2.66	1.85	13
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	14	53.05	43.81	36.21	24.79	20.52	17.02	14.12	11.71	8.09	5.59	3.88	2.70	1.88	14
	15	51.63	42.76	35.43	24.38	20.25	16.82	13.99	11.64	8.08	5.62	3.92	2.74	1.92	15
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16	50.26	41.73	34.66	23.97	19.96	16.63	13.86	11.57	8.06	5.63	3.95	2.78	1.96	16
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	17	48.91	40.72	33.92	23.58	19.68	16.44	13.75	11.49	8.05	5.66	3.99	2.81	2.00	17
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	10	47.00	39.73	32.10	23.19	19.41	16.25	13.02	11.42	0.04 8.03	5.09 5.70	4.02	2.00	2.03	10
$ \begin{array}{c} 1 \\ 43.87 \\ 21 \\ 43.87 \\ 36.91 \\ 31.06 \\ 30.03 \\ 21.69 \\ 21.32 \\ 24 \\ 42.75 \\ 35.13 \\ 29.72 \\ 21.32 \\ 40.42 \\ 34.27 \\ 29.07 \\ 20.97 \\ 20.97 \\ 17.82 \\ 15.15 \\ 12.90 \\ 10.99 \\ 10.99 \\ 10.99 \\ 10.99 \\ 10.91 \\ $	20	45.09	37.83	31.76	22.01	18.86	15.88	13.38	11.33	8.02	5.73	4.00	2.30	2.07	20
22 42.70 36.01 30.39 21.69 18.34 15.52 13.14 11.15 7.99 5.79 4.17 3.01 2.19 22 23 41.55 35.13 29.72 21.32 18.07 15.34 13.02 11.05 7.99 5.79 4.20 3.05 2.24 23 24 40.42 34.27 20.97 17.42 15.15 12.00 10.99 7.98 5.81 4.24 3.10 2.27 24 25 38.26 32.61 27.62 19.93 17.07 14.63 12.54 10.67 7.94 5.87 4.35 3.23 2.40 27 28 36.23 30.27 26.01 19.25 16.57 14.28 12.32 10.62 7.91 5.91 4.42 3.32 2.45 28 29 35.23 30.27 26.01 19.25 16.57 14.28 12.32 10.62 7.91 5.91 4.42 3.32	21	43.87	36.91	31.06	22.05	18.60	15.70	13.25	11.20	8.01	5.74	4.13	2.98	2.15	21
23 41.55 35.13 29.72 21.32 18.07 15.34 13.02 11.05 7.99 5.79 4.20 3.05 2.24 23 24 40.42 34.27 29.07 20.97 17.82 15.15 12.90 10.99 7.98 5.81 4.24 3.10 2.27 24 25 39.33 33.43 28.44 20.62 17.57 14.98 12.76 10.91 7.97 5.85 4.31 3.19 2.36 26 27 37.23 31.81 27.20 19.93 17.07 14.63 12.54 10.07 7.93 5.89 4.39 3.28 2.44 2.80 2.50 28 29 36.23 30.27 26.01 19.25 16.57 14.28 12.02 10.62 7.91 5.91 4.47 3.36 2.54 30 31 33.35 28.79 24.88 18.60 16.10 13.95 12.08 10.40 7.88 5.97 4.54 3.60 2.64 32 33 3.55 27.39 <	22	42.70	36.01	30.39	21.69	18.34	15.52	13.14	11.13	8.00	5.77	4.17	3.01	2.19	22
24 40.42 34.27 29.07 20.97 17.82 15.15 12.90 10.99 7.98 5.81 4.24 3.10 2.27 24 25 39.33 33.43 28.44 20.62 17.57 14.89 12.76 10.91 7.97 5.85 4.28 3.15 2.23 2.66 27 37.23 31.81 27.20 19.93 17.07 14.63 12.54 10.67 7.94 5.87 4.35 3.23 2.40 27 28 36.22 31.03 26.601 19.25 16.57 14.28 12.23 10.62 7.91 5.91 4.42 3.22 2.60 29 30 34.27 29.52 25.44 18.93 16.34 14.11 12.19 10.55 7.90 5.94 4.47 3.36 2.64 32 31 33.35 28.79 24.88 18.60 16.10 13.95 12.08 10.40 7.86 5.99 4	23	41.55	35.13	29.72	21.32	18.07	15.34	13.02	11.05	7.99	5.79	4.20	3.05	2.24	23
25 39.33 33.43 28.44 20.26 17.31 14.98 12.76 10.91 7.97 5.83 4.28 3.15 2.32 25 26 38.26 32.61 27.82 31.03 26.60 19.59 17.07 14.63 12.54 10.77 7.94 5.87 4.35 3.23 2.40 27 28 36.22 31.03 26.60 19.59 16.57 14.28 12.22 10.62 7.91 5.91 4.42 3.32 2.60 29 30 34.27 29.52 25.44 18.33 16.34 14.11 12.19 10.55 7.90 5.94 4.47 3.36 2.54 30 31 33.35 28.79 24.88 18.60 13.47 11.75 10.40 7.88 5.97 4.54 3.46 2.64 32 33 31.55 27.39 23.80 17.98 15.67 13.78 11.97 10.40 7.88 5.99	24	40.42	34.27	29.07	20.97	17.82	15.15	12.90	10.99	7.98	5.81	4.24	3.10	2.27	24
26 38.26 32.61 27.82 20.26 17.31 14.80 12.66 10.83 7.95 5.85 4.31 3.19 2.36 26 27 37.23 31.81 27.20 19.93 17.07 14.63 12.54 10.07 7.93 5.89 4.39 3.28 2.45 28 29 35.23 30.27 26.01 19.25 16.57 14.28 12.32 10.62 7.91 5.91 4.42 3.32 2.50 29 30 34.27 29.52 25.44 18.60 16.34 11.11 12.19 10.55 7.90 5.94 4.47 3.36 2.54 30 31 33.35 28.79 24.88 18.60 16.37 13.78 11.97 10.40 7.88 5.97 4.54 3.46 2.64 32 33 31.65 27.39 23.80 17.88 15.19 13.30 11.64 10.20 7.84 6.02 4.61 3.55 2.74 34 35 29.86 26.06 2.75 <	25	39.33	33.43	28.44	20.62	17.57	14.98	12.78	10.91	7.97	5.83	4.28	3.15	2.32	25
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	26	38.26	32.61	27.82	20.26	17.31	14.80	12.66	10.83	7.95	5.85	4.31	3.19	2.36	26
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	27	37.23	31.81	27.20	19.93	17.07	14.63	12.54	10.77	7.94	5.87	4.35	3.23	2.40	27
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20 20	30.22 35.23	31.03	20.00	19.59	16.62	14.40	12.43	10.69	7.93	5.09 5.01	4.39	3.20	2.40	20
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	30	34 27	29.52	25.01	18.93	16.34	14.20	12.32	10.02	7.90	5.91	4.42	3.36	2.50	30
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	31	33.35	28.79	24.88	18.60	16.10	13.95	12.08	10.48	7.89	5.96	4.50	3.41	2.58	31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	32	32.44	28.08	24.33	18.29	15.87	13.78	11.97	10.40	7.88	5.97	4.54	3.46	2.64	32
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	33	31.55	27.39	23.80	17.98	15.65	13.61	11.86	10.34	7.86	5.99	4.57	3.50	2.69	33
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	34	30.69	26.72	23.27	17.67	15.41	13.45	11.75	10.26	7.84	6.02	4.61	3.55	2.74	34
