IN THE GENERAL DIVISION OF
THE HIGH COURT OF THE REPUBLIC OF SINGAPORE

[2021] SGHC 77

Suit No 908 of 2015
(Assessment of Damages No 1 of 2020)

Between

Christian Joachim Pollmann

… *Plaintiff*

And

Ye Xianrong

… *Defendant*

JUDGMENT

[Damages] — [Measure of damages] — [Personal injuries cases]

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v
Ye Xianrong

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Vinodh Coomaraswamy J
14–17, 22, 24 January, 30, 31 March, 8, 15 June 2020

26 April 2021 Judgment reserved.

Vinodh Coomaraswamy J:

Introduction

1 In November 2014,[1] the plaintiff suffered a number of serious injuries in a road accident.[2] I found the defendant to be 100% liable for the plaintiff's injuries and ordered that the plaintiff's damages be assessed (see *Pollmann, Christian Joachim v Ye Xianrong* [2017] SGHC 229 at [99]). This judgment assesses those damages.

Background facts

1 Plaintiff's AEIC (4 October 2016) at para 5.

2 Statement of Claim (3 September 2015) at para 4.

2 The plaintiff is a Swiss national. At the date of the accident, he was employed in Singapore at Bank Julius Baer ("BJB"). His internal rank was that of an executive director ("ED") and his title was Head of Market Business Development in Asia.[3]

3 The plaintiff was aged 38 and married at the date of the accident. His wife was aged 37 at the date of the accident. The plaintiff and his wife have two children, who were aged one and three at the date of the accident.

4 The plaintiff is neither a citizen of Singapore nor a permanent resident of Singapore. He was employed at BJB[4] on an employment pass. Despite this, both parties are content to have his damages assessed as though all of his future loss will be incurred in Singapore.

5 It was appreciated from the outset by the defendant, or those who stand behind him, that the plaintiff's claim for damages was likely to be substantial. The defendant has therefore made interim payments to the plaintiff amounting to $3,100,000 over the course of these proceedings.[5] These interim payments will naturally have to be brought into account against the sums awarded in this assessment.

6 As for the assessment itself, counsel have sensibly and pragmatically agreed a large number of one-off items of loss and damage. The agreed items are set out in Annex A.[6] Despite counsel's best efforts, however, a number of

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3 Defendant's Closing Submissions at para 2.

4 Plaintiff's AEIC at para 40.

5 Plaintiff's Closing Submissions at para 7.

6 Plaintiff's Closing Submissions at Annex A; Defendant's Reply Submissions at para 558.

heads of loss remain in contention. The contested heads of loss are listed at Annex B.[7] The two largest and most contentious heads of loss are losses which extend into the future: loss of future earnings and future medical expenses. The difference between the parties on these two heads of loss involve questions of fundamental principle as well as fact. The remaining heads of loss in contention are one-off losses. The difference between the parties on these heads of loss are simply questions of present or projected fact.

7 Before addressing the disputed heads of loss in turn, it is convenient to address the questions of fundamental principle which divides the parties on the assessment of plaintiff's future losses.

The multiplier-multiplicand approach

The traditional approach

8 An award of damages for future losses arising from non-fatal personal injuries is intended to place a lump sum of money in the plaintiff's hands which he can draw down upon at periodic intervals over the expected duration of his loss, taking into account the vicissitudes of life, such that the lump sum is reduced to zero at the end of that duration, after taking into account the time value of money (see *Quek Yen Fei Kenneth (by his litigation representative Pang Choy Chun) v Yeo Chye Huat and another appeal* [2017] 2 SLR 229 ("*Kenneth Quek*" at [43]–[44] and [58]).

9 The damages for a particular head of future loss have traditionally been calculated using the formula $multiplicand \times multiplier$ (*Kenneth Quek* (at [42]):

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[7] Plaintiff's Closing Submissions at Annex B; Defendant's Reply Submissions at para 558.

> … The multiplicand represents the quantum of loss, whether in terms of an incurrence of medical expenses (for [future medical expenses]) or a reduction of earnings (for [loss of future earnings]), that the claimant is expected to suffer at periodic intervals in the future. The multiplier, in turn, is the mathematical tool used to calculate the lump-sum present value of the stream of future periodic losses across the remaining life expectancy and the remaining working life … of the claimant.

10 Determining the multiplicand, while fraught with difficulty, is ultimately no more or less difficult than the court's usual task in making findings of contested present or projected fact. Determining the multiplier, on the other hand, poses all of those difficulties plus additional difficulties of concept and of principle. Those additional difficulties lead to differences of approach which have the potential to have a significant effect on the quantum of damages awarded.

Determining the multiplier

11 The multiplier represents the number of periods which comprise the total duration of a particular head of loss. For loss of future earnings, the duration of a plaintiff's loss will be the remainder of his working life. For future medical treatment, the duration of a plaintiff's loss will be the period for which he is likely to require that treatment. In the case of lifelong medical treatment, the duration of the plaintiff's loss will be the rest of his natural life.

12 To avoid the risk of overcompensating a plaintiff, the multiplier must be adjusted to account for two features.

13 One adjustment to the multiplier is to account for the time value of money, or for accelerated receipt as it is traditionally known. A lump sum of money in a plaintiff's hands today has traditionally thought to be worth more to a plaintiff than a stream of periodic payments equivalent in quantum to the

multiplicand over the duration of the plaintiff's loss. This is because a plaintiff can invest the lump sum in order to earn a real, positive rate of return, *ie*, a rate of return which is above the inflation rate. That return must be treated as part of the plaintiff's compensation and must therefore be brought into account. That is done by adjusting the multiplier to account for the anticipated rate of achievable return. That anticipated rate of achievable return is the discount rate. The conventional range for discount rates in damages awards in Singapore is 4% to 5% (see *Kenneth Quek* at [65]).

14 The other adjustment to the multiplier is to account for what is called the vicissitudes of life. The vicissitudes of life are factors which could shorten the duration of the plaintiff's loss and therefore reduce the plaintiff's loss as compared to the loss anticipated at the time of assessment. The primary factor which could have this result, of course, is the possibility that the plaintiff may die of causes unrelated to the tort before the expiry of the duration of his loss anticipated at the date of assessment.

15 The Court of Appeal in *Kenneth Quek* noted that there are four approaches to determining the multiplier (at [50]). Each approach deals with the two adjustments to the multiplier in different ways. The precedent approach determines the multiplier by analogy with past precedents. The arithmetic approach determines the multiplier by the arithmetic formula for determining the net present value of a stream of payments into the future. The actuarial approach determines the multiplier by reference to actuarial tables. The fixed-formula approach determines the multiplier by a formula fixed by legislation.

16 In the absence of authoritative actuarial tables for Singapore lives, and in the absence of any formula fixed by legislation, the precedent approach and the arithmetic approach are to be preferred in Singapore. These two approaches

are to be used independently, with the precedent approach used to cross-check the result obtained by the arithmetic approach so as to ensure consistency with past awards in like cases (*Kenneth Quek* at [54]).

17 The precedent approach embeds the adjustment for both accelerated receipt and the vicissitudes of life in the multipliers which the courts have selected in past cases, albeit in a manner which has been until recently, unreasoned, unarticulated, and ultimately unprincipled. The arithmetic approach uses a formula which is a function of the discount rate for any given loss and duration to calculate a multiplier. The multiplier calculated by this formula adjusts only for the time value of money at the selected discount rate. A multiplier derived by the arithmetic approach must therefore be adjusted further to account for the vicissitudes of life (see *Kenneth Quek* at [58]).

18 Authoritative actuarial tables set out multipliers which incorporate an evidence-based adjustment for life expectancy at a range of discount rates. One of the advantages of the actuarial approach is therefore that it allows a multiplier which is adjusted both for the time value of money and for the vicissitudes of life to be selected from a single source.

Loss of future earnings

The plaintiff cannot return to gainful employment

19 The plaintiff advances his case for loss of future earnings on the basis that he will not be able to return to gainful employment for the remainder of his working life. The defendant does not suggest otherwise. This is no doubt

because the uncontested[8] medical evidence shows that the plaintiff has negligible prospects of returning to gainful employment.

20 One of the plaintiff's neurosurgeons, Dr Ivan Ng, gave evidence that the plaintiff's disabilities made it "impossible for [him] to work in his current position [*ie*, as a director at BJB] or *other form of gainful employment* … the level of disability is total (100%)"[9] [emphasis added]. The plaintiff's other neurosurgeon, Dr Alvin Hong, gave evidence to similar effect: the plaintiff "cannot handle more than 1 task or person at a time [and thus] his job prospects are limited … [e]ven doing manual work is difficult because he cannot remember the full set of instructions".[10]

21 Further, one of the plaintiff's psychologists, Dr Tommy Tan, gave evidence that the plaintiff's injuries caused the plaintiff to suffer from major depressive disorder and generalised anxiety disorder,[11] which affect both his specific ability to work as a banker[12] and his general ability to find gainful employment.[13] The plaintiff's psychiatrist, Dr Calvin Fones, gave evidence that "it is impossible that [the plaintiff] achieves the level of vocational attainments that he would have … It is highly unlikely that he will ever be able to secure employment in the open, normal setting".[14]

The multiplier

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8 Plaintiff's Closing Submissions at para 3; Defendant's Closing Submissions at para 304.

9 Affidavit of Dr Ng Hua Bak Ivan (19 November 2019) at p 59.

10 Affidavit of Dr Alvin Hong (10 January 2020) at p 10.

11 Affidavit of Dr Tan Kay Seng Tommy (10 January 2020) at p 13, para 17.

12 Affidavit of Dr Tan Kay Seng Tommy (10 January 2020) at p 14, para 21.

13 Affidavit of Dr Tan Kay Seng Tommy (10 January 2020) at p 14, paras 22–23.

14 Affidavit of Dr Fones Calvin Soon Leng (19 November 2019) at pp 29–30, para 56.

The plaintiff's case

22 The plaintiff's case on the multiplier is twofold. First, the plaintiff advances a case on methodology to be adopted. Second, the plaintiff advances a case on the discount rate to be selected.

23 On methodology, the plaintiff submits as follows. I should use the actuarial approach either in place of or in addition to the arithmetic approach.[15] In particular, I can and should rely on the actuarial tables found in WS Chan, FWH Chan and JSH Li, *Personal Injuries Tables Singapore 2015* (Sweet & Maxwell, 2015) ("Singapore Tables").[16] The Singapore Tables are an example of the type of actuarial tables which the Court of Appeal endorsed in *Kenneth Quek*[17] and in *Poh Huat Heng Corp Pte Ltd v Hafizul Islam Kofil Uddin* [2012] 3 SLR 1003 ("*Hafizul*").[18] Moreover, the advantage of relying on the Singapore Tables, as compared to the arithmetic approach, is that the multiplier requires no further adjustment for the vicissitudes of life.[19] The Singapore Tables are admittedly based on life expectancy data from 2012. Life expectancy in Singapore has increased since 2012. In this respect, the Singapore Tables may not be up to date. But this shortcoming can be addressed by applying a slight uplift to the multiplier derived from the Singapore Tables.[20]

24 As for the discount rate, the plaintiff submits that I should select a discount rate outside the conventional range of 4% to 5% (see *Kenneth Quek* at

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15 Plaintiff's Closing Submissions at paras 145–146.

16 Plaintiff's Closing Submissions at paras 135(c), 188, 196.

17 Plaintiff's Closing Submissions at para 135(g).

18 Plaintiff's Reply Submissions at para 9.

19 Plaintiff's Closing Submissions at para 145.

20 Plaintiff's Reply Submissions at para 13.

[65]). The plaintiff relies on *Kenneth Quek* to argue that an *incremental* departure from the conventional range is justified if the circumstances of a case warrant it.[21] The plaintiff submits that a discount rate of 2.5% is warranted in the circumstances of this case because the rates of return on deposits and certain low-risk financial instruments are currently low by historical standards.[22] To support his submission, the plaintiff invites me to take judicial notice of certain public documents evidencing the rates of return of deposits and various financial instruments ("the Public Documents").[23]

The defendant's case

25 On methodology, the defendant has no objection in principle to using the actuarial approach instead of the arithmetic approach. The defendant accepts that the actuarial approach differs from the arithmetic approach only in that the actuarial approach accounts for life expectancy explicitly and empirically.[24] As a result, at any given discount rate, there is no material difference between selecting a multiplier using the actuarial approach (*eg*, from the Singapore Tables) and calculating a multiplier using the arithmetic approach and then adjusting it for the vicissitudes of life.[25] However, the defendant insists that the precedent approach must still be used as a cross check before making the award.[26]

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21 Plaintiff's Closing Submissions at para 136.

