

MULTIPLIERS TRAINING

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CONTENTS

Introduction.....3

Why use Multipliers.....3

Discount Rate.....4

Calculating a Basic Multiplier5

Lifelong Losses.....6

Future Loss of Earnings7

 Contingencies other than Mortality7

 Residual Earning Capacity.....8

Early Receipt.....9

Term Certain10

Interpolation.....10

 Exact age of a claimant10

 Different retirement age12

Losses at Intervals.....14

Conclusion17

INTRODUCTION

This training is aimed at trying to understand how to calculate future losses that are ongoing. Most commonly this will be future loss of earnings, future loss of pension or future care costs. But it will also include things that will need to be purchased from time to time in the future.

When assessing future losses there will always be an element of uncertainty as no one can ever know exactly what was going to happen but for the accident or what will happen in the future and whether the needs of a claimant will change.

Assessing any future loss is a two stage process. Firstly the annual loss needs to be calculated, this is the multiplicand. There are then two potential options. The first is the traditional lump sum method. This involves a one off payment whereby the claimant's future loss is arrived at by multiplying the annual loss by a multiplier that represents the period of time during which the claimant is expected to suffer the loss subject to a deduction for accelerated receipt and mortality.

The second method is by way of periodical payments. The claimant receives each year the annual amount of his loss which is updated to take account of inflation.

This training will concentrate on the traditional lump sum method of assessing future loss.

WHY USE MULTIPLIERS

In personal injury actions, damages to compensate the claimant for his future losses such as loss of earnings and care have traditionally been payable by way of a single lump sum at the time of settlement or judgment. To arrive at that lump sum it would be inappropriate to simply multiply the claimant's annual loss by the period of time over which he is likely to suffer that loss. Such an approach fails to take into account accelerated receipt.

This can best be illustrated by way of an example:

A claimant sustains severe brain injuries during an motorbike accident which prevents him from ever working again in any capacity. At the time of the accident he is aged 25, and before the accident he earned £30,000 net per annum. His intention was to retire when he had reached 65 years of age. By multiplying £30,000 by 40 years (which represents his period of loss), a figure of £1,200,000 is obtained.

However, the purpose of the award is to put the claimant in the position he would have been in if he had not been injured. The courts assume that, at the very least, the claimant would have invested his damages award in a bank or building society where the capital sum would earn interest. If the full £1,200,000 was awarded to the claimant then when he reached the age of 65 he would still be in funds because of the interest that he had earned on the monies over the preceding 40 years. A figure must be arrived at which will take account of the fact that the claimant will earn interest on the monies received, so that by the time the claimant retires at age 65 all of his damages award will have been used up. That figure is called the multiplier.

DISCOUNT RATE

If it is assumed that the claimant will invest his damages, the amount of interest that he will be expected to earn on those damages is crucial. If it is assumed that the interest rate will be high, a lower lump sum will be needed to fund the claimant's future losses. Conversely if the assumed rate of interest is low, the greater will be the lump sum that is required to fund the claimant's future losses. Therefore claimants seek to argue that a low rate of interest is available as that means a higher lump sum will be required and defendants argue that a high rate of interest is available.

The Ogden tables are now in their seventh edition and provide for a number of different options the calculate the loss depending on 11 different rates of return ranging from -2.0% to 3.0%. The rate of return used to calculate a future loss is known as the discount rate.

In *Wells v Wells* [1997] 1 WLR 652 the House of Lords held that the discount rate should be based on the yields on Index Linked Government Stock.

The discount rate is now fixed by the Lord Chancellor under s1 of the Damages Act 1996. The discount rate was fixed at 2.5% in July 2001 and stayed at that level until 20th March 2017 when the Lord Chancellor made a decision few would have predicted and changed the discount rate to -0.75%. A new consultation has been started to change the way the discount rate is calculated but it is likely to be a while before the Government can legislate so we are going to have to work with the new discount rate for a while at least.