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35	29.86	26.06	22.75	17.37	15.19	13.30	11.64	10.20	7.83	6.04	4.65	3.60	2.78	35
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	36	29.05	25.41	22.25	17.08	14.97	13.14	11.53	10.13	7.82	6.05	4.69	3.65	2.84	36
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	37	28.25	24.79	21.75	16.79	14.75	12.98	11.42	10.06	7.80	6.08	4.73	3.69	2.89	3/
40 26.01 23.00 20.34 15.94 14.12 12.52 11.10 9.85 7.77 6.13 4.86 3.85 3.00 40 41 25.30 22.42 19.89 15.67 13.92 12.37 11.00 9.79 7.76 6.16 4.90 3.90 3.12 41 42 24.62 21.87 19.45 15.41 13.72 12.22 10.90 9.72 7.75 6.18 4.94 3.95 3.17 42 43 23.94 21.34 19.02 15.14 13.52 12.08 10.80 9.66 7.73 6.20 4.98 4.01 3.24 43 44 23.29 20.81 18.61 14.89 13.33 11.94 10.70 9.59 7.71 6.22 5.02 4.07 3.30 44 45 22.66 20.30 18.19 14.64 13.14 11.80 10.60 9.53 7.71 6.24 5.07 4.12 3.36 45 46 22.05 19.80 17.80 14.39 12.96 11.66 10.51 9.46 7.69 6.26 5.12 4.17 3.42 46 47 21.46 19.32 17.41 14.15 12.76 11.52 10.41 9.40 7.68 6.29 5.16 4.24 3.48 47 48 20.88 18.85 17.03 13.92 12.21 11.126 10.22 9.28 <	30 39	26 73	24.17	20.81	16.50	14.55	12.02	11.32	9.90	7.60	6.09	4.77	3.74	2.95	39
4125.3022.4219.8915.6713.9212.3711.009.797.766.164.903.903.12414224.6221.8719.4515.4113.7212.2210.909.727.756.184.943.953.17424323.9421.3419.0215.1413.5212.0810.809.667.736.204.984.013.24434423.2920.8118.6114.8913.3311.9410.709.597.716.225.024.073.30444522.6620.3018.1914.6413.1411.8010.609.537.716.245.174.123.36454622.0519.8017.8014.3912.9611.6610.519.467.696.265.124.173.42464721.4619.3217.4114.1512.7611.5210.419.407.686.315.214.243.48474820.8818.8517.0313.9212.5911.3910.329.347.666.345.254.353.62495019.7717.9516.2913.4612.2311.1310.139.227.656.375.304.413.69505119.2517.5115.9513.2412.0711.0110.049.177.646.395.354.48<	40	26.01	23.00	20.34	15.94	14.12	12.52	11.10	9.85	7.77	6.13	4.86	3.85	3.06	40
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	41	25.30	22.42	19.89	15.67	13.92	12.37	11.00	9.79	7.76	6.16	4.90	3.90	3.12	41
4323.9421.3419.0215.1413.5212.0810.809.667.736.204.984.013.24434423.2920.8118.6114.8913.3311.9410.709.597.716.225.024.073.30444522.6620.3018.1914.6413.1411.8010.609.537.716.245.074.123.36454622.0519.8017.8014.3912.9611.6610.519.467.696.265.124.173.42464721.4619.3217.4114.1512.7611.5210.419.407.686.295.164.243.48474820.8818.8517.0313.9212.5911.3910.329.347.686.315.214.293.55484920.3118.3916.6613.6912.4111.2610.229.287.666.345.254.353.62495019.7717.9516.2913.4612.2311.1310.139.227.656.375.304.413.69505119.2517.5115.9513.2412.0711.0110.049.177.646.395.354.483.76515218.7317.1015.6013.0311.9110.899.969.117.646.425.394.55 </td <td>42</td> <td>24.62</td> <td>21.87</td> <td>19.45</td> <td>15.41</td> <td>13.72</td> <td>12.22</td> <td>10.90</td> <td>9.72</td> <td>7.75</td> <td>6.18</td> <td>4.94</td> <td>3.95</td> <td>3.17</td> <td>42</td>	42	24.62	21.87	19.45	15.41	13.72	12.22	10.90	9.72	7.75	6.18	4.94	3.95	3.17	42
44 23.29 20.81 18.61 14.89 13.33 11.94 10.70 9.59 7.71 6.22 5.02 4.07 3.30 44 45 22.66 20.30 18.19 14.64 13.14 11.80 10.60 9.53 7.71 6.24 5.07 4.12 3.36 45 46 22.05 19.80 17.80 14.39 12.96 11.66 10.51 9.46 7.69 6.26 5.12 4.17 3.42 46 47 21.46 19.32 17.41 14.15 12.76 11.52 10.41 9.40 7.68 6.29 5.16 4.24 3.48 47 48 20.88 18.85 17.03 13.92 12.59 11.39 10.32 9.34 7.68 6.31 5.21 4.29 3.55 48 49 20.31 18.39 16.66 13.69 12.41 11.26 10.22 9.28 7.65 6.37 5.30 4.41 3.69 50 51 19.25 17.51 15.95 13	43	23.94	21.34	19.02	15.14	13.52	12.08	10.80	9.66	7.73	6.20	4.98	4.01	3.24	43
4522.6620.3018.1914.6413.1411.8010.609.537.716.245.074.123.36454622.0519.8017.8014.3912.9611.6610.519.467.696.265.124.173.42464721.4619.3217.4114.1512.7611.5210.419.407.686.295.164.243.48474820.8818.8517.0313.9212.5911.3910.329.347.686.315.214.293.55484920.3118.3916.6613.6912.4111.2610.229.287.666.345.254.353.62495019.7717.9516.2913.4612.2311.1310.139.227.656.375.304.413.69505119.2517.5115.9513.2412.0711.0110.049.177.646.395.354.483.76515218.7317.1015.6013.0311.9110.899.969.117.646.425.394.553.83525318.2416.6915.2812.6111.5810.649.799.017.636.475.504.683.99545517.3115.9214.6412.4111.4310.539.728.967.636.505.564.75	44	23.29	20.81	18.61	14.89	13.33	11.94	10.70	9.59	7.71	6.22	5.02	4.07	3.30	44
46 22.05 19.80 17.80 14.39 12.96 11.66 10.51 9.46 7.69 6.26 5.12 4.17 3.42 46 47 21.46 19.32 17.41 14.15 12.76 11.52 10.41 9.40 7.68 6.29 5.16 4.24 3.48 47 48 20.88 18.85 17.03 13.92 12.59 11.39 10.32 9.34 7.68 6.31 5.21 4.29 3.55 48 49 20.31 18.39 16.66 13.69 12.41 11.26 10.22 9.28 7.66 6.34 5.25 4.35 3.62 49 50 19.77 17.95 16.29 13.46 12.23 11.13 10.13 9.22 7.65 6.37 5.30 4.41 3.69 50 51 19.25 17.51 15.95 13.24 12.07 11.01 10.04 9.17 7.64 6.42 5.39 4.55 3.83 52 53 18.24 16.69 15.28 12	45	22.66	20.30	18.19	14.64	13.14	11.80	10.60	9.53	7.71	6.24	5.07	4.12	3.36	45