22 Plaintiff's Closing Submissions at paras 181–183.

23 Plaintiff's Reply Submissions at para 37.

24 Defendant's Reply Submissions at para 31.

25 Defendant's Reply Submissions at para 34.

26 Defendant's Reply Submissions at para 38.

26 On the discount rate, the defendant rejects the plaintiff's suggested discount rate of 2.5%, both as a matter of principle and on the facts.

27 As a matter of principle, the defendant emphasises the Court of Appeal's reminder in *Kenneth Quek* (at [59] and [65]) that anything other than an incremental change in the discount rate is a matter to be undertaken by parliament, and not by the courts.[27] The defendant submits that selecting a discount rate of 2.5% is too radical a departure from the conventional range to be considered incremental.[28]

28 On the facts, the defendant submits that there is no evidence of any circumstances in this case to warrant selecting a discount rate of 2.5%. The defendant submits that the Public Documents cannot be the subject of judicial notice.[29] In any event, the defendant also submits that the Public Documents do not provide a sufficient factual basis to select a discount rate below the conventional range.

29 The defendant goes further in the other direction and submits that the discount rate should in fact be at the top end of the conventional range, *ie*, 5%. The defendant justifies his position on the basis of prevailing low inflation rates,[30] uncertainties as to the course of the plaintiff's career but for his injuries[31] and the plaintiff's thrill-seeking habits.[32] The defendant also submits that these

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27 Defendant's Reply Submissions at para 44.

28 Defendant's Reply Submissions at para 41.

29 Defendant's Reply Submissions at paras 59–63.

30 Defendant's Closing Submissions at para 25.

31 Defendant's Closing Submissions at para 39.

32 Defendant's Closing Submissions at paras 41–42.

three factors should be considered in making adjustments to the *multiplier* itself, as opposed to just the *discount rate*.[33]

Whether the actuarial approach should be used

30 The parties are in broad agreement that I may rely on the Singapore Tables. Further, the Court of Appeal in *Kenneth Quek* at [62] expressly endorsed the use of actuarial tables. For both these reasons, I consider that the actuarial approach is an appropriate one in the current case.

31 I cannot, however, go so far as to endorse the use of the Singapore Tables as a principle of law. The Singapore Tables, to my knowledge, have not attained the status of authoritativeness (to quote the Court of Appeal in *Kenneth Quek* at [51] and [80]). Further, as the parties have pointed out, the Singapore Tables are based on life expectancy data which is not up to date. I note that, insofar as the Singapore Tables do incorporate outdated life expectancy data, that does not affect the calculation of the multiplier for *loss of future earnings* as much as it affects the calculation of the multiplier for *future medical expenses*. That is because the multiplier for loss of future earnings is determined by reference to the plaintiff's working life, and not by reference to his natural life.

32 I therefore propose to use the actuarial approach *in addition to*, and not *in replacement of*, the arithmetic approach. I will therefore determine the multiplier on *three* approaches: the actuarial approach, the arithmetic approach and the precedent approach.

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[33] Defendant's Reply Submissions at paras 133–134.

33 Having determined the applicable approach to determining the multiplier, I next consider the number of periods which comprise the duration of the plaintiff's future loss and select the discount rate to apply.

The number of periods of future loss

34 I start with the number of periods of the plaintiff's loss. The minimum statutory age of retirement, both at the time of the plaintiff's accident and at the date of the assessment, is 62 years of age as stipulated by s 4 of the Retirement and Re-Employment Act (Cap 274A, 2012 Rev Ed) ("RRA"). However, the defendant is willing to accept a retirement age of 65 for the purposes of this assessment, on the basis of the report from the plaintiff's employment expert, Mr Jonathan Mark Evans ("Mr Evans").[34] Therefore, the defendant submits that the number of periods for the plaintiff's loss of future earnings is 21 years, being 65 years (the end of the plaintiff's working life) less 44 years (the plaintiff's age at the time of assessment).

35 The plaintiff acknowledges that Mr Evans estimates the plaintiff's retirement age as 65. However, the plaintiff argues that ss 7 and 7A of the RRA oblige an employer to offer re-employment to an employee who reaches 62 years of age until the employee turns 67.[35] The plaintiff goes even further and submits that he would have carried on working until he reached 70, as is common for white-collar workers and professionals.[36]

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34 Defendant's Closing Submissions at para 54.

35 Plaintiff's Reply Submissions at para 69.

36 Plaintiff's Closing Submissions at para 180.

36 In his reply submissions, the defendant accepts in principle a retirement age of 70.[37]

37 I note at the outset that the RRA does not apply to the plaintiff. Paragraphs 3 and 4 of the Retirement and Re-Employment (Exemption) Notification 2011 provide that neither the statutory minimum retirement age of 62 nor the statutory obligation to offer re-employment applies to individuals who are not Singaporeans or permanent residents. In the circumstances, I cannot rely on the RRA alone to find that the plaintiff would have retired at 67 or at some later age. Without further evidence and submissions on this specific point, I am inclined to accept Mr Evans' evidence that the plaintiff would retire at 65, despite the defendant's willingness to accept in principle a retirement age of 70.[38] It follows that the number of periods of the plaintiff's loss of future earnings would be 21 (being 65–44).

38 However, the plaintiff also has a claim for post-retirement income. The plaintiff's pre-retirement and post-retirement income must be calculated separately. This is because the plaintiff accepts that his post-retirement income (if any) would have been markedly lower than his pre-retirement income.[39] For the avoidance of doubt, therefore, the calculation of the multiplier and the multiplicand in the following sections take into account only the plaintiff's pre-retirement income. It is also for this reason that I take the plaintiff's retirement age to be 65 and not 70, even though the defendant does not have any objection in principle to adopting a retirement age of 70.[40]

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37 Defendant's Reply Submissions at para 147.

38 Defendant's Reply Submissions at para 147.

39 Plaintiff's Closing Submissions at para 177.

40 Defendant's Reply Submissions at para 147.

The discount rate

39 I now select the discount rate. This is the more contentious issue. The plaintiff advocates a rate (2.5%) which is half that advocated by the defendant (5%).

40 The plaintiff in his written submissions initially advocated as his primary position a discount rate of 1%.[41] But in oral submissions, the plaintiff moderated that position to advocate a discount rate of 2.5% instead.[42] Presumably, the plaintiff accepts that selecting a discount rate of 1% is too radical to be considered an incremental departure from the conventional range.

41 I do not think that is necessarily the case. It is true that in *Kenneth Quek*, the Court of Appeal held that any departure from the conventional range "should be undertaken only incrementally and by reference to or analogy with past cases" (at [65]). But the Court of Appeal in the same case also found merit in the tiered discount rate framework proposed by Bharwaney J in the Hong Kong Court of First Instance case of *Chan Pak Ting v Chan Chi Kuen (No 2)* [2013] 2 HKLRD 1 ("*Chan Pak Ting*") (*Kenneth Quek* at [64] and [67]). That tiered framework contemplates a discount rate as low as -0.5% (*Kenneth Quek* at [64]). A discount rate of -0.5% is a far more radical departure from the conventional range than a discount rate of 1% in two senses. Arithmetically, it is of course a bigger jump downwards. And conceptually, a negative discount rate is a more radical departure from the conventional range than any positive discount rate. A negative discount rate assumes that inflation will exceed nominal rates of return over the period of the plaintiff's loss and amounts to applying a premium for accelerated receipt, rather than the orthodox discount. As the Court of

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41 Plaintiff's Closing Submissions at para 181.

42 Certified Transcript (15 June 2020) at p 9, lns 28–31.

Appeal made clear in *Kenneth Quek* (at [67]), the fundamental difficulty in that case was not so much the magnitude of the departure from the conventional range but that there was simply no expert evidence or submissions on macroeconomic trends in Singapore and the impact on likely investment returns to warrant such a departure.

42 The question for me, therefore, is not whether the departure which the plaintiff proposes is a radical or an incremental departure from the conventional discount rate. The more pertinent question for me is whether the plaintiff has adduced sufficient evidence to establish that a departure from the conventional range is warranted in the circumstances of this case. The plaintiff relies on the Public Documents as the necessary evidence.

43 The Public Documents comprise the following:[43]

S/N	Date	Contents
1	Undated	Graph taken from *http://www.tradingeconomics.com* showing the historical yield for 10-year Singapore Government Securities ("SGS") Bonds
2	May 2020	Screenshot from the Monetary Authority of Singapore ("MAS") website showing average 10-year SGS Bonds yield of 0.72

[43] Plaintiff's Supplementary Bundle of Documents (18 May 2020) ("PB2") at Index.

S/N	Date	Contents
3	May 2020	Graphs taken from *http://www.tradingeconomics.com* ("*Trading Economics*") showing 10-year yields for government bonds in UK, Switzerland, Japan and Germany
4	May 2020	European Union ("EU") Short-Term Interest Rate taken from *http://www.ceicdata.com*, citing the European Money Market Institute ("EMMI")
5	May 2020	Screenshot from Yahoo Finance showing historical performance of Nikko Asset Management ("Nikko AM") Singapore Straits Times Index Exchange-Traded Fund ("STI ETF")
6	May 2020	Screenshot from Yahoo Finance showing historical performance of SPDR STI ETF
7	July 2019	Statement of Reasons by the Rt Hon David Gauke MP, Lord Chancellor, in respect of the review of the personal injury discount rate in England and Wales from -0.75% to -0.25%
8	July 2019	UK Ministry of Justice, Summary of Responses to the Call for Evidence on setting the Personal Injury Discount Rate

S/N	Date	Contents
9	May 2020	Graph taken from *Trading Economics* showing the historical interest rates set by the US Federal Reserve, citing the US Federal Reserve itself

44 The difficulty with the plaintiff's reliance on the Public Documents is that he produced them long after closing his case at trial. The documents were therefore not proven at trial and are not in evidence before me. Further, the defendant had no opportunity to cross-examine the makers of these documents, or to adduce any factual evidence or expert opinion to rebut or challenge these documents. Receiving and relying on the Public Documents now would be unfair to the defendant.

45 The plaintiff nevertheless argues that I can take judicial notice under s 59 of the Evidence Act (Cap 97, 1997 Rev Ed) of the following facts asserted in the Public Documents:[44]

(a) The historical yield on 10-year SGS bonds, taken from *Trading Economics*;[45]

(b) The average yield on 10-year SGS bonds as determined by the MAS;[46]

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44 Plaintiff's Reply Submissions at para 37.

45 PB2 at p 164.

46 PB2 at p 165.

(c) The historical returns for the STI ETF and Nikko AM Singapore STI ETF;[47]

(d) The statutorily prescribed discount rate in England and Wales of 0.25%;[48]

(e) The historical interest rates set by the US Federal Reserve;[49]

(f) The historical yield of 10-year bonds in Germany, Switzerland, UK and Japan, taken from *Trading Economics*;[50]

(g) Short-term interest rates in the European Union.[51]

(1) Judicial notice

46 At common law, a court may take judicial notice of two categories of facts (see *Zheng Yu Shan v Lian Beng Construction (1988) Pte Ltd* [2009] 2 SLR(R) 587 at ("*Zheng Yu Shan*") at [27]):

(a) facts which are so notorious or so clearly established that they are beyond the subject of reasonable dispute ("Category 1"); and

(b) specific facts which are capable of being immediately and accurately shown to exist by authoritative sources ("Category 2").

47 On Category 1, the plaintiff submits that the courts have historically taken judicial notice of economic or financial facts which can be evidenced by

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47 PB2 at pp 181–182.

48 PB2 at pp 183– 187.

49 PB2 at pp 177–180.

50 PB2 at pp 166–169.

51 PB2 at pp 170–176.

documents in the public domain. As an example, the plaintiff cites *Asia Hotel Investments Ltd v Starwood Asia Pacific Management Pte Ltd and another* [2007] SGHC 50 ("*Asia Hotel*") at [42]. In that case, Lai Siu Chiu J took judicial notice of the fact that the Thai baht had appreciated by about 20% over the five years from the date of the defendant's breach of contract to the date of her judgment. By the same token, the plaintiff submits that I can take judicial notice of the seven economic and financial facts asserted in the Public Documents.[52]

48 In my view, a court cannot take judicial notice of a fact simply because it is an economic and financial fact evidenced by a public document. Lai J took judicial notice of the appreciation of the Thai baht in *Asia Hotel* not because it was an economic and financial fact evidenced by public documents but because the currency appreciation "may be easily and accurately established by reference to a readily-available variety of unimpeachable sources" (*Zheng Yu Shan* at [33]). I note that there may be some overlap between Categories 1 and 2 in relation to the use of unimpeachable or authoritative sources. However, such an overlap is understandable given the idea of *incontrovertibility* that underpins the doctrine of judicial notice.

