

# Introduction of actuarial tables for determining the multiplier in personal injury and death claims in Singapore: Is this a prelude to larger claims against doctors and healthcare providers?

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In personal injury and death claims, damages for future losses will typically form a substantial portion of a claimant's quantum of damages. Quantifying future damages is a difficult task, which "involves a double exercise in the art of prophesying not only what the future holds for the injured plaintiff but also what the future would have held for him if he had not been injured" (*Paul v Rendell* (1981) 34 ALR 569 at 571).

Particularly vexing has been the question of the correct methodology for determining the appropriate multiplier (that is, the period of future loss) in each case. Until recently, Singapore courts have generally taken a rough and ready approach by drawing guidance from comparable cases and/or applying an arithmetical discount.

Pursuant to a recent amendment of the Supreme Court and State Court Practice Directions, Singapore courts will refer to actuarial tables published by the Singapore Academy of Law (the Actuarial Tables) to determine an appropriate multiplier in personal injury and death claims. This applies for proceedings for the assessment of damages in personal injury and death claims heard on or after 1 April 2021, regardless of when the incidents which gave rise to those claims occurred, and regardless of the dates on which the actions were commenced.

The aim of the Actuarial Tables is to introduce greater certainty and precision in the quantification of damages in personal injury and death claims. However, it is also likely that the quantum of damages arrived at using the Actuarial Tables will increase due to the general increase in multiplier values in the Actuarial Tables, as compared with past cases.

## Quantifying damages: The multiplier-multiplicand approach

The multiplier-multiplicand approach forms the basis of the assessment of damages for future losses in personal injury and death claims. For non-fatal personal injury claims, the heads of claims include future medical and nursing care expenses and future loss of income suffered by the claimant as a result of the injury. For death claims, the heads of claims may include dependency claims and loss of inheritance.

The multiplicand represents the quantum of loss that the claimant is expected to suffer at periodic intervals in the future. The multiplier represents the period of future loss, and is based on two key factors – the victim's life expectancy and the length of his remaining working life.

The court will usually apply a discount on the actual period of future loss in determining the multiplier, particularly in cases involving a long period of future loss. This discount is in recognition of the fact that the claimant is given an immediate lump sum payment which can be invested to make a profit, and to account for contingencies such as mortality and other vicissitudes of life.

In cases where the remaining working life or remaining life expectancy is very short, a low or even zero discount rate may apply. Conversely, the longer the expected period of future loss, the higher the discount will generally be. This reflects the increased compounding of the effect of accelerated receipt, inflation, contingencies and other vicissitudes of life where the period of future loss is longer.

Prior to the publication of the Actuarial Tables, the general approach was to refer to comparable precedent cases in determining the appropriate multiplier. Over the years, the precedents appeared to point to an underlying assumption that there was an ability to generate a rate of return of 4.5% per annum for the accelerated receipt for lump sum awards, and an annualised discount rate of between 4% and 5% was observed to be generally applied. This was so despite the persistent climate of low interest rates and the fact that the prevailing rates of return on fixed deposits have remained below 4% per annum for the past 15 years. There was some concern that the generally accepted discount rate of 4.5% was outdated and that there was a need for reform.

## The Actuarial Tables

Upon the recommendation of the Personal Injury Damages Committee, the Actuarial Tables were developed by a multi-disciplinary committee comprising members from the Monetary Authority of Singapore, the General Insurance Association, the Singapore Actuarial Society, and the Law Society of Singapore, among others. The Actuarial Tables have built into them three key elements:

1. An investment expense assumption built into the rates of return on the yield curve, based on a composite rate approach which considers an asset mix of risk-free assets and other investment instruments (e.g. bonds and equities).
2. An annual price inflation rate of 2%.
3. A built-in mortality improvement of 2.6% per annum for both genders. The mortality improvement will be applied up to the age of 72 and then decreased linearly to zero at age 100.

The Actuarial Tables are an aid to the courts in selecting an appropriate multiplier for each case being assessed. There may be other contingencies and vicissitudes of life that may cause the court in a particular case to make adjustments to the multipliers as it may deem fair and just.

The Actuarial Tables set out the exact multiplier to be applied for a claimant at any given age, based on the claimant's gender, life expectancy and/or the length of his remaining working life. We explore a few simple examples based on certain assumptions, to demonstrate the use of the Actuarial Tables below:

Patient A	<p>Patient A is a 50-year-old man who has been rendered paraplegic after undergoing a negligently performed spine operation.</p> <p>Assumption: The court accepts that but for the injury, Patient A would have worked until the age of 67 (<i>i.e.</i> another 17 years).</p> <p>To calculate his loss of future earnings, the multiplier is 14.97 (refer to Table 1-7, Multipliers for Males, on page 21 of the Actuarial Tables book).</p>
Patient B	<p>Patient B passed away during a negligently performed bowel resection surgery. She was 40 years old at the time of her death. She had a 14-year-old son, and her 45-year-old husband was a stay-home father.</p> <p>Assumption: The court accepts that the son would have been dependent on Patient B until he graduated from university, <i>i.e.</i> until age 24 (a period of 10 years).</p> <p>The multiplier for the son's dependency claim is 9.95 (refer to Table 2-5, Multipliers for Females) on page 34 of the Actuarial Tables book).</p> <p>Assumption: The court accepts that Patient B would have worked until the age of 65, and her income was unlikely to change until retirement. The court also accepts that the husband would have been dependent on Patient B until her retirement.</p>