CALCULATING A BASIC MULTIPLIER

The multipliers provided in the latest Ogden tables (7th edition) were published in August 2012 and use mortality rates from the data at the last National Census in 2008.

The first step is to choose the correct table. You need to know the sex of the claimant and what the period of loss is.

- There are tables for a loss that will continue for the rest of a claimant's life, for example care that will continue to be needed (Tables 1 and 2);
- There are also tables for a loss that will continue for the rest of a claimant's working life with a range of retirement ages from 50 to 75 (Tables 3 to 14); and
- Then there are tables for loss of pension that will only start from retirement, again the retirement ages range from 50 to 75 (Tables 15 to 26).

This 'Basic Multiplier' takes into account the fact that the claimant might die in the period that the loss is being incurred and also it takes into account the discount rate. It does not take into account any other contingencies like the fact that the claimant might have been out of work during the period for ill health, loss of employment or to look after dependants.

Tables 27 and 28 do not make provision for mortality and simply apply a discount rate to a figure where a loss is not being incurred immediately (Table 27) and where a loss is incurred for a specified period (Table 28).

LIFELONG LOSSES

The tables that you need to know for losses that are expected to last for the duration of a claimant's life are Table 1 for men and Table 2 for women.

Care is the head of loss that is most frequently claimed as a lifelong loss but often you can also see claims for ongoing treatment, increased travel expenses, increased electricity bills.

As a defendant often you want to first of all look at whether you are going to challenge the losses being lifelong. For example a frequent argument made against lifelong care claims is that the claimant would have needed some care anyway by the time they have reached a certain age.

As an example take a claimant who is male and aged 48 with a normal life expectancy who requires care for the rest of his life.

- The multiplier can be found from Table 1 using the -0.75% discount column = 44.14

If the care was £7,000 per year (the multiplicand) the loss would be:

- $£7,000 \times 44.14 = £308,980$

(as an example if you argued that actually from age 75 he would have needed £7,000 of care a year anyway then the multiplier would be found instead in Table 13 – 27.56 and the loss would be £192,920)

It is also worth noting that if you take the 0% discount column then you get the life expectancy. For example the life expectancy of a 30 year old woman can be found using the 0% discount column on Table 2 for a 30 year old which gives a life expectancy of 60.02.

FUTURE LOSS OF EARNINGS

Contingencies other than Mortality

Prior to the 6th edition of the Ogden Tables provision was made in Section B for the multipliers for loss of earnings to be discounted to take account of contingencies other than mortality. In essence this involved discounting the multiplier to take account of economic activity, geographical location and occupational status. These factors were taken into consideration and were used to reduce the multipliers that one obtained from the Ogden Tables. However, the real affect of these reducing factors were minimal in the sense that they did not amount to a significant reduction from the multiplier.

Section B was completely changed with the 6th edition of the Ogden Tables. The new Section B is based upon two pieces of research which considers the impact of contingencies other than mortality on working life. This research showed that the factors that were previously considered as being of importance such as occupation, industrial sector, geographic location and levels of economic activity are relatively insignificant once educational attainment is taken into account. The research also found that people without disabilities spend more time out of employment than earlier research had suggested.

The research demonstrated that the factors other than gender which have the most effect on a person's future employment status are:

- Whether the individual was employed or unemployed at the outset;
- Whether the individual is disabled or not; and
- The individuals educational attainment.

These factors are placed at the heart of the new Section B in order to calculate the 'reduction factor' to be applied to the Basic Multiplier. The reduction factor is the proportion of working life that is likely to be spent in employment.

Tables A to D of the new Section B provide reduction factors to take account of disability, employment and educational attainment. Once the reduction factor is applied you will have an Adjusted Multiplier.

There are three levels of educational attainment:

- D: Degree or equivalent or higher
- GE-A: GCSE grades up to A-C up to A-level or equivalent
- O: Below GCSE grade C or CSE grade 1 or equivalent or no qualifications

Judges still have discretion over what reduction factor to apply and it may not be appropriate to use Tables A-D depending on the particular circumstances of the claimant.