47 21.46 19.32 17.41 14.13 12.76 11.32 10.41 9.40 7.66 6.29 5.16 4.24 3.46 47 48 20.88 18.85 17.03 13.92 12.59 11.39 10.32 9.34 7.66 6.31 5.21 4.29 3.55 48 49 20.31 18.39 16.66 13.69 12.41 11.26 10.22 9.28 7.66 6.34 5.25 4.35 3.62 49 50 19.77 17.95 16.29 13.46 12.23 11.13 10.13 9.22 7.65 6.37 5.30 4.41 3.69 50 51 19.25 17.51 15.95 13.24 12.07 11.01 10.04 9.17 7.64 6.39 5.35 4.48 3.76 51 52 18.73 17.10 15.60 13.03 11.91 10.89 9.96 9.11 7.64 6.42 5.39 4.55 3.83 52 53 18.24 16.69 15.28 12.	46	22.05	19.80	17.80	14.39	12.96	11.66	10.51	9.46	7.69	6.26	5.12	4.17	3.42	46
40 20.30 10.30 11.30 11.30 11.30 10.32 3.34 1.360 6.31 5.21 4.25 3.35 40 49 20.31 18.39 16.66 13.69 12.41 11.26 10.22 9.28 7.66 6.34 5.25 4.35 3.62 49 50 19.77 17.95 16.29 13.46 12.23 11.13 10.13 9.22 7.65 6.37 5.30 4.41 3.69 50 51 19.25 17.51 15.95 13.24 12.07 11.01 10.04 9.17 7.64 6.39 5.35 4.48 3.76 51 52 18.73 17.10 15.60 13.03 11.91 10.89 9.96 9.11 7.64 6.42 5.39 4.55 3.83 52 53 18.24 16.69 15.28 12.61 11.58 10.64 9.79 9.01 7.63 6.47 5.50 4.68 3.99 54 55 17.31 15.92 14.64 12.41 11.	47	21.40	19.52	17.41	14.10	12.70	11.02	10.41	9.40 9.34	7.00	6 31	5.10	4.24 1 20	3.40	47
10 1010 1	49	20.00	18.39	16.66	13.69	12.33	11.26	10.32	9.28	7.66	6.34	5.25	4.35	3.62	49
51 19.25 17.51 15.95 13.24 12.07 11.01 10.04 9.17 7.64 6.39 5.35 4.48 3.76 51 52 18.73 17.10 15.60 13.03 11.91 10.89 9.96 9.11 7.64 6.42 5.39 4.55 3.83 52 53 18.24 16.69 15.28 12.81 11.74 10.76 9.87 9.06 7.63 6.44 5.45 4.61 3.91 53 54 17.76 16.30 14.95 12.61 11.58 10.64 9.79 9.01 7.63 6.47 5.50 4.68 3.99 54 55 17.31 15.92 14.64 12.41 11.43 10.53 9.72 8.96 7.63 6.50 5.56 4.75 4.07 55 56 16.85 15.55 14.34 12.22 11.28 10.42 9.63 8.91 7.63 6.54 5.61 4.82 4.15 56 57 16.43 15.18 14.05 12.03 </td <td>50</td> <td>19.77</td> <td>17.95</td> <td>16.29</td> <td>13.46</td> <td>12.23</td> <td>11.13</td> <td>10.13</td> <td>9.22</td> <td>7.65</td> <td>6.37</td> <td>5.30</td> <td>4.41</td> <td>3.69</td> <td>50</td>	50	19.77	17.95	16.29	13.46	12.23	11.13	10.13	9.22	7.65	6.37	5.30	4.41	3.69	50
52 18.73 17.10 15.60 13.03 11.91 10.89 9.96 9.11 7.64 6.42 5.39 4.55 3.83 52 53 18.24 16.69 15.28 12.81 11.74 10.76 9.87 9.06 7.63 6.44 5.45 4.61 3.91 53 54 17.76 16.30 14.95 12.61 11.58 10.64 9.79 9.01 7.63 6.47 5.50 4.68 3.99 54 55 17.31 15.92 14.64 12.41 11.43 10.53 9.72 8.96 7.63 6.50 5.56 4.75 4.07 55 56 16.85 15.55 14.34 12.22 11.28 10.42 9.63 8.91 7.63 6.54 5.61 4.82 4.15 56 57 16.43 15.18 14.05 12.03 11.15 10.32 9.57 8.87 7.62 6.57 5.67 4.89 4.23 57 58 16.01 14.84	51	19.25	17.51	15.95	13.24	12.07	11.01	10.04	9.17	7.64	6.39	5.35	4.48	3.76	51
53 18.24 16.69 15.28 12.81 11.74 10.76 9.87 9.06 7.63 6.44 5.45 4.61 3.91 53 54 17.76 16.30 14.95 12.61 11.58 10.64 9.79 9.01 7.63 6.44 5.45 4.61 3.91 53 55 17.31 15.92 14.64 12.41 11.43 10.53 9.72 8.96 7.63 6.47 5.50 4.68 3.99 54 56 16.85 15.55 14.34 12.22 11.28 10.42 9.63 8.91 7.63 6.54 5.61 4.82 4.15 56 57 16.43 15.18 14.05 12.03 11.15 10.32 9.57 8.87 7.62 6.57 5.67 4.89 4.23 57 58 16.01 14.84 13.77 11.85 11.00 10.22 9.49 8.82 7.63 6.61 5.79	52	18.73	17.10	15.60	13.03	11.91	10.89	9.96	9.11	7.64	6.42	5.39	4.55	3.83	52
54 17.76 16.30 14.95 12.61 11.58 10.64 9.79 9.01 7.63 6.47 5.50 4.68 3.99 54 55 17.31 15.92 14.64 12.41 11.43 10.53 9.72 8.96 7.63 6.50 5.56 4.75 4.07 55 56 16.85 15.55 14.34 12.22 11.28 10.42 9.63 8.91 7.63 6.54 5.61 4.82 4.15 56 57 16.43 15.18 14.05 12.03 11.15 10.32 9.57 8.87 7.62 6.57 5.67 4.89 4.23 57 58 16.01 14.84 13.77 11.85 11.00 10.22 9.49 8.82 7.63 6.61 5.73 4.97 4.32 58 59 15.62 14.52 13.50 11.69 10.87 10.13 9.43 8.79 7.64 6.65 5.79	53	18.24	16.69	15.28	12.81	11.74	10.76	9.87	9.06	7.63	6.44	5.45	4.61	3.91	53
55 17.31 15.92 14.64 12.41 11.43 10.53 9.72 8.96 7.63 6.50 5.56 4.75 4.07 55 56 16.85 15.55 14.34 12.22 11.28 10.42 9.63 8.91 7.63 6.54 5.61 4.82 4.15 56 57 16.43 15.18 14.05 12.03 11.15 10.32 9.57 8.87 7.62 6.57 5.67 4.89 4.23 57 58 16.01 14.84 13.77 11.85 11.00 10.22 9.49 8.82 7.63 6.61 5.73 4.97 4.32 58 59 15.62 14.52 13.50 11.69 10.87 10.13 9.43 8.79 7.64 6.65 5.79 5.05 4.42 59	54	17.76	16.30	14.95	12.61	11.58	10.64	9.79	9.01	7.63	6.47	5.50	4.68	3.99	54
50 10.85 15.55 14.34 12.22 11.28 10.42 9.63 8.91 7.63 6.54 5.61 4.82 4.15 56 57 16.43 15.18 14.05 12.03 11.15 10.32 9.57 8.87 7.62 6.57 5.67 4.89 4.23 57 58 16.01 14.84 13.77 11.85 11.00 10.22 9.49 8.82 7.63 6.61 5.73 4.97 4.32 58 59 15.62 14.52 13.50 11.69 10.87 10.13 9.43 8.79 7.64 6.65 5.79 5.05 4.42 59	55	17.31	15.92	14.64	12.41	11.43	10.53	9.72	8.96	7.63	6.50	5.56	4.75	4.07	55
57 10.45 13.16 14.05 12.05 11.15 10.32 9.57 6.67 7.62 6.37 5.67 4.89 4.23 57 58 16.01 14.84 13.77 11.85 11.00 10.22 9.49 8.82 7.63 6.61 5.73 4.97 4.32 58 59 15.62 14.52 13.50 11.69 10.87 10.13 9.43 8.79 7.64 6.65 5.79 5.05 4.42 59	50	16.85	15.55	14.34	12.22	11.28	10.42	9.63	8.91 9 97	7.63	6.54 6.57	5.61	4.82	4.15	56 F7
<u>59 15.62 14.52 13.50 11.69 10.87 10.13 9.43 8.79 7.64 6.65 5.79 5.05 4.42 59</u>	58	16.43	14.84	13 77	11.05	11.15	10.32	9.57	0.07 8.82	7.02	6.61	5.73	4.09 4 97	4.23	58
	59	15.62	14.52	13.50	11.69	10.87	10.13	9.43	8.79	7.64	6.65	5.79	5.05	4.42	59