49 On Category 2, there is to my knowledge no settled judicial definition of what amounts to an "authoritative" source. Having said that, *Hauque Enamul v China Taiping Insurance (Singapore) Pte Ltd and another* [2018] 5 SLR 485 ("*Hauque*") offers some guidance. In *Hauque,* George Wei J took judicial notice of the fact that Singapore public hospitals have begun implementing an electronic record exchange system. Wei J accepted that this fact can be found on the Ministry of Health's webpage, and accepted further that that was an authoritative source (*Hauque* at [93]). In my view, an official publication by an

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52 Plaintiff's Reply Submissions at para 42.

arm of the government which asserts a fact within the purview of that arm of government is an authoritative source. That does not, however, mean that no other sources can be authoritative sources.

50 Applying these principles, the seven facts listed at [45] above are not within Category 1. These seven facts are highly specific and technical financial and economic information. They are not so widely known or clearly established as to be "accepted by the public without qualification or contention" (see *Zheng Yu Shan* at [27]). None of these facts are "notorious" in any sense of the word. They are all outside Category 1.

51 The key question, therefore, is whether any of these facts are within Category 2. That in turn depends on whether they are facts which can be immediately and accurately shown to exist by "authoritative sources". In considering this question, I bear in mind the Court of Appeal's warning in *Zheng Yu Shan* that a judge should exercise judicious caution in taking judicial notice of facts (at [29]–[30]).

52 My assessment of whether the seven facts listed at [45] are within Category 2 is as follows:

(a) The historical yield of 10-year SGS and foreign bonds (at [45(a)] and [45(f)]) is outside Category 2. The Public Documents refer to a website known as *Trading Economics*. There is no evidence as to where *Trading Economics* obtained the yield data from. I must therefore treat *Trading Economics* as the source of the historical yield data. I do not accept *Trading Economics* to be an authoritative source.

(b) The discount rate prescribed by statute in England and Wales (at [45(d)]) is within Category 2. The source of this fact is the Lord

Chancellor's Department. The Lord Chancellor is empowered by the Damages Act of England and Wales to set the relevant discount rate. I accept the Lord Chancellor's Department to be an authoritative source for this fact.

(c) The historical interest rates set by the US Federal Reserve (at [45(e)]) is outside Category 2. The historical rates appear in a document from the *Trading Economics* website. The ultimate source for these rates is said to be the US Federal Reserve itself. But that statement is self-serving and is not authoritative, coming as it does from a source (*Trading Economics*) which I do not accept as authoritative. These historical interest rates would have been within Category 2 if the document produced to me was an official publication of the Federal Reserve itself. In that event, the facts would originate from an arm of the US Federal government and assert facts within that arm's purview.

(d) The average yield of 10-year SGS bonds, obtained as at May 2020 (at [45(b)]) is within Category 2. The source is the MAS. I accept that these facts have been shown to exist by an official publication of an arm of the government asserting a fact within that arm's purview.

(e) The short-term interest rates for the European Union, defined *generally*, (at [45(g)]) are outside Category 2. Short-term interest rates vary based on the time horizon and the index being used. Therefore, I do not find that there can be an authoritative source on short-term interest rates in the European Union *in general*.

(f) The historical returns on the SPDR and Nikko AM STI ETFs (at [45(c)]) are outside Category 2. The figures are obtained from Yahoo! Finance. I do not accept Yahoo! Finance as an authoritative source.

53 My analysis so far only touches on whether the seven facts listed at [45] above are within Category 2. Even when a fact is within Category 1 or Category 2, the court retains a discretion to take judicial notice of the fact. As I pointed out to plaintiff's counsel in the course of oral submissions, the plaintiff has adopted a very expansive reading of s 59, a reading which may carry many unintended consequences.[53] Moreover, based on the authorities presented by the plaintiff, the court's discretion in taking judicial notice of a fact may turn on whether that fact is presented merely by way of background, or whether that fact is critical to the outcome of the case.

54 I therefore take judicial notice of only the three facts at [52(b)] and [52(d)] above.

(2) Downward adjustment of the discount rate

55 The defendant argues that even if I take judicial notice of these facts, I cannot take judicial notice of, and should attach no weight to, *the plaintiff's analysis of the effects and consequences* of these facts. According to the defendant, the plaintiff's analysis is either not incontrovertible, or is opinion that requires proof by expert evidence.[54] The defendant's argument presupposes that the plaintiff's analysis amounts to a fact which must be proved. I disagree. The plaintiff's analysis, properly construed, is a *submission*. The submission attempts to draw out the nexus between the factual premises, *ie*, the facts in the Public Documents which the plaintiff wants me to take judicial notice of, and a legal conclusion, *ie*, that it is appropriate to select a discount rate of 2.5% even though it is outside the conventional range.

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53 Certified Transcript (15 June 2020) at p 22, lns 29–31.

54 Defendant's Reply Submissions at paras 65–66.

56 However, this mischaracterisation of the nature of the plaintiff's analysis does not detract from the substance of the defendant's argument. There are two prongs to the argument.[55] First, the selection of a discount rate requires far more financial and economic facts than those asserted in the Public Documents. Second, the financial and economic data must be properly analysed by financial and economic experts, instead of by lawyers and the court. To put it bluntly, counsel and the court should focus on law and not economics.

57 I agree with the defendant.

58 First, I do not consider the facts asserted in the Public Documents are a sufficient evidential basis to select a discount rate of 2.5%. The discount rate is the achievable real rate of return that a plaintiff is likely to be able to earn on his award over the period of his loss. Selecting a discount rate thus requires some knowledge of the basket of investments that a plaintiff will reasonably invest the lump sum award in. The Public Documents refer to the historical returns of only *low-risk* investments (*ie*, deposits, ETFs and fixed-income instruments). The plaintiff therefore assumes that his basket of investments will comprise only *low-risk* investments. I do not find this assumption justified.

59 The plaintiff's explanation for this assumption is that he cannot afford to make risky investments because he will have to live off the award for the rest of his life and therefore has no room for error.[56] That is the case for every plaintiff who has suffered personal injuries by reason of a tort. A similar explanation was rejected by the Court of Appeal in *Lai Wai Keong Eugene v Loo Wei Yen* [2014] 3 SLR 702 ("*Eugene Lai*"). According to the Court of

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55 Defendant's Reply Submissions at paras 90 and 111.

56 Plaintiff's Reply Submissions at para 35.

Appeal in *Eugene Lai*, a plaintiff does not require the entire sum of the award to meet his expenses at any one point in time, and thus a substantial portion of the award, which would not be called upon for many years, can be invested in relatively higher-risk (and therefore higher-reward) investments (*Eugene Lai* at [34]).

60 Moreover, even assuming that it is reasonable for the plaintiff to confine his basket of investments to low-risk investments, there is no reason to consider it reasonable to limit his investments to the *specific low-risk investments mentioned in the Public Documents*. Risk and reward are undoubtedly correlated. But, as the defendant points out, there exist a whole range of low-risk investments – including but not limited to real estate, real estate investment trusts, index funds and preferred stock – which enable an investor to achieve higher returns without disproportionately higher risk.[57] The specific low-risk investment products which are the subject of the Public Documents are too limited to be representative of low-risk investments *as a class*.

61 Second, the analysis of financial and economic data to select a discount rate is a matter on which expert evidence is essential. The plaintiff asserts that, so long as there is sufficient data, the court is able on its own to interpret and analyse the data to select a discount rate.[58] The court does not need the assistance of an expert, since the expert would also "literally be guessing".[59] I do not accept this submission. It is well beyond the ability of any court to interpret and analyse financial and economic data of this nature, assuming it to be sufficient for the purpose, without the assistance of experts.

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57 Defendant's Reply Submissions at para 91.

58 Plaintiff's Reply Submissions at para 36.

59 Plaintiff's Reply Submissions at para 31.

62 As the Court of Appeal noted in *Eugene Lai*, the discount rate represents "the average [effective] rate of return *over a plaintiff's remaining working lifespan*" [emphasis added] (at [36]). In other words, selecting the discount rate requires an estimate of the likely average rates of return *into the future.* The average rates of return at the date of assessment are only one factor in this exercise. It is one thing to estimate the *current* average rate of return based on *current* economic data. It is another thing altogether to estimate *future* average rates of return based on *current* economic data. To do so requires expert knowledge and analysis.

63 Further, in this case, the duration of the plaintiff's loss stretches two decades into the future. A lay person cannot forecast whether average rates of return will continue to remain low for such a long duration. A lay person can only guess. An expert can at least make an educated, informed and principled guess.

64 Additionally, selecting a discount rate requires some account to be taken of inflation. This is because the real rate of return on any investment is the nominal rate of return less the inflation rate. The plaintiff has adduced no evidence on the outlook for inflation.[60] The plaintiff is content instead to assert that his failure to account explicitly for inflation is "actually beneficial to the defendant" in that it reduces the award.[61] I do not accept this assertion. If one is to descend to the level of granularity which the plaintiff advocates in selecting the discount rate, one ought equally to descend to the same level of granularity in estimating inflation. The plaintiff's submission that his failure to account explicitly for inflation is beneficial to the defendant assumes that inflation will

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60 Certified Transcript (15 June 2020) at p 11, ln 24 to p 12, ln 22.

61 Certified Transcript (15 June 2020) at p 12, lns 20 to 22.

continue to be positive throughout the plaintiff's period of loss. But deflationary periods in the next 20 years or so are not beyond the realm of possibility.

65 In summary, I find that there is neither sufficient financial or economic data nor sufficient expert analysis of that data to justify selecting a discount rate beyond the lower end of the conventional range (at either 1% or 2.5%). A contrast can be drawn with the case of *Chan Pak Ting*. In *Chan Pak Ting*, the court had the following financial and economic data available:[62]

(a) an extensive analysis of the Hong Kong economy from 1995 to the time of the judgment;

(b) economic trends which may affect future economic development in Hong Kong;

(c) the wide range of investment products reasonably available to Hong Kong investors and the historical performance of those products;

(d) the difference between wage inflation and price inflation to assess the true impact of inflation.

66 The plaintiff in *Chan Pak Ting* adduced all of this financial and economic data through experts, not by an appeal to judicial notice. And the analysis of this data was undertaken by experts rather than being the subject of submission. In particular, the expert used the economic data to (a) set out different baskets of investments at different levels of risk for plaintiffs of different levels of need and (b) projected rates of return into the future. This level of factual and expert evidence is missing in the present case.

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62 Defendant's Reply Submissions at para 86.

67 A further contrast can be drawn with the discount rate prescribed by statute in England and Wales. This statutory discount rate was selected only after careful study and consultation. Detailed and exhaustive financial and economic data was collated from the responses to the government's surveys on, *inter alia*, the investment habits and risk appetites of claimants who receive lump sum damages in serious personal injury cases. This data was also thoroughly analysed by the Government Actuary, who presented his analysis and recommendation to the Lord Chancellor for approval. The Lord Chancellor did not select the statutory discount rate in England and Wales on incomplete data. The Lord Chancellor selected the discount rate only with the assistance of experts who obtained and analysed extensive financial and economic data.

68 In conclusion, I recognise that economic circumstances and life expectancies have changed fundamentally since the precedent approach arrived at multipliers which carry discount rates in the conventional range of 4% to 5%. The Court of Appeal recognised this in *Kenneth Quek*. But, as the Court of Appeal also held, the court must have sufficient and cogent evidence together with expert interpretation and analysis before it can conclude that a discount rate outside the conventional range is warranted. I am not in that position.

(3) A discount rate at the upper end of the conventional range

69 Having rejected the plaintiff's submission that I should select a discount rate outside the conventional range of 4% and 5%, I must next determine where the plaintiff's discount rate should fall within that conventional range.