The following arguments might be raised on behalf of a defendant seeking to restrict the loss of earnings claim where the claimant is 'disabled' post-accident:

- It might be possible to argue that the pre-injury reduction factor should be reduced and adjusted downwards to reflect the uninjured claimant's above average risk of not reaching normal retirement age, for example on grounds of poor employment history or insecure work sector
- Where the claimant's disability is most relative to his peer group average it might be worth arguing for an upwards adjustment of the post-injury reduction factor
- The claimant's disability might not be relevant to his likely field of work, for example a loss of a leg is likely to have less effect on an office worker's earnings
- It could be argued that the claimant is well motivated to return to employment and intends to retrain for work in which the impact of his disability will be much reduced

Residual Earning Capacity

Where the claimant is still able to earn something post-injury then the loss will be calculated as follows:

Stage 1

A full loss of earnings is calculated using a Multiplicand x Adjusted Multiplier based upon the claimant's pre-injury earning capacity having regard to his gender, age, educational attainment, disability status and employment status (A)

Stage 2

A residual earning capacity is calculated using a Multiplicand x Adjusted Multiplier based upon the claimant's post-injury earning capacity having regard to his gender, age, educational attainment, disability status and employment status (B)

The loss is measured as A less B.

Where a claimant has been left disabled by an accident the new Section B provides that different reduction factors should be used to calculate his pre-earning capacity and his post-injury earning capacity.

EARLY RECEIPT

If money is being received early then Table 27 would apply to account for the fact that the money will be invested before that time. This used to be an argument that the claimant would conveniently forget about and the defendant would have to raise, however, the change in discount rate means that the claimant's loss will actually increase.

For example if the claimant is expected to need a surgery in five years which would cost £10,000 on a private basis then the loss would be:

Table 27 @ -0.75 % for 5 years = 1.0384

Therefore loss is £10,000 x 1.0384 = £10,384

Table 27 does not take into account mortality. To account for mortality a reduction factor can be calculated by dividing the life multiplier @ -0.75% by the multiplier for the term certain of the life expectancy in Table 28.

TERM CERTAIN

If the loss is for a specified period then Table 28 will apply to account for the rate of return.

As an example where a male claimant has a pre-existing cardiac condition and the cardiologist's evidence is that the condition has reduced the claimant's life expectancy and he is only expected to live for another 10 years. He needs ongoing care during that period at £5,000 a year.

Table 28 @ -0.75% is 10.39

£5,000 x 10.39 = £51,950

Table 28 also does not take into account mortality. To account for mortality a reduction factor can be calculated by dividing the life multiplier @ -0.75% by the multiplier for the term certain of the life expectancy in Table 28.

INTERPOLATION

Exact age of a claimant

Very rarely will a claimant be an exact age unless the schedule or trial is on their birthday. Precision is important with multipliers especially where the multiplicand is high and failing to account for three quarters of a year could end up with the claimant recovering thousands of pounds more than their actual loss.

First you need to establish the claimant's age to the second decimal point. Then you need to interpolate. Interpolation is a way of finding a new data point in between two data points.

This is easy if for example half a year has passed between the claimant's birthday and the date you are calculating to. Take a male claimant who is 20.5 years old then his lifetime multiplier using Table 1 and a -0.75% discount rate would be:

$$\text{Half of } 88.96 \text{ (multiplier for a 20yr old)} + \text{half of } 87.14 \text{ (multiplier for a 21yr old)} \\ 44.48 + 43.57$$

Lifetime multiplier is 88.05

The principle is the same for any proportion of a year that has passed but it is slightly more complicated:

- First multiply the multiplier for the age that the claimant is approaching by the proportion of the year that has gone between the claimant's last birthday and the date you are calculating to (A)
- Then multiply the multiplier for the age that the claimant was at her last birthday by the proportion of the year that is left between the date you are calculating to and the claimant's next birthday (B)
- The interpolated multiplier is A + B