continued

Table 34 Multipliers for loss of pension commencing age 80 (females) continued

Age at	Multiplie	er calculate	ed with allo	wance for	projected I	mortality fr	om the 201	18-based	populatio	n projectio	ons			Age at
date of	and rate	e of return	of											date of
trial														trial
	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	
60	15.24	14.20	13.24	11.51	10.74	10.03	9.36	8.75	7.65	6.69	5.86	5.14	4.51	60
61	14.87	13.89	12.98	11.36	10.63	9.94	9.31	8.73	7.66	6.73	5.93	5.22	4.61	61
62	14.51	13.60	12.74	11.21	10.51	9.86	9.26	8.69	7.68	6.78	6.00	5.32	4.72	62
63	14.18	13.32	12.51	11.06	10.40	9.79	9.21	8.67	7.70	6.83	6.08	5.41	4.82	63
64	13.86	13.05	12.29	10.93	10.30	9.71	9.17	8.66	7.72	6.89	6.16	5.51	4.93	64
65	13.56	12.80	12.09	10.79	10.21	9.65	9.13	8.64	7.75	6.95	6.24	5.62	5.06	65
66	13.27	12.56	11.89	10.67	10.12	9.59	9.10	8.64	7.78	7.02	6.33	5.73	5.19	66
67	13.00	12.33	11.71	10.57	10.04	9.55	9.08	8.64	7.82	7.09	6.43	5.84	5.32	67
68	12.74	12.12	11.55	10.48	9.98	9.51	9.06	8.64	7.87	7.17	6.54	5.98	5.46	68
69	12.51	11.93	11.39	10.39	9.92	9.48	9.06	8.67	7.92	7.26	6.66	6.11	5.61	69
70	12.29	11.76	11.25	10.31	9.88	9.46	9.07	8.69	7.99	7.36	6.78	6.25	5.77	70
71	12.08	11.60	11.13	10.26	9.84	9.46	9.08	8.73	8.07	7.46	6.92	6.41	5.95	71
72	11.91	11.46	11.02	10.21	9.83	9.47	9.12	8.78	8.17	7.59	7.07	6.59	6.14	72
73	11.76	11.35	10.94	10.19	9.84	9.49	9.17	8.86	8.27	7.73	7.23	6.78	6.35	73
74	11.63	11.25	10.88	10.18	9.85	9.55	9.24	8.95	8.40	7.89	7.42	6.98	6.57	74
75	11.54	11.19	10.85	10.21	9.90	9.61	9.33	9.06	8.54	8.07	7.62	7.22	6.83	75
76	11.47	11.15	10.84	10.25	9.97	9.70	9.45	9.20	8.72	8.27	7.86	7.47	7.11	76
77	11.44	11.15	10.87	10.33	10.08	9.83	9.59	9.36	8.92	8.51	8.12	7.76	7.42	77
78	11.45	11.19	10.93	10.44	10.22	9.99	9.77	9.56	9.16	8.78	8.43	8.10	7.78	78
79	11.50	11.26	11.04	10.60	10.39	10.19	10.00	9.81	9.44	9.10	8.77	8.47	8.18	79
80	11.60	11.39	11.19	10.80	10.62	10.44	10.27	10.10	9.77	9.46	9.17	8.90	8.63	80