70 The defendant submits that the plaintiff's discount rate should be at the upper limit of the conventional range, *ie*, 5% for two reasons. First, the plaintiff's employment in the banking industry is particularly susceptible to the

vagaries of the economy.[63] Second, the plaintiff's penchant for thrill-seeking means that his career could have been cut short by accident even if the defendant had not injured him.[64]

71 I find neither argument to be convincing. The defendant's first argument is premised on the factual basis that the private banking industry, in particular BJB, is in decline, and that this decline has been exacerbated by the COVID-19 pandemic.[65] But the defendant makes no attempt to apply this general trend to the specific circumstances of the plaintiff and his employment. I do not accept that this general trend justifies selecting a discount rate at the top end of the conventional range, given that the plaintiff had attained a relatively senior position in the industry before his accident. In my view, the general vagaries of the economy or even the specific vagaries of the private banking industry are therefore less likely to affect the plaintiff's earnings. Further, there is no guarantee that any decline in the performance or prospects for the private banking industry, or for BJB in particular, which is currently apparent will continue for the duration of the plaintiff's loss.

72 The defendant's second reason for selecting a discount rate of 5% is, in my view, pure speculation. Of course, thrill-seeking does pose a risk of injury or death by accident. But even the most avid thrill seekers take precautions for their own self-preservation. There is nothing to suggest that the plaintiff would not do the same. Further, the defendant offers no way by which to assess the plaintiff's net risk, qualitatively or quantitatively. The submission is therefore of no quantitative assistance in selecting a discount rate.

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63 Defendant's Closing Submissions at para 39.

64 Defendant's Closing Submissions at paras 40–42.

65 Defendant's Closing Submissions at paras 168–174.

73 I consider the risk of the plaintiff's injury or death by accident from thrill-seeking to be so remote as to be negligible in selecting the discount rate.

(4) The discount rate

74 In summary, I find that there is insufficient basis to select a discount rate below the lower limit of the conventional range, *ie*, 4%. But I find also that there is insufficient basis to select a discount rate at the upper limit of this range, *ie*, 5%.

75 Having considered the two facts which I have found that I can take judicial notice of (at [52(b)] and [52(d)] above), I accept that we are now in a low interest rate environment and that it is likely to persist for an appreciable part of the duration of the plaintiff's loss. This indicates to me that I should select a discount rate in the lower half of the conventional range. Having said that, the plaintiff's period of loss stretches over two decades. That length of time means that his investment horizon is further away and that the degree of risk which it is reasonable to expect him to take is higher. Further, I cannot assume that the current low interest rate environment will persist for the entire duration of his loss. I therefore consider that I should not select a discount rate too far down into the lower half of the conventional range. Given the absence of assistance from expert evidence, the task falls to me to select a discount rate which is appropriate in all the circumstances of the case. Considering all the evidence presented to me and all the circumstances of the case, I select a discount rate of **4.25%**.

The calculations

76 I now calculate the multiplier for the plaintiff's loss of future earnings. The multiplier is the number which, when multiplied by the multiplicand, will

yield the present value of an ordinary annuity which will pay out to the plaintiff a constant sum equivalent to the multiplicand over the 21-year duration of his loss, after accounting for the returns earned over that duration at the discount rate. An annuity is a series of constant payments at constant intervals for a fixed duration into the future. An ordinary annuity is an annuity in which each constant payment is made at the end of an intervals rather than at the beginning.

77 The mathematical formula for the present value of an ordinary annuity is as follows: $PV = P \times \frac{1 - (1+r)^{-n}}{r}$. In this formula, *PV* is the present value of the annuity, *P* is the value of each periodic payment, *r* is the interest rate and *n* is the number of payments. This formula is the mathematical equivalent of the formula which the Court of Appeal used to derive the discount rate implicit in a multiplier selected using the precedent approach (*Kenneth Quek* at [72]).

78 The multiplier/multiplicand method also seeks to yield the present value of an ordinary annuity, albeit by a different route than the arithmetic method. Therefore, it is mathematically valid to set the two formulas equal to each other thus: $P \times \frac{1 - (1+r)^{-n}}{r} = multiplicand \times multiplier$. If the value of each constant payment is *P* in the first formula and is the $multiplicand$ in the second formula, then the $multiplier$ in the first formula must necessarily equal $\frac{1 - (1+r)^{-n}}{r}$ in the second formula. In this formula, *r* is the *discount rate* which I have selected of 4.25% per annum (see [75] above) and *n* is the number of periods comprised in the duration of the plaintiff's loss of earnings, *ie,* 21 years (see [37] above). Inserting these values into the formula yields a multiplier of 13.71.

79 The multiplier on the arithmetic approach is therefore 13.71, on the basis of 21 years of loss and a discount rate of 4.25% per annum. Using the actuarial

approach, Table 9 of the Singapore Tables (based on a retirement age of 65),[66] indicates a multiplier between 13.97 (at a discount rate of 4.0%) and 13.39 (at a discount rate of 4.5%). The actuarial and the arithmetic approaches thus yield results which are consistent.

80 I now cross-check the multiplier obtained by the arithmetic and the actuarial approaches with the multiplier obtained by the precedent approach. The defendant directs my attention to the following cases:[67]

(a) *Tan Hun Boon v Rui Feng Travel Pte Ltd* [2018] 3 SLR 244 ("*Tan Hun Boon*"), where the plaintiff had a remaining working life of 28 years and the multiplier was 16.

(b) *Hafizul*, where the plaintiff had a remaining working life of 36 years and the multiplier was 17.

(c) *Teo Seng Kiat v Goh Hwa Teck* [2003] 1 SLR(R) 333, where the plaintiff had a remaining working life of 34 years and the multiplier was 18.

81 I am satisfied that the multiplier I have arrived at is consistent with precedent. As the plaintiff has a shorter remaining working life compared to those in the precedents, the multiplier in this case should accordingly be lower. However, to bring the multiplier in this case even closer to the precedents, I adjust the multiplier upwards slightly to 14. The defendant himself suggests a multiplier of 14.[68]

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66 PB2 at p 108.

67 Defendant's Reply Submissions at para 55.

68 Defendant's Reply Submissions at para 145.

82 There is a final point. The defendant submits that I should make further adjustments to the multiplier to take into account the vicissitudes of the plaintiff's life and his uncertain unemployment prospects.[69] As the Court of Appeal noted in *Kenneth Quek*, any such adjustment is to be made directly to the discount rate. It would therefore amount to double counting to make a further adjustment to the multiplier. In any event, as I have found in [71]–[72] above, the defendant's arguments on the vicissitudes of the plaintiff's life and his uncertain unemployment prospects are not persuasive.

The multiplicand

The plaintiff's case

83 At the time of his accident, the plaintiff was an ED at BJB.[70] The next step up would have been to Managing Director Senior Advisor ("MDSA") and then to Managing Director ("MD").[71] The plaintiff submits that I should use a variable multiplicand to assess his loss of future income. This is because, but for his accident, he would have climbed the ranks of BJB, enjoying step changes in his income (salary increments as well as bonuses) as he went from ED to MDSA and then from MDSA to MD. Taking into account these three variables, the plaintiff sets out the multiplicand in the following table:[72]

Year	**Job title**	**Multiplicand (per annum)**
2021	MDSA	734,027.24
2022 to 2031	MD	1,195,488.50

69 Defendant's Closing Submissions at paras 68–70.

70 Plaintiff's Closing Submissions at para 4.

71 Plaintiff's Closing Submissions at para 170.

72 Plaintiff's Closing Submissions at para 177.

2032 to 2041	MD	1,602,350.54
2042 to 2046	Advisor / Independent non-executive director	171,800.00

The defendant's case

84 The defendant's primary case is that there is insufficient evidence to show that, but for the accident, the plaintiff: (a) would have been promoted to MDSA or beyond, (b) received any annual salary increments, or (c) received any bonus.[73] Accordingly, the defendant submits that the multiplicand should be a single figure for the entire duration of his loss, based on the plaintiff's base salary of $366,000.00 as at July 2015.[74] From this figure, the defendant makes revisions to take into account his pension and his income tax liability to arrive at a final multiplicand of $330,407.24 per annum.[75]

85 In the alternative, the defendant is prepared to accept that the plaintiff could have been promoted from ED to MDSA (but not beyond that to MD) and would have enjoyed annual salary increments and bonuses.[76] The defendant has prepared various career scenarios, catering for various permutations of these three variables: promotion, increments and bonuses. In each scenario, the multiplicand is obtained by taking the midpoint between the lowest possible earnings and highest possible earnings for that scenario. From this midpoint, the defendant makes further adjustments to take into account his pension and his

73 Defendant's Closing Submissions at paras 105–249.

74 Plaintiff's Closing Submissions at para 153(b).

75 Defendant's Reply Submissions at para 264.

76 Defendant's Reply Submissions at para 265.

income tax liability. The defendant's position is presented in the following table:[77]

S/N	Career scenario	Earnings	Multiplicand after pension and tax (per annum)
1	Promotion: No Salary increment: 2% Bonus: No	Minimum: 396,180 Maximum: 600,450 Median: 498,315	433,612.94
2	Promotion: No Salary increment: 2.5% Bonus: No	Minimum: 403,990 Maximum: 678,540 Median: 541,265	467,113.94
3	Promotion: No Salary increment: 2.5% Bonus: 12%	Minimum: 452,470 Maximum: 759,960 Median: 606,215	507,774.94
4	Promotion: Yes Salary increment: 2% Bonus: No	Minimum: 396,180 Maximum: 674,300 Median: 535,240	462,414.44
5	Promotion: Yes Salary increment: 2.5% Bonus: No	Minimum: 403,990 Maximum: 759,940 Median: 581,965	498,859.94

[77] Defendant's Reply Submissions at para 268.

S/N	Career scenario	Earnings	Multiplicand after pension and tax (per annum)
6	Promotion: Yes Salary increment: 2% Bonus: 12%	Minimum: 443,720 Maximum: 755,220 Median: 599,470	512,513.84
7	Promotion: Yes Salary increment: 2.5% Bonus: 12%	Minimum: 452,470 Maximum: 851,130 Median: 651,800	533,331.24

The applicable approach

86 I begin by addressing the burden and standard of proof. It is axiomatic that the burden of proving loss lies with the plaintiff. The usual standard of proof in civil cases is the balance of probabilities. However, the defendant was prepared to accept that a less stringent standard of proof applies to determining the multiplicand for claims of loss of future earnings.[78] The defendant refers me to the observations of the Court of Appeal in *Lua Bee Kiang (administrator of the estate of Chew Kong Seng, deceased) v Yeo Chee Siong* [2019] 1 SLR 145 ("*Lua Bee Kiang*") at [65], [67] and [72]:[79]

> … It is not possible by human means to know what the future holds. Therefore, it would be unfair to fault a party for being unable to establish an assumption about a future event as true on the balance of probabilities. Instead, the question in that context is whether that assumption is reasonable, and if it is,

78 Defendant's Closing Submissions at para 97.

79 Defendant's Closing Submissions at paras 92–95.

> an appropriate discount may be applied to take into account the risk that the event may not happen …
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> …
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> Instead, in assessing damages which depend on what will happen in the future or what would have happened in the future but for the defendant's negligence, 'the court must make an estimate as to what are the chance that a particular thing will or would have happened and reflect those chances, whether they are more or less than even, in the amount of damages which it awards' … Significantly, Lord Morris of Borth-y-Gest located this approach within the broader, central principle of giving the claimant fair compensation …
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> …
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> … In our judgment, in assessing damages for future loss – such as cost of nursing care – arising from the possible future onset of a medical condition as a result of the defendant's negligence, the court must first determine whether there is an *appreciable risk* that the claimant will suffer that loss. If there is such a risk of future loss, then the claimant ought to be compensated for it. The court's task will be to evaluate that risk. The court may take as its starting point an award corresponding to the full extent of that loss, and then adjust it to account for the remoteness of the possibility and the chance that factors unconnected with the defendant's negligence might contribute to bringing about the loss.
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> [emphasis in original]

87 The defendant interprets these observations to mean that, to discharge his burden of proof, the plaintiff need only show that he had an *appreciable chance* of earning this income, as opposed to showing on the balance of probabilities that he *would have* earned this income.[80] The defendant recognises that the Court of Appeal's observations in *Lua Bee Kiang* were made in the context of assessing damages for future medical expenses, but submits that these observations apply with equal force to claims for loss of future earnings.[81]

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80 Defendant's Closing Submissions at paras 95, 99.