If a female claimant is 40 years and 9 months old she would be 40.75 years old (i.e. 40 and three quarters of a year). To calculate her lifetime multiplier using Table 2 with a discount rate of -0.75%:

- The claimant is approaching 41, the multiplier for a 41 year old is 58.96. That needs to be multiplied by the proportion of the year that has passed which is three quarters or 0.75. That gives a value of 44.22
- The claimant was 40 at her last birthday, the multiplier for a 40 year old is 60.52. That needs to be multiplied by the remainder of the year which is 0.25. That gives a value of 15.13.
- Adding them together gives the lifetime multiplier for a 40.75 year old female

claimant, which is 59.35

As a more complicated example take a female claimant whose date of birth is 10th June 1986. She would be 30 and 306 days old today, which is 30.84 in decimal terms. To work out her lifetime multiplier from Table 2 (using a -0.75% discount rate):

$$\begin{aligned} & ((30.84 - 30) \times 75.24) + ((31 - 30.84) \times 76.95) \\ & (0.84 \times 75.24) + (0.16 \times 76.95) \\ & 63.2016 + 12.312 \end{aligned}$$

Lifetime multiplier = 75.51

When interpolating you must remember that the proportion that you are multiplying the lower multiplier by added to the proportion you are multiplying the higher multiplier by should always be 1. In the examples above $0.75 + 0.25 = 1$ and $0.31 + 0.69 = 1$.

It is always worth checking you have multiplied the correct proportion to the correct multiplier.

You can do this by thinking which multiplier the final multiplier should be closest to and checking whether it is. In the example above where the claimant is 30.84 as more than half a year has gone since the claimant was 30 you would expect the final multiplier to be closer to the multiplier for a 31 year old than a 30 year old.

Different retirement age

The Ogden tables only provide for retirement ages of 50, 55, 60, 65, 70 and 75.

With the gradual increase in the state pension age these may no longer be appropriate, as well as the fact that different people have different plans of when they would like to retire.

The explanatory introduction to the Ogden tables 7th edition provides an explanation for how you should calculate a multiplier where the actual retiring age is between two of the tables at paragraphs 13 to 16.

It suggests that correct multiplier can be found by consideration of the tables for retirement age immediately above and below the actual retirement age, keeping the period until retirement the same.

The formula 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 $[B-A]$).

As an example if you take a female claimant whose date of birth is 11th April 1987 and therefore is 30 today, her state pension age will be 68 years.

1. Taking her actual retirement as 68: A is 65 and B is 70
2. $30 + 65 - 68 = 27$

3. The multiplier for a 27 year old on Table 10 is 43.19
4. $30 + 70 - 68 = 32$
5. The multiplier for a 32 year old on Table 12 is 42.76
6. Interpolating gives a multiplier of:

$$((70 - 68) \times 43.19) + ((68 - 65) \times 42.76)$$

$$(2 \times 43.19) + (3 \times 42.76)$$

$$86.38 + 128.28$$

$$214.66$$

Divided by $70 - 65$ (i.e. by 5), gives the multiplier of 42.93

SPLIT MULTIPLIERS

Often the loss is not expected to stay the same for the rest of a claimant's life and the multiplicand will change, for example where the care costs are expected to increase or where the claimant would have got a promotion and earned more.

In those situations you will have to split the multipliers using the multiplier for the term certain of the life expectancy in Table 28 and splitting it into percentages. Once you have percentages for each stage you can work out what the multipliers from the other tables (that allow for mortality) are.

As an example if you had a 40 year old claimant whose care package currently costs £20,000 a year but that will increase to £30,000 once he is 60 years old:

His life expectancy is 45.76 (Table 1 @ 0%). The multiplier for a term certain of 45.76 using Table 28 is:

$$((46 - 45.76) \times 53.56) + ((45.76 - 45) \times 54.97)$$

$$(0.24 \times 53.56) + (0.76 \times 54.97)$$

$$12.8544 + 41.7772 = 54.63$$

The multiplier for a term certain of 20 years on Table 28 is 21.58. You calculate the multiplier from 60 to the rest of his life by subtracting 21.58 from the total Table 28 multiplier giving 33.05.