Table 35 Discounting factors for term certain

Factor	to discoun	t value of n	nultiplier fo	or a period	of deferme	nt								
Term	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	Term
1	1.0204	1.0178	1.0152	1.0101	1.0076	1.0050	1.0025	1.0000	0.9950	0.9901	0.9852	0.9804	0.9756	1
2	1.0412	1.0359	1.0307	1.0203	1.0152	1.0101	1.0050	1.0000	0.9901	0.9803	0.9707	0.9612	0.9518	2
3	1.0625	1.0544	1.0464	1.0306	1.0228	1.0152	1.0075	1.0000	0.9851	0.9706	0.9563	0.9423	0.9286	3
4	1.0842	1.0732	1.0623	1.0410	1.0306	1.0203	1.0101	1.0000	0.9802	0.9610	0.9422	0.9238	0.9060	4
5	1.1063	1.0923	1.0785	1.0515	1.0384	1.0254	1.0126	1.0000	0.9754	0.9515	0.9283	0.9057	0.8839	5
6	1.1289	1.1117	1.0949	1.0622	1.0462	1.0305	1.0151	1.0000	0.9705	0.9420	0.9145	0.8880	0.8623	6
(1.1519	1.1315	1.1116	1.0729	1.0541	1.0357	1.0177	1.0000	0.9657	0.9327	0.9010	0.8706	0.8413	(
8	1.1754	1.1517	1.1285	1.0837	1.0621	1.0409	1.0202	1.0000	0.9609	0.9235	0.8877	0.8535	0.8207	8
9	1.1994	1.1722	1.1457	1.0947	1.0701	1.0461	1.0228	1.0000	0.9501	0.9143	0.8740	0.8368	0.8007	9
10	1.2239	1.1931	1 1800	1 1 1 6 0	1.0702	1.0514	1.0255	1.0000	0.9513	0.9055	0.8/80	0.0203	0.7612	10
12	1.2403	1 2360	1 1989	1 1 2 8 2	1.0005	1.0507	1.0275	1.0000	0.9400	0.0303	0.0403	0.0045	0.7021	12
12	1.2740	1.2580	1.2171	1 1 3 9 6	1.1028	1.0020	1.0331	1.0000	0.9372	0.0074	0.0004	0.7000	0.7254	12
14	1.3269	1.2804	1.2356	1.1511	1.1112	1.0727	1.0357	1.0000	0.9326	0.8700	0.8118	0.7579	0.7077	14
15	1.3540	1.3032	1.2545	1.1627	1.1195	1.0781	1.0383	1.0000	0.9279	0.8613	0.7999	0.7430	0.6905	15
16	1.3816	1.3264	1.2736	1.1745	1.1280	1.0835	1.0409	1.0000	0.9233	0.8528	0.7880	0.7284	0.6736	16
17	1.4098	1.3500	1.2930	1.1863	1.1365	1.0889	1.0435	1.0000	0.9187	0.8444	0.7764	0.7142	0.6572	17
18	1.4386	1.3741	1.3126	1.1983	1.1451	1.0944	1.0461	1.0000	0.9141	0.8360	0.7649	0.7002	0.6412	18
19	1.4679	1.3986	1.3326	1.2104	1.1538	1.0999	1.0487	1.0000	0.9096	0.8277	0.7536	0.6864	0.6255	19
20	1.4979	1.4235	1.3529	1.2226	1.1625	1.1054	1.0513	1.0000	0.9051	0.8195	0.7425	0.6730	0.6103	20
21	1.5285	1.4488	1.3735	1.2350	1.1713	1.1110	1.0540	1.0000	0.9006	0.8114	0.7315	0.6598	0.5954	21
22	1.5596	1.4746	1.3944	1.2475	1.1801	1.1166	1.0566	1.0000	0.8961	0.8034	0.7207	0.6468	0.5809	22
23	1.5915	1.5009	1.4157	1.2601	1.1890	1.1222	1.0593	1.0000	0.8916	0.7954	0.7100	0.6342	0.5667	23
24	1.6240	1.5276	1.4372	1.2728	1.1980	1.1278	1.0619	1.0000	0.8872	0.7876	0.6995	0.6217	0.5529	24
25	1.6571	1.5548	1.4591	1.2856	1.20/1	1.1335	1.0646	1.0000	0.8828	0.7798	0.6892	0.6095	0.5394	25
26	1.6909	1.5825	1.4814	1.2986	1.2162	1.1392	1.06/2	1.0000	0.8784	0.7720	0.6790	0.5976	0.5262	26
27	1.7254	1.6107	1.5039	1.3117	1.2204	1.1449	1.0099	1.0000	0.8740	0.7644	0.6690	0.5859	0.5134	27
20	1.7000	1.0394	1.5200	1 229/	1.2347	1.1007	1.0720	1.0000	0.0097	0.7000	0.6291	0.5744	0.5009	20
29	1.7900	1.0000	1.5501	1 3510	1 2534	1.1505	1.0733	1.0000	0.8610	0.7493	0.0494	0.5051	0.4007	29
31	1.8706	1.0000	1 5976	1 3656	1 2629	1 1681	1 0807	1.0000	0.8567	0.7346	0.0000	0.5321	0.4651	31
32	1.9088	1.7594	1.6220	1.3793	1.2724	1.1740	1.0834	1.0000	0.8525	0.7273	0.6210	0.5306	0.4538	32
33	1.9478	1.7907	1.6467	1.3933	1.2820	1.1799	1.0861	1.0000	0.8482	0.7201	0.6118	0.5202	0.4427	33
34	1.9875	1.8226	1.6717	1.4074	1.2917	1.1858	1.0888	1.0000	0.8440	0.7130	0.6028	0.5100	0.4319	34
35	2.0281	1.8551	1.6972	1.4216	1.3015	1.1918	1.0916	1.0000	0.8398	0.7059	0.5939	0.5000	0.4214	35
36	2.0695	1.8881	1.7230	1.4359	1.3113	1.1978	1.0943	1.0000	0.8356	0.6989	0.5851	0.4902	0.4111	36
37	2.1117	1.9217	1.7493	1.4504	1.3212	1.2038	1.0970	1.0000	0.8315	0.6920	0.5764	0.4806	0.4011	37
38	2.1548	1.9560	1.7759	1.4651	1.3312	1.2098	1.0998	1.0000	0.8274	0.6852	0.5679	0.4712	0.3913	38
39	2.1988	1.9908	1.8030	1.4799	1.3413	1.2159	1.1025	1.0000	0.8232	0.6784	0.5595	0.4619	0.3817	39
40	2.2437	2.0263	1.8304	1.4948	1.3514	1.2220	1.1053	1.0000	0.8191	0.6717	0.5513	0.4529	0.3724	40
41	2.2894	2.0624	1.8583	1.5099	1.3616	1.2282	1.1081	1.0000	0.8151	0.6650	0.5431	0.4440	0.3633	41
42	2.3362	2.0991	1.8866	1.5252	1.3719	1.2343	1.1109	1.0000	0.8110	0.6584	0.5351	0.4353	0.3545	42
43	2.3838	2.1365	1.9153	1.5406	1.3823	1.2405	1.1136	1.0000	0.8070	0.6519	0.5272	0.4268	0.3458	43
44	2.4325	2.1745	1.9445	1.5501	1.3927	1.2468	1.1104	1.0000	0.8030	0.6404	0.5194	0.4184	0.3374	44
45	2.4021	2.2133	2 00/2	1.5719	1 /138	1 2503	1 1 2 2 0	1.0000	0.7990	0.0391	0.5117	0.4102	0.3292	45
40	2.5520	2.2327	2.0042	1.5077	1 4245	1.2555	1 1248	1.0000	0.7930	0.0327	0.3042	0.4022	0.3211	40
48	2.5045	2.2320	2.0657	1.6000	1.4353	1.2007	1.1277	1.0000	0.7871	0.0203	0.4894	0.3865	0.3057	48
49	2.6911	2.3752	2.0971	1.6363	1.4461	1.2784	1.1305	1.0000	0.7832	0.6141	0.4821	0.3790	0.2982	49
50	2.7460	2.4175	2.1291	1.6529	1.4570	1.2848	1.1333	1.0000	0.7793	0.6080	0.4750	0.3715	0.2909	50
51	2.8020	2.4606	2.1615	1.6696	1.4681	1.2913	1.1362	1.0000	0.7754	0.6020	0.4680	0.3642	0.2838	51
52	2.8592	2.5044	2.1944	1.6864	1.4792	1.2978	1.1390	1.0000	0.7716	0.5961	0.4611	0.3571	0.2769	52
53	2.9175	2.5490	2.2278	1.7035	1.4903	1.3043	1.1419	1.0000	0.7677	0.5902	0.4543	0.3501	0.2702	53
54	2.9771	2.5944	2.2617	1.7207	1.5016	1.3109	1.1447	1.0000	0.7639	0.5843	0.4475	0.3432	0.2636	54
55	3.0378	2.6406	2.2962	1.7381	1.5129	1.3174	1.1476	1.0000	0.7601	0.5785	0.4409	0.3365	0.2572	55
56	3.0998	2.6877	2.3312	1.7556	1.5244	1.3241	1.1505	1.0000	0.7563	0.5728	0.4344	0.3299	0.2509	56
57	3.1631	2.7355	2.3667	1.7733	1.5359	1.3307	1.1534	1.0000	0.7525	0.5671	0.4280	0.3234	0.2448	57
58	3.2277	2.7843	2.4027	1.7913	1.5475	1.3374	1.1562	1.0000	0.7488	0.5615	0.4217	0.3171	0.2388	58
59	3.2935	2.8339	2.4393	1.8094	1.5592	1.3441	1.1591	1.0000	0.7451	0.5560	0.4154	0.3109	0.2330	59
60	3.3607	2.8843	2.4/64	1.02/0	1.5/10	1.3509	1.1621	1.0000	0.7414	0.5504	0.4093	0.3048	0.2273	60