81 Defendant's Closing Submissions at para 97.

88 I accept that this approach applies to loss of future income as well as to future medical expenses. The Court of Appeal in *Lua Bee Kiang* spoke of difficulties with ascertaining future losses *generally*, and not just about ascertaining future medical expenses. In the same vein, loss of future earnings and future medical expenses are both in the nature of *future loss.* To this extent, I can think of no principled distinctions between the two heads of loss. Further, the Court in *Kenneth Quek* also took the position that no such distinction can be drawn. In [45] of *Kenneth Quek*, the Court commented that the determination of a multiplier for *both* future medical expenses and loss of future earning is difficult because such a determination "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".

89 However, a critical distinction must be drawn between future events that are *within* a plaintiff's control, and those which are *not within* a plaintiff's control. For instance, the Court of Appeal in *Lua Bee Kiang* was speaking of the possible future onset of a medical condition, which is a future event not within a plaintiff's control.

90 Therefore, insofar as there is a lower standard of proof in claims for loss of future earnings, I find that that lower standard applies only to events which are *beyond* the plaintiff's control. I demonstrate this point by way of an example. Assume that the plaintiff claimed that he had received and was considering an irrevocable offer of employment in November 2014, before the accident, from a rival private bank. Assume further that the rival bank's offer carried a salary which was double the plaintiff's salary at BJB. If the plaintiff wished to use that higher salary as his multiplicand, he would have to prove on the usual balance of probabilities that he would have accepted the offer. This is because accepting an irrevocable offer would be entirely within his control. In contrast, whether

BJB would promote the plaintiff is not something within his control. No matter how well he performed, whether he would ultimately be promoted would depend on the assessment of his superiors.

91 As earlier mentioned, the three key variables in relation to the multiplicand are (a) the plaintiff's prospects of promotion(s); (b) his annual salary increments and (c) his annual bonuses. I thus use the three variables as a conceptual framework to organise my analysis.

The plaintiff's promotion

92 I begin with the plaintiff's prospects of promotion. There are two levels of promotions that the plaintiff could have enjoyed but for his accident: from ED to MDSA, and from MDSA to MD.

93 Having considered the evidence, I am satisfied that the plaintiff has discharged the burden of showing that he had an appreciable chance of being promoted to MDSA but for the accident. Luigi Vignola ("Mr Vignola") was the plaintiff's direct superior at BJB at the time of the accident. Mr Vignola's evidence was that, but for his accident, the plaintiff would have achieved rapid career progression within BJB and would today be one of its leading executives:[82]

> I am convinced that had it not been for his unfortunate accident in November 2014, Mr. Pollmann would today be a leading executive of our bank. I have no doubt that there was a *clear potential* for Mr. Pollmann to pursue a rapid career progression and move into roles with even more managerial responsibility, potentially becoming a Managing Director of Julius Baer or any other similar Bank or financial institution. [emphasis added]

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82 Luigi Vignola's AEIC at para 7.

94 As stated above, Mr Vignola testified that the plaintiff had the "clear potential" to attain MD rank. A promotion to MDSA must precede promotion to MD. It follows that Mr Vignola must have *at least* considered the plaintiff to have the same "clear potential" to attain MDSA rank. However, the reality is that a promotion from ED to MDSA is much more frequent, and therefore likely, than a promotion from MDSA to MD. Implicit in Mr Vignola's evidence is that it was even more likely for the plaintiff to be promoted from ED to MDSA than his "clear potential" for a promotion from MDSA to MD. Mr Vignola's evidence is important because he, as the plaintiff's direct supervisor, would have been the person chiefly responsible for championing and awarding the plaintiff's promotion from ED to MDSA. The defendant's expert himself recognised this.[83]

95 The defendant submits that Mr Vignola's affidavit evidence amount merely to "rhetorical statements", because it was not clear what "leading executive" means, and that the plaintiff at most had a *chance* of being promoted to MD rank, a chance which was not even properly quantified by Mr Vignola.[84] The defendant's interpretation of Mr Vignola's evidence is somewhat strained. Mr Vignola explained the concept of "leading executive" to mean a MD. Further, it would be unrealistic to expect Mr Vignola to assign a numerical probability to the plaintiff's prospects of a promotion. Even the parties' experts were unable to do that. What carries great weight with me is the overall tenor of Mr Vignola's assessment of the plaintiff. Having considered Mr Vignola's evidence, both in chief and under cross-examination, I am satisfied that Mr Vignola considered the plaintiff to have at the very least an *appreciable chance* of being promoted to MDSA.

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83 Plaintiff's Closing Submissions at para 155.

84 Defendant's Closing Submissions at paras 107–111.

96 The defendant also submits that Mr Vignola's assessment is not of much weight because Mr Vignola did not have much of a basis in the plaintiff's performance and track record at BJB on which to make an assessment.[85] I do not accept this. The plaintiff had been working under Mr Vignola's supervision for just under a year before his accident.[86] This, in my view, is a sufficient period for Mr Vignola to make a reasonable assessment of the plaintiff's capabilities and current estimated potential.

97 The defendant further submits that Mr Vignola's praise of the plaintiff is insufficient evidence that the plaintiff would have received those promotions, because the plaintiff's promotions are not within Mr Vignola's exclusive control. His promotions would have been subject to approval by an independent board of assessors within BJB.[87] That may be the case, but the standard of proof, as the defendants concede, is simply an *appreciable chance*. Mr Vignola's evidence is in my view more than sufficient for the plaintiff to satisfy this standard.

98 The defendant submits that Mr Vignola was replaced in 2017 by one Rajesh Manwani ("Mr Manwani"). Since no evidence from Mr Manwani was adduced, it could not be said that Mr Manwani shared Mr Vignola's high estimation of the plaintiff's capabilities and current estimated potential.[88] I do not find this argument convincing. Mr Manwani did not give evidence because he did not work with the plaintiff. He therefore had no basis on which to assess the plaintiff's capabilities or to give evidence as to the plaintiff's prospects of

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85 Defendant's Closing Submissions at paras 114–119.

86 Defendant's Closing Submissions at para 115.

87 Defendant's Closing Submissions at para 182.

88 Defendant's Closing Submissions at para 180.

promotion. Therefore, the fact that the plaintiff did not call Mr Manwani cannot be held against the plaintiff. Further, I am satisfied that Mr Vignola's assessment of the plaintiff's capabilities and current estimated potential is not a partial or idiosyncratic assessment but is an impartial and rational assessment.

99 Second, there was evidence at trial that the plaintiff's post-accident replacement in BJB, Sacha Walker ("Mr Walker"), is currently of MDSA rank.[89] The plaintiff relies on this as evidence that the plaintiff too would have been promoted to MDSA rank. The defendant argues that this evidence is of little to no weight, since there is no evidence that Mr Walker was promoted to MDSA rank after coming to work at BJB Singapore.[90] I do not find this argument persuasive. Even if Mr Walker was already of MDSA rank when he came to BJB Singapore to replace the plaintiff, the fact remains that BJB considers it appropriate that a person of MDSA rank do the plaintiff's former job.

100 Third, the plaintiff was selected for BJB's global Team Leadership Program, which is a prerequisite to a promotion to MDSA rank.[91] The defendant argues that the plaintiff's involvement in this program is a necessary but not a sufficient condition for promotion to MDSA rank.[92] That is no doubt true. But the plaintiff was one of only three persons in the departments which were then under Mr Vignola's purview selected to participate in the program. He was presumably selected from the six or seven team heads under Mr Vignola, of whom the plaintiff was one.[93] It appears to me therefore that the selection

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89 Plaintiff's Closing Submissions at para 161.

90 Defendant's Reply Submissions at paras 212–213.

91 Luigi Vignola's AEIC at para 6.

92 Defendant's Reply Submissions at para 207.

93 Plaintiff's Closing Submissions at para 163.

process is still *somewhat* competitive and that the plaintiff's selection is of some weight in demonstrating that he was some way along the path for promotion to MDSA.

101 Finally, the defendant argues that the uncertain state of the economy would have affected the plaintiff's prospects of promotion.[94] This argument is too general and too speculative to be taken into consideration. The plaintiff's promotional prospects must be assessed over 21 years into the future. There is no basis to assume that the economic uncertainty would have continued throughout this long period.

102 I therefore accept that the plaintiff has discharged the burden of proving that he would have been promoted to MDSA rank. Having said that, I do not accept that the plaintiff has discharged the burden of showing that he would have been promoted to MD rank. I say that for several reasons. First and foremost, as a matter of statistical inference, Mr Vignola gave evidence that in the two departments then under his purview, which had about a hundred staff, there were ten MDSAs but only *one* MD, *ie*, Mr Vignola himself.[95] The number of MDs for BJB as a whole is similar: out of some eight hundred staff, there are 80 MDSAs but only 25 to 30 MDs.[96] A promotion from MDSA to MD is considerably less likely than a promotion from ED to MDSA.

103 The plaintiff seeks to downplay this statistical inference by referring, once again, to Mr Vignola's favourable testimony. According to the plaintiff, it should be enough that Mr Vignola testified that the plaintiff had "clear

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94 Defendant's Closing Submissions at paras 168–174.

95 Defendant's Closing Submissions at para 163.

96 Defendant's Closing Submissions at para 162.

potential" to be promoted to MD (see [93] above). I do not accept the plaintiff's submission. There is a key difference between a promotion from ED to MDSA and a promotion from MDSA to MD. The latter promotion could only have come about if the plaintiff were to take over Mr Vignola's position.[97] In the former situation, the plaintiff's promotion would not have affected Mr Vignola in any way. This distinction, to my mind, reduces the weight of Mr Vignola's testimony in relation to the plaintiff's prospects of promotion to MD rank. Of course, this distinction applies only if the plaintiff remained in the same department in BJB as he was before the accident. But if the plaintiff was to change department, Mr Vignola's testimony would once again be of less weight as to the plaintiff's prospects in that new department.

104 Second, there is no objective evidence that the plaintiff was on track to be promoted to MD as there was for a promotion to MDSA. The plaintiff cannot be faulted for this. His possible promotion to MD was far in the future and subject to many contingencies at the time of the accident. But the burden of proof nevertheless rests on the plaintiff. And in the absence of any other evidence, I cannot find based on Mr Vignola's oral evidence of "clear potential" that there was an appreciable chance that the plaintiff would have been promoted to MD. For completeness, I do not give much weight to the plaintiff's track record of past achievements or his ongoing projects at the time of the accident. As the defendant has rightly pointed out, most if not all candidates vying for a MD position would have the same track record.

105 Having established that the plaintiff had an appreciable chance of being promoted to MDSA rank but not beyond, I now must establish what his income would likely be. The plaintiff argues that as the plaintiff would become more

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97 Defendant's Closing Submissions at para 165.

senior and would draw a higher salary, I should not select a single multiplicand.[98] However, as I have found that the plaintiff would have been promoted only to MDSA, there is in my view no contraindication to using a single multiplicand for the entire period of the plaintiff's loss. Insofar as the plaintiff's salary would continue to increase because of the ordinary annual salary increments, without a change in rank, these increases do not necessitate the use of different multiplicands, since these increases would not be as radical as a step-change increases occasioned by promotion to a new rank.

106 I note that Mr Evans and Mr Tan's initial positions on the plaintiff's base salary upon promotion to MDSA are similar. Mr Evans pegged the plaintiff's annual base salary as MDSA as between $420,000 and $540,000,[99] while the defendant's expert, Mr Edmund Tan ("Mr Tan") pegged it as between $450,000 and $460,000.[100] This is consistent with Mr Vignola's evidence of Mr Walker's annual income as an MDSA, which is between $425,000 and $475,000.[101] Further, Mr Tan estimates the plaintiff's promotion to come with a 10% increase compared to his base salary as an ED.[102] This is consistent with Mr Evan's estimation.[103] I am inclined to use the midpoint value of Mr Walker's annual income at **$450,000** as the appropriate approximation of the plaintiff's annual income upon promotion to MDSA.

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98 Plaintiff's Closing Submissions at paras 192–193.

99 Jonathan Mark Evans' AEIC at p 50, para 284.

100 Tan Peng Yew Edmund's AEIC at pp 33–34, Tables A3, A4, Raw Base Salary value for Year 5.

101 Certified Transcript (22 January 2020) at p 56, ln 21.

102 Tan Peng Yew Edmund's AEIC at p 29.

103 Jonathan Mark Evans' AEIC at p 50, para 284.

107 For the purposes of this calculation, it is also necessary to determine *when* the plaintiff would have been promoted to MDSA. Mr Evans estimates that the plaintiff would have been promoted as early as 2016.[104] Mr Tan estimates that this promotion would have happened only in 2022.[105] There is no clear method by which either expert has arrived at his estimate. In the circumstances, I am inclined to assume that the plaintiff would be promoted in 2020, being a point between those two dates but closer to the later date.