Age	Table 28	% split	Table 1	Care costs	Total
40-60	21.58	39.50%	21.99	£20,000	£439,800
60 – death	33.05	60.50%	33.67	£30,000	£1,010,100
Totals	54.63	100%	55.66		£1,449,900

A further example is a female 35 year old claimant who has suffered loss of earnings for the rest of her working life but these earnings were expected to increase as follows:

35 – 45: £25,000 pa

45-55: £35,000 pa

55-65: £45,000 pa

The Table 28 multiplier for 30 years is 33.66. The first period of 10 years is represented by a multiplier of 10.39 using Table 28. The next 15 years is represented by a multiplier of 17.12 which is the difference between the figure for a term certain of 10 years and 25 years (i.e. 27.51 – 10.39), the final multiplier is found by subtracting the 10.39 and 17.12 from 33.66.

Assuming that the claimant has a degree and was employed prior to the accident gives a reduction factor of 0.89 from Table C.

Age	Table 28	% split	Table 10	Discounted Multiplier (x 0.89)	Loss of Earnings	Total
35-45	10.39	30.87%	10.17	9.05	£25,000	£226,250
45-60	17.12	50.86%	16.76	14.92	£35,000	£522,200
60-65	6.15	18.27%	6.02	5.36	£45,000	£241,200
Totals	33.66	100%	32.95			£989,650

LOSSES AT INTERVALS

A separate table has been produced to calculate a multiplier where the loss only occurs at intervals, for example an aid or equipment that needs replacing every few years. This table can be found as Table A5 of Facts & Figures published by the PNBA (in the 2016/2017 version it uses a 2.5% discount rate, hopefully this will be updated but for the meantime there is a version using -0.75% in your handout materials).

To work out the multiplier:

1. Work out the total period over which the loss will last for - n (if this is the rest of the claimant's life you can find this out by using Table 1 and 2 at a discount rate of 0%)
2. Use the row for the period n and column depending on the frequency of payments
3. You might need to interpolate if the frequency of payments does not go exactly into the period

As an example take a 35 year old female claimant who will have to buy new aids at a cost of £5,000 every four years for the rest of her life:

Her life expectancy is 54.61 years (Table 2 @ 0%)

As 4 does not go exactly into 54.61 we have to interpolate:

$$((56 - 54.61) \times 17.68) + ((54.61 - 52) \times 16.15) \text{ divided by } 56 - 52$$

$$(1.39 \times 17.68) + (2.61 \times 16.15) \text{ divided by } 4$$

$$24.5752 + 42.1515 \text{ divided by } 4$$

$$66.7267/4$$

The total multiplier is 16.68

The total cost of aids is £83,400

Table A5 does not allow for mortality or contingencies and therefore will be slightly too high.

To account for mortality a reduction factor can be calculated by dividing the life multiplier @ -0.75% by the multiplier for the term certain of the life expectancy in Table 28.

Using the example above:

The life multiplier is 68.54 (Table 2 @ -0.75%)

Multiplier for a term certain of 54.61 years on Table 28:

$$((55 - 54.61) \times 66.63) + ((54.61 - 54) \times 68.14)$$

$$(0.39 \times 66.63) + (0.61 \times 68.14)$$

$$25.9857 + 41.5654 = 67.55$$

The reduction factor is $68.54 / 67.55 = 1.01$

Therefore the total multiplier would be $1.01 \times 16.68 = 16.85$

The total loss would be £84,250

Accounting for mortality using the -0.75% actually increases the multiplier and therefore no longer worth raising on behalf of a defendant.

CONCLUSION

Every file you get will be different and no one can ever remember exactly how to calculate the multiplier in all situations so take your time and remember what you are trying to achieve before opening the Ogden tables to find the right table. Good luck!

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