Factor to discount value of multiplier for a period of deferment

continued

Table 35 Discounting factors for term certain continued

Factor	to discoun	t value of n	nultiplier fo	or a period	of deferme	nt								
Term	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	Term
61	3.4293	2.9357	2.5141	1.8461	1.5828	1.3577	1.1650	1.0000	0.7377	0.5450	0.4032	0.2988	0.2217	61
62	3.4993	2.9880	2.5524	1.8647	1.5948	1.3645	1.1679	1.0000	0.7340	0.5396	0.3973	0.2929	0.2163	62
63	3.5707	3.0412	2.5913	1.8836	1.6069	1.3713	1.1708	1.0000	0.7304	0.5343	0.3914	0.2872	0.2111	63
64	3.6436	3.0954	2.6308	1.9026	1.6190	1.3782	1.1737	1.0000	0.7267	0.5290	0.3856	0.2816	0.2059	64
65	3.7180	3.1505	2.6708	1.9218	1.6312	1.3852	1.1767	1.0000	0.7231	0.5237	0.3799	0.2761	0.2009	65
66	3.7938	3.2066	2.7115	1.9412	1.6436	1.3921	1.1796	1.0000	0.7195	0.5185	0.3743	0.2706	0.1960	66
67	3.8713	3.2638	2.7528	1.9608	1.6560	1.3991	1.1826	1.0000	0.7159	0.5134	0.3688	0.2653	0.1912	67
68	3.9503	3.3219	2.7947	1.9806	1.6685	1.4061	1.1856	1.0000	0.7124	0.5083	0.3633	0.2601	0.1865	68
69	4.0309	3.3811	2.8373	2.0007	1.6811	1.4132	1.1885	1.0000	0.7088	0.5033	0.3580	0.2550	0.1820	69
70	4.1132	3.4413	2.8805	2.0209	1.6938	1.4203	1.1915	1.0000	0.7053	0.4983	0.3527	0.2500	0.1776	70
71	4.1971	3.5026	2.9243	2.0413	1.7066	1.4275	1.1945	1.0000	0.7018	0.4934	0.3475	0.2451	0.1732	71
72	4.2827	3.5650	2.9689	2.0619	1.7195	1.4346	1.1975	1.0000	0.6983	0.4885	0.3423	0.2403	0.1690	72
73	4.3702	3.6285	3.0141	2.0827	1.7325	1.4418	1.2005	1.0000	0.6948	0.4837	0.3373	0.2356	0.1649	73
74	4.4593	3.6931	3.0600	2.1038	1.7456	1.4491	1.2035	1.0000	0.6914	0.4789	0.3323	0.2310	0.1609	74
75	4.5503	3.7589	3.1066	2.1250	1.7588	1.4564	1.2065	1.0000	0.6879	0.4741	0.3274	0.2265	0.1569	75
76	4.6432	3.8258	3.1539	2.1465	1.7721	1.4637	1.2095	1.0000	0.6845	0.4694	0.3225	0.2220	0.1531	76
77	4.7380	3.8940	3.2019	2.1682	1.7855	1.4710	1.2126	1.0000	0.6811	0.4648	0.3178	0.2177	0.1494	77
78	4.8347	3.9633	3.2507	2.1901	1.7990	1.4784	1.2156	1.0000	0.6777	0.4602	0.3131	0.2134	0.1457	78
79	4.9333	4.0339	3.3002	2.2122	1.8125	1.4859	1.2187	1.0000	0.6743	0.4556	0.3084	0.2092	0.1422	79
80	5.0340	4.1058	3.3504	2.2345	1.8262	1.4933	1.2217	1.0000	0.6710	0.4511	0.3039	0.2051	0.1387	80