	The multiplier for the husband's dependency claim is based on Patient B's economic lifespan (25 years), and is 19.79 (refer to Table 2-7, Multipliers for Females, on page 38 of the Actuarial Tables book).
Patient C	<p>Patient C is a 35-year-old man whose lung cancer was only diagnosed at Stage IV due to an earlier missed diagnosis.</p> <p>Assumption: The court accepts that he is not expected to live beyond the age of 40 as a result of the missed diagnosis.</p> <p>The multiplier for Patient C's future medical expenses is 5 (refer to Table 3, Multipliers for Annuity Term Certain, on page 48 of the Actuarial Tables book).</p>

In cases where there is undisputed medical evidence that the claimant's life expectancy is reduced, the mortality assumptions built within the actuarial tables would not be appropriate. Instead, multipliers for Annuity Term Certain at Table 3 of the Actuarial Tables Book would apply to future medical expenses instead, where only the effect of discounting and not mortality is taken into consideration. This is to avoid under-compensation as mortality would otherwise be taken into account twice, in both the multiplier and the shortened lifespan.

## Implications of the new approach

The introduction of the Actuarial Tables will likely, in terms of the multiplier to be used, result in greater certainty and precision in the quantification of damages going forward. This is also a fairer state of the law from a claimant's point of view, given that the discount rate embedded in the multipliers in previous cases was not reflective of the prevailing macro-economic conditions.

The flip side of the coin is that the overall quantum of damages for personal injury / death claims is likely to increase, as there is a substantial increase in multiplier values in the Actuarial Tables, compared with previous cases. We set out a few illustrations, using previous personal injury / death claims:

<i>Yap Boon Fong Yvonne v Wong Kok Mun Alvin and another and another appeal</i> [2019] 1 SLR 230	<p>Ms Yap was 40 years old at the time of the trial and would have about 27 years remaining in her working life assuming she retired at the re-employment age ceiling of 67.</p> <p>In determining Ms Yap's loss of future earnings, the court applied a multiplier of 15 years. Using the Actuarial Tables, the multiplier would have been 20.69 (refer to Table 2-7, Multipliers for Females, on page 38 of the Actuarial Tables book).</p>
<i>Quek Yen Fei Kenneth (by his litigation representative Pang Choy Chun) v Yeo Chye Huat and another appeal</i> [2017] 2 SLR 229	<p>Mr Quek was 24 years old at the time of the assessment of damages, and it was accepted that he would have worked up to age 67 (<i>i.e.</i> another 43 years) and lived up to age 74 (<i>i.e.</i> another 50 years).</p> <p>In determining Mr Quek's future medical expenses (which he would have incurred until his death), the court applied a multiplier of 20 years. Using the Actuarial Tables, the multiplier would have been 27.41 (refer to Table 1-10, Multipliers for Males, on page 27 of the Actuarial Tables book).</p>

	<p>In determining Mr Quek’s loss of future earning capacity (which he would have incurred until his expected retirement age of 67), the court applied a multiplier of 20 years. Using the Actuarial Tables, the multiplier would have been 25.48 (refer to Table 1-7, Multipliers for Males, on page 20 of the Actuarial Tables book).</p>
<p><i>AOD (a minor suing by his litigation representative) v AOE [2016] 1 SLR 217</i></p>	<p>The Plaintiff was 9 years old when he was rendered a quadriplegic after a car accident. At the time of assessment of damages, the Plaintiff was 11 years old and it was estimated that he would live another 27 years, to the age of 38.</p> <p>In determining the Plaintiff’s loss of earnings during the remaining years of his working life (which was accepted to be 16 years, on the assumption that he would start working after finishing National Service at 22 years old), the court applied a multiplier of 9 years. Using the Actuarial Tables, the multiplier would arguably have been 14.66 (refer to Table 1-4, Multipliers for Males, on page 15 of the Actuarial Tables book). Although the Plaintiff’s lifespan is significantly shortened due to the accident, the multipliers for Annuity Term Certain in Table 3 of the Actuarial Tables book is only applicable to calculating future medical expenses. It is however open to the court to decide in future cases whether the Annuity Term Certain would also apply to loss of future earnings for a claimant’s remaining (reduced) lifespan, especially when the economic lifespan of the claimant is affected by the shortened lifespan.</p> <p>As for the Plaintiff’s loss of earnings during the lost years calculated from age of 38 (which was accepted to be 24 years, on the basis that he would have worked until the age of 62 if not for the accident), the court applied a multiplier of 8 years. Using the Actuarial Tables, the multiplier would arguably be 10.29. This is calculated by taking the multiplier from age 22 to age 62 (24.95 – refer to Table 1-7, Multipliers for Males, on page 20 of the Actuarial Tables book), and subtracting the multiplier from age 22 to age 38 (14.66 – refer to Table 1-4, Multipliers for Males, on page 15 of the Actuarial Tables book).</p> <p>In determining the Plaintiff’s future medical expenses, the court applied a multiplier of 14 years. Using the Actuarial Tables, the multiplier would have been 20.93 (refer to Table 3, Multipliers for Annuity Term Certain, on page 48 of the Actuarial Tables book).</p>

## Conclusion

The Actuarial Tables will serve as a guide for courts to refer to, but ultimately the court still has the discretion to determine the appropriate award of damages. This means that the court may award damages based on a multiplier that is higher (or lower) than the multiplier applicable to the claimant under the Actuarial Tables in appropriate cases. Nevertheless, it is likely that the courts will generally be slow to depart from the multipliers in the Actuarial Tables, unless the facts and circumstances of the case dictate otherwise. Medical practitioners, healthcare institutions and their indemnity providers ought to be prepared for an increase in the claim amounts and awards for any ongoing or imminent claims against them.

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