The plaintiff's base salary

108 However, the plaintiff's base salary *when first promoted to MDSA* is only a starting point, since his base salary was likely to increase over the duration of his loss with the routine annual salary increments. The defendant argues that the chance of the plaintiff receiving salary increments is "speculative".[106] I do not accept this argument. The plaintiff *did* receive annual increments between 2014 and 2015. There is nothing to suggest that this trend would not have continued into the future after the plaintiff was promoted to MDSA.

109 I begin with the plaintiff's approach. Mr Evans states in his report that the plaintiff's base salary as an MDSA from 2016 to 2021 would have been between $420,000 and $540,000.[107] He stated that this range took into account salary increments. However, he did not give a specific figure, or even a range of figures, for what the annual salary increments actually would have been.[108]

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104 Jonathan Mark Evans' AEIC at p 50, para 284.

105 Tan Peng Yew Edmund's AEIC at pp 13, 29.

106 Defendant's Closing Submissions at para 187.

107 Jonathan Mark Evans' AEIC at p 50, para 284.

108 Defendant's Closing Submissions at paras 204–213.

Nor did he give any evidence on the basis on which he arrived at this range of incomes, citing confidentiality as a reason.[109]

110 Mr Evans' hesitance to commit to a figure for annual salary increments may be understandable given the uncertainties involved. But uncertainty is not in itself a basis to justify a failure to give a figure or a range. Further, he also gave no evidence on the methodology or the basis on which he arrived at the range of base salaries in the preceding paragraph. In the circumstances, the weight which I can give to Mr Evans' estimate is limited.

111 I now turn to the defendant's approach. The defendant's expert, Mr Tan, adopted a different methodology from Mr Evans. He began by calculating the plaintiff's actual salary increment between 2014 and 2015, which he worked out to be 1.67%.[110] However, he noted that this increment may have been awarded on the basis only of the plaintiff's work in January 2014 up to the accident in November 2014. He thus uplifted the increment to arrive at an annual salary increment of 2% if the plaintiff's working year in 2014 had not been cut short by the accident.[111] He then gave a further top-up of 0.5% to arrive at an annual salary increment figure of 2.5%.[112]

112 I prefer Mr Tan's methodology for three reasons. First, his estimate of the annual increment was based on actual calculations of the plaintiff's salary change between 2014 and 2015. The plaintiff pointed out that this change in salary occurred *after* the accident took place, and therefore it cannot be readily assumed that this change is reflective of the increment that the plaintiff would

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109 Jonathan Mark Evans' AEIC at p 45.

110 Tan Peng Yew Edmund's AEIC at p 25.

111 Tan Peng Yew Edmund's AEIC at p 25.

112 Tan Peng Yew Edmund's AEIC at p 28 and 29.

have been awarded but for the accident.[113] This complaint, while intuitively appealing, was not supported by evidence. More importantly, Mr Tan himself recognised that the increment awarded in 2015 may have taken into account only the plaintiff's work up to the accident. He has thus included an appropriate uplift. He also gave a further uplift to arrive at an annual figure of 2.5%. This further uplift in my view satisfactorily addresses the plaintiff's complaint. Second, Mr Tan provided some corroborative evidence to show his estimate of the increment was consistent with the figures from the market.[114] Third, Mr Evans made his estimates on the assumption that the plaintiff would have been promoted to MD in 2022, *ie*, Mr Evans did not factor annual salary increments from 2023 onwards into his estimate of the plaintiff's base salary *as MDSA*. As a corollary, adopting Mr Tan's estimation would be less prejudicial to the plaintiff.

113 I am inclined to assume that the plaintiff's annual increments would be at **2.5%**, bearing in mind the plaintiff's complaint in the preceding paragraph. Since the plaintiff's base salary is now assumed to be increasing at a steady 2.5% per annum, the average base salary that the plaintiff would earn over the 21 years remaining of his career at the time of the accident (see [37] above) can be approximated as his base salary at the halfway point of that 21-year period. The plaintiff's average base salary can therefore be approximated to be $450,000 x (1.025)^(21/2) = $583,194.07. For ease of calculation, I round this figure to the nearest $10,000 to achieve a value of $580,000.

114 There is one further matter. This analysis presumes that the plaintiff would have remained in BJB's employment for the remainder of his career. Mr

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113 Plaintiff's Reply Submissions at para 132.

114 Tan Peng Yew Edmund's AEIC at p 25,

Evans in his expert report did provide an alternative scenario where the plaintiff joined another private bank in Singapore. That scenario would have entailed a further uplift of 17.5% to the plaintiff's base salary.[115] I am prepared to accept that there was an appreciable chance that the plaintiff would have joined another private bank, since he was only 38 years old at the time of the accident. Most employees of that age will have at least one change of employment in the course of their career. However, I do not accept that the jump would have entailed a 17.5% uplift to the plaintiff's base salary. Mr Evans adduced no objective evidence to support his estimation. I therefore assume that, even if the plaintiff had changed employer, it would not have made a material difference overall to his lifetime earnings.

The plaintiff's yearly bonuses

115 The plaintiff's annual remuneration also had a bonus component. I start with Mr Tan's evidence. Mr Tan's range is premised on his calculations of the plaintiff's bonus in 2015 and some corroborating evidence from the market. Mr Tan begins his analysis with the plaintiff's bonus in 2015, which was 14.7% of his base salary.[116] He thus estimated the future bonuses to be anywhere between 0% and 16% of the plaintiff's base salary.[117] He then compared this with industry information on the range of bonuses awarded to a private banker and found it to be consistent.

116 However, as the plaintiff points out, the bonus awarded to him for 2015 was much reduced because of his accident in 2014.[118] An annual bonus is

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115 Jonathan Mark Evans' AEIC at p 50.

116 Tan Peng Yew Edmund's AEIC at p 25.

117 Tan Peng Yew Edmund's AEIC at p 29.

118 Plaintiff's Closing Submissions at para 160(c).

generally a reward to an employee for his performance over the past year. Since the plaintiff was on leave for most of 2015, it is very likely that his bonus for 2015 was not indicative of the bonus he would have been awarded but for the accident. This is the same conceptual point that the plaintiff made about Mr Tan's estimate of the plaintiff's annual increments. However, the criticism in the context of bonuses is much weightier, because there was evidence to show that the plaintiff could have earned a much higher bonus than he actually received for 2015. First, Mr Vignola states in his affidavit of evidence in chief that the plaintiff could generally have expected bonuses of between 6 and 9 months of base salary in good years.[119] In percentage terms, this is an annual bonus of 50% to 75% of his base salary. In cross-examination, Mr Vignola recognised that the bonus actually awarded would of course vary with the circumstances, both individual and general. But I accept that the range of six to nine months is the general starting position in the plaintiff's industry generally and at BJB specifically. Second, Mr Vignola gave evidence in cross-examination that Mr Walker was awarded a bonus of roughly 12 months of base salary as an MDSA.[120] For these reasons, I do not attach great weight to Mr Tan's range of 0% to 16%.

117 I turn to Mr Evans' estimate. He estimated that the plaintiff's bonuses as an MDSA would range between 50% and 75%. Mr Evans' estimation is consistent with Mr Vignola's evidence that in a good year, the plaintiff could have been awarded six to nine months' bonus. Mr Evans' estimate is also supported by Mr Vignola's evidence on the bonus actually awarded to Mr Walker. But Mr Evans' evidence goes further in that he concludes that the plaintiff's expected bonuses would be between 50% and 75% of base salary

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119 Luigi Vignola's AEIC at para 8.

120 Certified Transcript (22 January 2020) at p 56, lns 21–28.

every year, as opposed to in the *good* years. Once again, Mr Evans fails to present the methodology behind this estimate or the evidence supporting it. I appreciate that bonuses to senior bankers are closely guarded confidential information with strategic value to industry players. But at the same time, I find it difficult to accept at face value what are essentially broad and bare assertions by Mr Evans. I prefer Mr Evans' evidence to Mr Tan's, but I give Mr Evans' evidence only slightly more weight than Mr Tan's.

118 Having considered the experts' evidence, I take as my starting point Mr Evans' range for the plaintiff's annual bonuses at 50% to 75%. However, that is not the end of the matter. For two reasons, the actual cash and guaranteed component of the plaintiff's bonus will be significantly lower than the 50% to 75% range.

119 First of all, Mr Vignola's evidence is that the 50% to 75% range is for a *good year*, not for every year. I have no basis on which to find that every year of the plaintiff's remaining career would have been a good year, whether for his employer generally or for him personally. I therefore cannot assume that the plaintiff would have been awarded bonuses of between 50% and 75% of his base salary for every remaining year of the plaintiff's career.

120 Second, the defendant points out that part of the plaintiff's bonus would take the form of shares and another part would be deferred. The value of these two components, the defendant submits, is too speculative to be included in this assessment exercise.[121] On this point, Mr Evans testified that a deferred bonus, once declared, will generally be paid. He also testified that it is only in extremely rare circumstances that a declared bonus awarded *to a senior*

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121 Defendant's Closing Submissions at paras 243–245.

executive is withdrawn, even if deferred.[122] On the shares, however, Mr Evans accepted that the value of these shares is only realised when the plaintiff sells them, and that the price of these shares will fluctuate depending on the bank's financial performance.[123]

121 I accept that a downward adjustment to the starting range of bonuses is necessary, taking into account the vagaries of corporate and personal performance and the speculative nature of the share component of the bonus. Taking into account all the evidence presented to me and all the circumstances of the case, I am of the view that an average yearly bonus figure of 35% of the plaintiff's annual salary is appropriate.

122 The defendant also argues that bonuses in the range of 50% to 75% of base salary are now unrealistic, given the prevailing economic uncertainties and the COVID-19 pandemic.[124] I agree that there is considerable economic uncertainty now, especially as the COVID-19 pandemic is not over even now, more than a year after it began. But as I have already pointed out, the period of the plaintiff's loss is over two decades. Given this time frame, it is unfair to the plaintiff to assume that the economy will be in a constant state of uncertainty throughout that entire period. I therefore reject this submission.

The calculations

123 Thus far, I have decided that the average base salary for the plaintiff over the rest of his career would be at $580,000 per annum. I have also decided that an average bonus of 35% would have been awarded upon this base salary. That

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122 Certified Transcript (30 March 2020) at p 56, ln 1–21.

123 Certified Transcript (30 March 2020) at p 53, ln 20 to p 54, ln 15.

124 Defendant's Closing Submissions at para 241.

yields a total average annual income of $783,000 per annum. The parties have agreed that a further pension contribution of $24,458 is to be added to that figure.[125] That yields a gross average annual income of $807,458.

124 Annual income tax must be deducted from this figure. The prevailing rate of income tax in Singapore is $44,550 tax on the first $320,000 of income and 22% on anything above $320,000. The plaintiff assumed a $30,000 tax deduction in his calculations,[126] said to be "usual". I do not adopt that deduction. I assume only a tax deduction of $15,000, which is what is shown in the plaintiff's notices of assessment for the years 2015 – 2017.[127] The tax on the plaintiff's gross annual income would be [0.22 x ($807,458 - $15,000 - $320,000) + 44,550] = $148,490.76.

125 I therefore arrive at a figure of **$658,967.24** as the plaintiff's annual average post-tax net income. That figure is therefore the multiplicand for the plaintiff's lost earnings pre-retirement.

The plaintiff's post-retirement earnings

126 The final issue in calculating the plaintiff's loss of future earnings is his post-retirement income. The plaintiff's case is that, but for the accident, he was likely to have continued working in a consulting or equivalent capacity from his retirement until age 70. As a result, the plaintiff argues that the damages awarded to him for loss of future earnings ought to include a component to compensate him for his lost post-retirement earnings.[128] As mentioned above at

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125 Plaintiff's Closing Submissions at para 177; Defendant's Reply Submissions at para 263.

126 Plaintiff's Closing Submissions at paras 174 and 177.

127 Plaintiff's AEIC at pp 99–101.

128 Plaintiff's Closing Submissions at para 177.

[38], I have decided to calculate the plaintiff's post-retirement earnings separately from his pre-retirement earnings, because his annual income post-retirement (if any) would be much lower than his annual income pre-retirement.