Table 36 Multipliers for pecuniary loss for term certain

Multipli	er for regu	lar frequer	nt payment	s for a tern	n certain a	t rate of re	turn of							
Term	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	Term
1	1.01	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1
2	2.04	2.04	2.03	2.02	2.02	2.01	2.01	2.00	1.99	1.98	1.97	1.96	1.95	2
3	3.09	3.08	3.07	3.05	3.03	3.02	3.01	3.00	2.98	2.96	2.93	2.91	2.89	3
4	4.17	4.14	4.12	4.08	4.06	4.04	4.02	4.00	3.96	3.92	3.88	3.85	3.81	4
5	5.26	5.23	5.19	5.13	5.10	5.06	5.03	5.00	4.94	4.88	4.82	4.76	4.70	5
6 7	0.38	0.33	0.28	0.18	0.14 7 10	0.09 7.10	0.05	6.00 7.00	5.91	5.82	5.74	5.00	5.58 6.42	6 7
8	8.68	7.40 8.50	7.30 8.50	8 33	8 25	8 16	7.00 8.08	7.00	0.00	7 69	7.54	7.40	7 26	8
9	9.87	9.75	9.64	9.42	9.31	9.10	9.10	9.00	8 80	8.61	8 42	8 24	8.07	9
10	11.08	10.94	10.80	10.52	10.39	10.25	10.13	10.00	9.75	9.52	9.29	9.07	8.86	10
11	12.32	12.14	11.97	11.63	11.47	11.31	11.15	11.00	10.70	10.42	10.15	9.88	9.63	11
12	13.58	13.37	13.16	12.75	12.56	12.37	12.18	12.00	11.65	11.31	10.99	10.68	10.39	12
13	14.87	14.61	14.37	13.89	13.66	13.43	13.21	13.00	12.59	12.19	11.82	11.46	11.12	13
14	16.18	15.88	15.59	15.03	14.76	14.50	14.25	14.00	13.52	13.07	12.64	12.23	11.84	14
15	17.52	17.17	16.84	16.19	15.88	15.58	15.29	15.00	14.45	13.93	13.44	12.98	12.54	15
16	18.89	18.49	18.10	17.36	17.00	16.66	16.32	16.00	15.38	14.79	14.24	13.71	13.22	16
17	20.28	19.83	19.38	18.54	18.14	17.75	17.37	17.00	16.30	15.64	15.02	14.43	13.88	17
10	21.71	21.19	20.09	19.73	19.20	10.04	10.41	10.00	10.12	10.40	10.79	15.14	14.00	10
20	23.10	22.50	23 35	20.94	20.43	21 04	20 51	20.00	19.13	18 14	17 30	16.51	15.17	20
21	26.16	25.42	24.71	23.38	22.75	22.15	21.56	21.00	19.94	18.95	18.03	17.18	16.39	21
22	27.70	26.88	26.10	24.62	23.93	23.26	22.62	22.00	20.84	19.76	18.76	17.83	16.97	22
23	29.28	28.37	27.50	25.88	25.11	24.38	23.67	23.00	21.73	20.56	19.48	18.47	17.55	23
24	30.88	29.89	28.93	27.14	26.30	25.50	24.74	24.00	22.62	21.35	20.18	19.10	18.11	24
25	32.53	31.43	30.38	28.42	27.51	26.63	25.80	25.00	23.50	22.13	20.87	19.72	18.65	25
26	34.20	33.00	31.85	29.71	28.72	27.77	26.86	26.00	24.38	22.91	21.56	20.32	19.19	26
27	35.91	34.59	33.34	31.02	29.94	28.91	27.93	27.00	25.26	23.68	22.23	20.91	19.71	27
28	37.65	36.22	34.86	32.34	31.17	30.06	29.00	28.00	26.13	24.44	22.90	21.49	20.21	28
29	39.43	31.81	36.40	33.67	32.41	31.21	30.08	29.00	27.00	25.19	23.55	22.06	20.71	29
30	41.24	<u> </u>	30.5/	36.37	33.00	32.37	31.10	31.00	27.00	20.94	24.20	22.02	21.19	30
32	44 99	43.01	41.15	37 74	36.18	34 71	33.32	32.00	29.58	20.07	25.46	23.70	22.100	32
33	46.91	44.79	42.79	39.13	37.46	35.89	34.40	33.00	30.43	28.13	26.07	24.23	22.57	33
34	48.88	46.59	44.45	40.53	38.75	37.07	35.49	34.00	31.27	28.85	26.68	24.74	23.01	34
35	50.89	48.43	46.13	41.95	40.04	38.26	36.58	35.00	32.12	29.56	27.28	25.25	23.43	35
36	52.94	50.30	47.84	43.37	41.35	39.45	37.67	36.00	32.95	30.26	27.87	25.74	23.85	36
37	55.03	52.21	49.58	44.82	42.67	40.65	38.77	37.00	33.79	30.95	28.45	26.23	24.26	37
38	57.16	54.15	51.34	46.28	43.99	41.86	39.87	38.00	34.62	31.64	29.02	26.70	24.65	38
39	59.34	56.12	53.13	47.75	45.33	43.07	40.97	39.00	35.44	32.32	29.58	27.17	25.04	39
40	62.02	58.13	54.95	49.24	40.00	44.29	42.07	40.00	30.20	33.00	30.14	27.63	25.42	40
41	03.03 66.14	62.25	58.66	52.26	40.03	40.0Z 46.75	43.10	41.00	37.00	30.07 31 33	30.09	20.00	25.76	41
43	68.50	64.37	60.56	53.79	50.78	47.99	45.40	43.00	38.70	34.98	31.76	28.95	26.49	43
44	70.91	66.53	62.49	55.34	52.16	49.23	46.51	44.00	39.51	35.63	32.28	29.37	26.83	44
45	73.36	68.72	64.45	56.90	53.56	50.48	47.63	45.00	40.31	36.27	32.80	29.78	27.17	45
46	75.87	70.95	66.44	58.48	54.97	51.74	48.75	46.00	41.10	36.91	33.30	30.19	27.49	46
47	78.43	73.23	68.46	60.08	56.39	53.00	49.88	47.00	41.90	37.54	33.80	30.59	27.81	47
48	81.04	75.54	70.51	61.69	57.82	54.27	51.00	48.00	42.69	38.16	34.30	30.98	28.12	48
49	83.70	77.89	72.59	63.32	59.26	55.54	52.13	49.00	43.47	38.78	34.78	31.36	28.42	49
50	86.42	80.29	/4./0	64.96	60.71	56.82	53.26	50.00	44.25	39.39	35.26	31.74	28.72	50
51	09.20 02.02	02.13 85 21	70.00 70.02	20.00	02.17 62.6F	50.11	54.40 55 54	51.00 52.00	45.03	40.00	30.13 36.20	32.10	29.00 20.29	57
53	92.03 94 92	87 74	81 24	69 99	65 13	60 71	56 68	52.00	40.00	40.00	36.66	32.47	29.20 29.56	52
54	97.86	90.31	83.48	71.71	66.63	62.01	57.82	54.00	47.34	41.78	37.11	33.17	29.82	54
55	100.87	92.93	85.76	73.44	68.14	63.33	58.97	55.00	48.10	42.36	37.55	33.51	30.08	55
56	103.94	95.59	88.08	75.18	69.65	64.65	60.11	56.00	48.86	42.93	37.99	33.84	30.34	56
57	107.07	98.30	90.43	76.95	71.18	65.98	61.27	57.00	49.61	43.50	38.42	34.17	30.59	57
58	110.27	101.06	92.81	78.73	72.73	67.31	62.42	58.00	50.36	44.07	38.84	34.49	30.83	58
59	113.53	103.87	95.23	80.53	74.28	68.65	63.58	59.00	51.11	44.63	39.26	34.80	31.06	59
60	116.85	106.73	97.69	82.35	75.84	70.00	64.74	60.00	51.85	45.18	39.67	35.11	31.29	60