127 The plaintiff relies on Mr Evans' report, which states that it is very likely for a person of the plaintiff's qualifications and experience to continue participating in economic activity post-retirement. Mr Evans also estimates that the plaintiff was likely to have earned anywhere between $125,000 and $250,000 per annum gross post-retirement.[129]

128 In response, the defendant argues that the plaintiff has not adduced any evidence of his intention to continue working post-retirement.[130] The defendant further argues that, in any event, projecting the plaintiff's post-retirement earnings is exponentially more difficult than projecting his pre-retirement earnings. It would require so much guesswork and imagination that it is within the realm of mere speculation.[131]

129 In my view, it is not necessary for the plaintiff to have testified that he intended to continue working post-retirement for me to find that there is an appreciable chance that he would do so. First, the plaintiff was only 38 at the time of the accident and 44 at the time of the assessment. He is simply too young to have given any serious thought to working post-retirement. Second, it is not clear what kind of evidence would suffice to establish his intention to continue working post-retirement. Perhaps the defendant has in mind a statement in the plaintiff's affidavit that he intended to continue working post-retirement. A bare

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129 Jonathan Mark Evans' AEIC at p 55, para 312.

130 Defendant's Reply Submissions at para 260.

131 Defendant's Reply Submissions at paras 257 and 259.

statement to that effect is neither meaningful nor necessary. Any evidence he would give about his intentions in more than 20 years' time would be of little or no evidential weight.

130 The prospect of the plaintiff continuing to work post-retirement thus depends on the strength and cogency of Mr Evans' expert evidence. While I have expressed my criticism of Mr Evans' expert evidence on certain points, these criticisms generally arise in relations to Mr Evans' lack of methodology in the *quantification* of the figures which he presented to this court. However, this criticism carries less weight in relation to the assessment of what is essentially a *qualitative* assessment of the post-retirement aspirations of a person in the plaintiff's position. Methodological clarity is, in my view, less important for such a qualitative assessment. What is more important is the expert's credentials and experience in the field. On this part, there is little fault that can be found with Mr Evans' evidence.[132] Further, there is no denying the fact that but for the accident, the plaintiff would have amassed a wealth of experience by his retirement as (at the minimum) a MDSA, which is a relatively senior position. I therefore find that there is an appreciable chance that the plaintiff would have continued working post-retirement.

131 However, when it comes to the *quantification* of the plaintiff's post-retirement income, Mr Evans' evidence once again falls short. This quantification exercise naturally places a greater premium on methodological clarity, and there was none from Mr Evans. It is understandable that a precise quantification of the plaintiff's post-retirement income is impossible, but Mr Evans could have at least explained the methodology underlying his conclusions. In addition, Mr Evans did not state how long a person in the

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132 Jonathan Mark Evans' AEIC at pp 9–10, paras 1–12.

plaintiff's position would be likely to continue working post-retirement. The plaintiff was content to assert, without any evidence or justification, that he would work until 70 years old. I do not find this bare assertion to be sufficient.

132 In the circumstances, I consider it more appropriate to make a lump-sum award for the plaintiff's lost post-retirement earnings. I am once again constrained by the evidence, but this evidential uncertainty must be overcome to award just compensation to a tort victim. Viewing the evidence in the round, I am of the view that a lump-sum award of **$100,000** is appropriate. That lump sum is, of course, a present value and has therefore already been discounted for accelerated receipt.

The final value

133 The plaintiff's award for loss of future earnings, omitting cents for convenience, is thus $\$\mathbf{658{,}967.24} \times 14 + \$100{,}000 = \$9{,}325{,}541$

Recurring future medical and related expenses

The multiplier

The applicable principles

134 The applicable principles for determining the multiplier have been canvassed at [30] above. Those principles apply equally to assessing the award for the plaintiff's future medical expenses. Once again, I will rely on three approaches: the actuarial approach, the arithmetic approach and the precedent approach. In the case of future medical expenses, however, the Singapore Tables must be approached with particular caution. This is because, as I have mentioned, the Singapore Tables are based on life expectancy data between

1992 and 2012.[133] Life expectancy as at 2020 is likely to be different and higher. And the period of loss for some of the plaintiff's future medical expenses is the rest of his natural life, not simply the rest of his working life.

The number of periods of future losses

135 Determining the number of periods of the plaintiff's loss is relevant only to the arithmetical approach. The number of periods depends on the plaintiff's life expectancy at the date of the assessment. As at 2018, the life expectancy at birth for a Singaporean male is 81.0 years. The life expectancy at 65 years of age for a Singaporean male is 19.3 years, giving a total lifespan of 84.3 years.[134] The life expectancy for a 40 year old Swiss male is 42.7 years, giving a total lifespan of 82.7 years.[135] The plaintiff himself suggests a life expectancy figure of 81.[136] I adopt the figure of 81 years for the arithmetic approach. This figure is generally consistent with the Singapore data and also closest to the life expectancy of a Swiss male at 40 years of age, which is the profile most closely comparable to the plaintiff. The number of periods of the plaintiff's loss in respect of future medical expenses is thus 81 minus 44 years (the age of the plaintiff at the assessment date), *ie*, 37 years.

The discount rate

136 The plaintiff makes the same argument on the discount rate here as he does for loss of future earnings. He submits that the circumstances of this case warrant selecting a discount rate considerably below the conventional range, *ie*,

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133 PB2 at p 146.

134 Plaintiff's Closing Submissions at para 144.

135 Plaintiff's Closing Submissions at para 144.

136 Plaintiff's Reply Submissions at paras 13 and 77.

4% to 5%. He again submits that the starting point for the discount rate should be either 1% or 2.5% (see [24] above).

137 However, for this head of loss, the plaintiff goes even further. His case is that projected healthcare inflation ought to be deducted from this starting point. He submits that healthcare costs will increase at a rate of 2% per annum, yielding a final discount rate of either -1% or 0.5%.[137] To support this submission, the plaintiff relies once again on the Public Documents. In particular, the plaintiff relies on: (a) an article in the Singapore Business Review with the headline "Medical inflation to rise 9.3% in 2020";[138] and (b) data from the Yearbook of Statistics Singapore 2019 on the price indices of medical treatment between 2012 and 2018.[139]

138 I have explained at [68] above why I do not accept the plaintiff's starting point of a discount rate of 1% or 2.5% for loss of future earnings. The same reasoning applies to the plaintiff's future medical expenses. I did not find it necessary to analyse the proper treatment of inflation in assessing the plaintiff's loss of future earnings. Now that the plaintiff has advanced a specific case on inflation in assessing future medical expenses, I must now analyse explicitly this aspect of the plaintiff's case.

139 The plaintiff's argument on inflation has the same evidential difficulty as I have explained above at [44]. He relies on the Public Documents for economic data on the inflation rate. But the Public Documents were not

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137 Plaintiff's Closing Submissions at para 196.

138 PB2 at pp 6–7.

139 PB2 at p 11.

admitted in the evidential phase of the assessment. He thus invites me to take judicial notice of the Public Documents.

140 The plaintiff invites me to take judicial notice of four facts asserted in the Public Documents as part of his case on healthcare inflation:[140]

(a) The annual healthcare inflation rate of 10% for employers, as reported by the Singapore Business Review;

(b) The healthcare inflation rate of 1.6% per annum in 2019, as recorded in the Singapore Yearbook of Statistics 2019;

(c) The healthcare inflation rate of about 10% per annum in 2018, as reported by the Business Times; and

(d) The healthcare inflation rate of about 10% per annum in 2018, as reported by the Straits Times.

141 I have analysed the principles on taking judicial notice at [46]–[49] above. The facts mentioned in the preceding paragraph are not in Category 1. They are highly specific economic information. Thus, the key question is whether these facts are in Category 2, *ie*, whether they can be easily or accurately established by "unimpeachable" or "authoritative" sources.

142 My findings on whether I can take judicial notice of these facts is as follows:

(a) The healthcare inflation rate of 10% for employers (at [140(a)]) cannot be the subject of judicial notice. The source for this fact, as

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140 PB2 at Index, S/Ns 1–4.

indicated in the Singapore Business Review article, is a "survey of medical insurers by Willis Towers Watson".[141] I do not accept Willis Towers Watson as an authoritative source.

(b) The 2019 healthcare inflation rate of 1.6% per annum (at [140(b)]) can be the subject of judicial notice. The source for this fact is the Department of Statistics of the Ministry of Trade and Industry ("MTI"). I accept that MTI is an authoritative source on matters within its purview.

(c) The 2018 healthcare inflation rate of 10% per annum (at [140(c)] and [140(d)]) cannot be the subject of judicial notice. The source for this fact in both articles is a report from Mercer Marsh Benefits, an American human resource consultant. I do not accept Mercer Marsh Benefits as an authoritative source.

143 Nevertheless, even taking the plaintiff's case at its highest, and even assuming that I take judicial notice of all four of the facts at [140], there is still no basis to conclude that the plaintiff's future medical expenses will increase at a rate of 2% per annum. There are two fatal flaws in the plaintiff's case. First, the inflation data pertains to healthcare inflation *in general*. Data at such a high level of generality is of limited use. The plaintiff's loss is the cost of a limited basket of specific medical treatments. There is nothing to suggest that the general inflation data applies to these specific medical treatments. Second, the plaintiff's treatments are expected to continue decades into the future. There is nothing in the data itself to suggest that the high inflation rate cited by the plaintiff will continue decades into the future. Nor has the plaintiff adduced any expert economic evidence to that effect. I also note that the inflation data, even

141 PB2 at p 6.

on the plaintiff's own evidence, appears to be fluctuating widely, by close to an order of magnitude (*ie*, from 10% in 2018 to 1.6% in 2019).

144 In summary, the plaintiff has not adduced sufficient evidence, either factual or expert, to satisfy me that the plaintiff's future medical expenses will increase at an overall rate of 2% per annum for the duration of his loss. Nor has the plaintiff satisfied me that the starting point for selecting the discount rate should be outside the conventional range, either at 1% or 2.5%.

145 In the circumstances, there is no basis to depart from the conventional range. For the same reasons as I gave in respect of the plaintiff's loss of future earnings, I fix the discount rate for the plaintiff's future medical expenses also at **4.25%** (see [75] above).

146 I now calculate the multiplier using the arithmetic approach. Using the formula at [9] above, I arrive at a figure of 18.48, or 18 rounded off to the nearest integer.

Cross-checking the arithmetic approach

147 I now cross-check the multiplier of 18.5 with the actuarial approach and the precedent approach. Using Table 1 of the Singapore Tables,[142] a discount rate of 4.25% gives me a multiplier of between **18.42** and **19.83**.

148 Turning to the precedents, the parties have drawn my attention to the following cases:

142 PB2 at p 96.

Case	Sex	Remaining years	Multiplier
Ng Song Leng v Soh Kim Seng Engineering & Trading Pte Ltd [1997] SGHC 289	Male	35	17
Hafizul	Male	34	18
Siew Pick Chiang v Hyundai Engineering & Construction Co Ltd and another [2016] SGHC 266	Male	38	19

The multiplier of 18 which I have derived is consistent with both the actuarial approach and the precedents.

149 Accordingly, the multiplier which I shall use to calculate the plaintiff's future medical expenses is **18**.

The multiplicand

The applicable principles

150 The defendant accepts that the general principle that the purpose of an award of damages in tort is to restore a plaintiff to the position that he would

have been in if the defendant had not committed the tort.[143] However, the defendant submits that this principle is subject to a test of *reasonableness*. According to the defendant, the plaintiff must show not only that undergoing a particular course of medical treatment will restore him to the condition he would have been in if the defendant's tort had not caused his injuries, the plaintiff must also show that undergoing that treatment is *reasonable*.[144]

151 I accept that a plaintiff is entitled to recover damages from the defendant only for the cost of future medical expenses which the plaintiff will reasonably incur by reason of the defendant's tort (see Harvey McGregor QC, *McGregor on Damages* (Sweet & Maxwell, 19th Ed, 2014) ("*McGregor*") at para 38-181). But this is not a qualification of the general principle of *restitutio in integrum*. Instead, the requirement of reasonableness arises because medical expenses, properly analysed, are steps which the plaintiff takes to alleviate the loss and damage which a plaintiff suffers by reason of the tort. The requirement of reasonableness is simply an aspect of the plaintiff's so-called "duty" to mitigate his loss: a plaintiff will not be able to recover any loss which he has incurred by acting unreasonably after suffering the tort (*McGregor* at para 4-059).