continued

Multipliers for pecuniary loss for term certain *continued* Table 36

Multipli	er for regu	llar frequei	nt payment	s for a terr	n certain a	t rate of re	turn of							
Term	-2.00%	-1.75%	-1.50%	-1.00%	-0.75%	-0.50%	-0.25%	0.00%	0.50%	1.00%	1.50%	2.00%	2.50%	Term
61	120.25	109.64	100.18	84.19	77.42	71.35	65.90	61.00	52.59	45.73	40.08	35.41	31.52	61
62	123.71	112.60	102.72	86.04	79.01	72.71	67.07	62.00	53.33	46.27	40.48	35.70	31.74	62
63	127.25	115.62	105.29	87.91	80.61	74.08	68.24	63.00	54.06	46.81	40.88	36.00	31.95	63
64	130.85	118.69	107.90	89.81	82.22	75.46	69.41	64.00	54.79	47.34	41.26	36.28	32.16	64
65	134.53	121.81	110.55	91.72	83.85	76.84	70.59	65.00	55.52	47.86	41.65	36.56	32.36	65
66	138.29	124.99	113.24	93.65	85.49	78.23	71.76	66.00	56.24	48.39	42.02	36.83	32.56	66
67	142.12	128.22	115.97	95.60	87.14	79.62	72.95	67.00	56.95	48.90	42.40	37.10	32.75	67
68	146.03	131.52	118.75	97.57	88.80	81.03	74.13	68.00	57.67	49.41	42.76	37.36	32.94	68
69	150.02	134.87	121.56	99.56	90.47	82.44	75.32	69.00	58.38	49.92	43.12	37.62	33.13	69
70	154.10	138.28	124.42	101.57	92.16	83.85	76.51	70.00	59.09	50.42	43.48	37.87	33.31	70
71	158.25	141.75	127.32	103.61	93.86	85.28	77.70	71.00	59.79	50.91	43.83	38.12	33.48	71
72	162.49	145.28	130.27	105.66	95.57	86.71	78.90	72.00	60.49	51.41	44.17	38.36	33.65	72
73	166.82	148.88	133.26	107.73	97.30	88.15	80.10	73.00	61.19	51.89	44.51	38.60	33.82	73
74	171.23	152.54	136.30	109.82	99.04	89.59	81.30	74.00	61.88	52.37	44.85	38.83	33.98	74
75	175.74	156.27	139.38	111.94	100.79	91.04	82.50	75.00	62.57	52.85	45.18	39.06	34.14	75
76	180.33	160.06	142.51	114.07	102.56	92.50	83.71	76.00	63.26	53.32	45.50	39.29	34.30	76
77	185.02	163.92	145.69	116.23	104.33	93.97	84.92	77.00	63.94	53.79	45.82	39.51	34.45	77
78	189.81	167.85	148.92	118.41	106.13	95.45	86.14	78.00	64.62	54.25	46.14	39.72	34.60	78
79	194.69	171.85	152.19	120.61	107.93	96.93	87.35	79.00	65.29	54.71	46.45	39.93	34.74	79
80	199.68	175.92	155.52	122.83	109.75	98.42	88.57	80.00	65.97	55.16	46.75	40.14	34.88	80
Actuarial Formulae and Basis

The functions tabulated are:

Tables 1 and 2	_ a _x
Tables 3 and 4	ax :50 - x
Tables 5 and 6	ax:55 - x
Tables 7 and 8	ax:60-x
Tables 9 and 10	ax: 65-x
Tables 11 and 12	ax :
Tables 13 and 14	ax:
Tables 15 and 16	ax:75-x
Tables 17 and 18	a _{x :}
Tables 19 and 20	(50-x) <u> </u>
Tables 21 and 22	(55-x) ⁻ a _x
Tables 23 and 24	(60-x) a _x

Tables 25 and 26	(65-x) a ×
Tables 27 and 28	(68-x) ⁻ a _x
Tables 29 and 30	(70-x) ⁻ a _×
Tables 31 and 32	(75-x)
Tables 33 and 34	(80-x)
Table 35:	1 / (1+i) ⁿ
Table 36:	_ a n

- Mortality assumptions for 2018-based official population projections for the United Kingdom
- Date of accident or injury assumed to be 2020
- Date of assessment or trial assumed to be 2022
- Loadings: None
- Rate of return: As stated in the Tables