152 That is not the end of the defendant's submission. He goes further than merely advancing a requirement of reasonableness. It is his case also that the plaintiff can recover damages for the cost of a particular medical treatment only to the extent that the plaintiff can satisfy me that the treatment is medically necessary and effective.[145] In other words, even though a medical treatment may restore the plaintiff to his pre-injury condition and is reasonable, the plaintiff

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143 Defendant's Closing Submissions at para 274.

144 Defendant's Closing Submissions at para 275.

145 Defendant's Closing Submissions at para 276.

cannot recover the cost of that treatment unless it is also medically necessary and effective.[146]

153 I do not accept this submission. Of course, it is true that a medical treatment must have some rational connection with alleviating the plaintiff's injuries. But the authorities cited by the defendant for this submission do not stipulate a test of both necessity and effectiveness. And such a test also contradicts the principle of *restitutio in integrum*. However, I accept that necessity and effectiveness (or the lack thereof) are relevant factors in considering whether a medical treatment is reasonable, which in turn impinges upon mitigation.

Botox

154 The defendant accepts that the plaintiff will have to undergo life-long botox treatment for synkinesis.[147] Synkinesis is a neurological condition in which the voluntary movement of one muscle causes another unrelated muscle to move at the same time. In the plaintiff's case, his right eye closes involuntarily when he smiles or bites.[148] The parties however disagree on the likely annual cost of this treatment.

155 The plaintiff relies on the evidence of his expert, Dr Wong Chin Ho ("Dr Wong"), that the plaintiff will require two botox treatments per year at $3,000 per treatment, costing a total of $6,000 per annum.[149] In response, the defendant makes two points. First, the cost of the plaintiff's botox treatment may decrease

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146 Certified Transcript (17 January 2020) at p 23, ln 27 to p 24, ln 3.

147 Defendant's Closing Submissions at para 297.

148 Defendant's Closing Submissions at para 291.

149 Plaintiff's Closing Submissions at para 23(b).

in the future. Second, that if the plaintiff undergoes a particular surgical procedure – a "functional muscle transfer" (see [196] below) – the frequency of his future botox treatment may also decline. For these two reasons, the defendant argues for a 25% downward adjustment of the sum awarded for the plaintiff's botox treatment costs to $4,500 per annum.[150]

156 The defendant's first argument is premised on his interpretation of Dr Wong's evidence in cross-examination. It is therefore necessary to look more closely at what Dr Wong actually said:[151]

> [Defendant's counsel]: So it's possible that in future if [the plaintiff]'s condition improves, he will require less than $3,000 treatment?
>
> [Dr Wong]: It has been 3 years since the injury. Now, most of the recovery from facial nerve injury occurs within the first 6 to 12 months. Beyond that if there is no surgical intervention like functional muscle transfer, it is unlikely that he will have further recovery of the muscle function. So in the context of---of this, it's unlikely that, you know, his---his facial expression will spontaneously improve. Over time, I---I see the dosage of botox he will need will likely to increase instead of decrease because of, you know, of this more abnormal movement developing.
>
> [Defendant's counsel]: Right. But it's possible, right, that it could be less than $3,000?
>
> [Dr Wong]: Yes, is possible that it will be less than 3,000, back down to the 1,500, depending on the dosage but it is unlikely that he would recover to the extent that he will not need this.
>
> [Defendant's counsel]: I understand, yes. We understand that the treatment is lifelong - that's what you recommended. But I'm just asking that it's possible that he'll need less than $3,000?
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> [Dr Wong]: Yes.

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150 Defendant's Reply Submissions at para 328.

151 Certified Transcript (17 January 2020) at p 24, ln 22 to p 26, ln 12.

> [Defendant's counsel]: Would it be---it could be within the 1,500 per treatment range that you indicated in your report. Am I right?
>
> [Dr Wong]: It may but unlikely because he's developing more and more of these abnormal movements now. That's why it's gradually been coming up. …
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> …
>
> [Plaintiff's counsel]: … You see, we lawyers, we've got this thing called a balance of probability, so that's why I'm using the words "more likely than not". Is [the cost of botox treatment] more likely than not to go down? More likely than not to remain the same? Or more likely than not to go up?
>
> [Dr Wong]: More likely to remain the same.

157 A closer reading of Dr Wong's cross-examination shows that what he is actually saying is that there is a possibility that the plaintiff's need for botox treatment will decrease in the future. The defendant also submits that, contrary to plaintiff's counsel's suggestion, the defendant need not show on the *balance of probabilities* that the annual cost of the plaintiff's botox treatment will decrease.[152] On this basis, therefore, the defendant relies on Dr Wong's evidence for adjusting the botox treatment costs down by 25%.

158 I agree with the defendant that the standard of proof in making a finding as to future loss, especially loss stretching decades into the future, cannot be approached in the same way as it is when making a finding as to a historical fact. Having said that, I am satisfied on the basis of Dr Wong's evidence that the annual cost of the plaintiff's botox treatment will not decline over the period of the plaintiff's loss. All that Dr Wong accepted is that there is a possibility that these costs will decrease. Dr Wong also testified that the plaintiff "is developing more and more of these abnormal [facial] movements now. That's why [the botox dosage has] gradually been coming up" and that "Over time, I see the

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152 Defendant's Reply Submissions at para 317.

dosage of botox he will need will be likely to increase".[153] Dr Wong's evidence is no basis on which to make any downward adjustment to this head of loss.

159 The defendant's other argument is that the plaintiff will have less need for botox treatment once he undergoes a "functional muscle transfer" procedure. The defendant relies on Dr Wong's evidence that "if there is no surgical intervention like functional muscle transfer, it is unlikely that he will have further recovery of the muscle function",[154] thus necessitating less botox treatment. The defendant extrapolates from Dr Wong's evidence, and submits that the converse is also true. In other words, if there *is* a functional muscle procedure, the plaintiff's muscle function *will* recover, and as such there is no need for further botox treatment.

160 In my view, this submission is a *non sequitur*. Dr Wong's evidence is that *not* undergoing a surgical intervention like a functional muscle transfer *will* necessitate more botox treatment. It does not follow that the opposite is true, *ie*, that *undergoing* such a surgical intervention will necessitate *less* botox treatment. In all fairness, this may be implicit in Dr Wong's evidence. But in the absence of an explicit statement from Dr Wong to this effect, I cannot accept the defendant's submission.

161 I therefore find that the multiplicand for botox treatment is **$6,000 per annum**.

Psychotherapy

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153 Certified Transcript (17 January 2020) at p 24, ln 29–31 and p 25, ln 11–ln 12.

154 Certified Transcript (17 January 2020) at p 24, ln 25–26.

162 The parties agree that the plaintiff will require one-hour psychotherapy sessions once a week for the rest of his life, *ie*, about 52 sessions per year.[155] These psychotherapy sessions are distinct from psychiatric consultations and neuropsychological consultations for which the plaintiff is also claiming damages. Once again, the dispute between the parties is the reasonable cost of each session. The plaintiff's expert, Dr Clare Henn-Haase ("Dr Henn-Haase"), testified that the hourly rate for the psychotherapy which the plaintiff needs is $350. The defendant's expert, Dr Marina Yap ("Dr Yap"), testified that the hourly rate is $190.

163 The plaintiff argues that I should adopt Dr Henn-Haase's rate for the multiplicand of this head of loss. According to the plaintiff, Dr Yap does not have specialist training in *neuropsychology*, which is the type of training necessary to render psychotherapy for the types of injuries that the plaintiff has suffered. It follows that Dr Yap's rates are not indicative of what the plaintiff will have to pay, as Dr Yap does not have the necessary specific experience and qualifications to treat the plaintiff.[156]

164 I reject the plaintiff's argument. The premise of the argument is that the plaintiff should receive psychotherapy from a *neuropsychologist* and not just a general *clinical psychologist*. But Dr Henn-Haase, who was treating the plaintiff before she left Singapore, is a clinical psychologist and not a neuropsychologist.[157] Further, the plaintiff himself said that the rate of $350 as

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155 Defendant's Reply Submissions at para 399.

156 Plaintiff's Closing Submissions at para 16.

157 Dr Clare Marie Henn-Haase's AEIC at para 1.

quoted by Dr Henn-Haase is the "standard hourly rate for a clinical psychologist".[158]

165 The fact of the matter is that Dr Henn-Haase and Dr Yap were giving quotations for the same medical treatment by the same type of psychologist *ie*, psychotherapy with a *clinical psychologist*, but at two different centres. In the absence of evidence that the quality of the treatment between these two centres differs materially, there is no reason the plaintiff cannot undergo treatment at the centre charging the lower rate.

166 I thus find that the multiplicand in respect of psychotherapy is $190 per sessions x 52 sessions per annum or **$9,880 per annum**.

Caregiver expenses

167 The parties agree that the plaintiff will require life-long care. The difference between the parties is about the type of caregiver which it is reasonable to expect the plaintiff to receive the care from, and the reasonable cost of care by that caregiver.

168 The parties present estimates of the cost of two different types of caregiver. The first type is a *private nurse*, *ie*, a qualified nurse who is a Singapore citizen or permanent resident and who is registered with the Singapore Nursing Board ("SNB").[159] A private nurse provides caregiving services on a live-out basis and therefore part-time. The second type of caregiver is a foreign domestic worker who comes to work in Singapore on a work permit and with qualifications as a nurse or a nursing aide in her home country but who

158 Plaintiff's Closing Submissions at para 18.

159 Exhibit D4B; Anastasia Koriukova's AEIC at p 37.

is not registered with the SNB.[160] This type of caregiver provides caregiving services on a live-in, and therefore full-time, basis.

169 The plaintiff's case is that only a private nurse can meet his four requirements for a long-term caregiver. First, the caregiver must be professionally trained and qualified in caregiving[161] with a specialist understanding of brain injuries such as those which the plaintiff has suffered.[162] Second, the caregiver must be a native English speaker, so that she can deal with the communication difficulties caused by the plaintiff's cognitive impairments.[163] Third, the caregiver must have the socio-cultural sensitivity necessary to care for the plaintiff. Finally, the caregiver must work part-time (*ie*, 12 hours a day),[164] as opposed to living with him and his family.[165] The plaintiff's case is that a live-in caregiver who is also a foreign-qualified nurse cannot meet all four of these criteria .[166]

170 On the basis that a private nurse is the appropriate caregiver, the plaintiff submits that the cost of his long-term care will be $318 per hour for a twelve-hour day. This is consistent with the defendant's evidence as to the cost of a private nurse, coincidentally from the same nursing agency. The annual cost of a private nurse is therefore $318 x 12 hours x 365 days or $116,070.

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160 Exhibit D4A.

161 Plaintiff's Closing Submissions at para 48.

162 Plaintiff's Closing Submissions at para 33.

163 Plaintiff's Closing Submissions at paras 41 and 42.

164 Plaintiff's Closing Submissions at p 126.

165 Plaintiff's Closing Submissions at para 48.

166 Plaintiff's Closing Submissions at paras 39 and 40.

171 The defendant submits that the plaintiff's claim for a private nurse is unreasonable, because a private nurse is not necessary.[167] According to the defendant, a live-in caregiver with nursing qualifications from her home country and one to two years' nursing experience can meet the plaintiff's caregiving needs just as well as a private nurse, but at a fraction of the cost.[168] Further, the defendant argues that the plaintiff's caregiver should provide care full-time rather than part-time, which once again means a live-in caregiver is more appropriate. On this basis, the plaintiff's care will cost $850 per month, or $10,200 per annum.[169]

172 A private nurse who meets all of the plaintiff's four criteria may well be the ideal mode of care for the plaintiff, as opposed to a live-in caregiver. But the test for recoverability is whether a particular head of claim is reasonable, not whether it is ideal. The question therefore is whether long-term care from a private nurse is *reasonable* in all the circumstances. I also accept the defendant's submission that the plaintiff's long-term caregiving needs can reasonably be met by a live-in caregiver.

173 I begin with the plaintiff's requirement that his caregiver has a diploma in caregiving, be a registered nurse and has specialist knowledge of brain injuries. I consider this requirement can reasonably be met by a live-in caregiver. There is no evidence that a private nurse is more likely to have these skills than a live-in caregiver. In fact, a live-in caregiver can be as skilled in a functional sense as a private nurse. It is quite possible to engage a live-in

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167 Defendant's Closing Submissions at paras 360–362.

168 Defendant's Reply Submissions at para 471.

169 Exhibit D4B.

caregiver who has a Bachelor of Science (Nursing) degree and more than a decade of experience as a nurse, albeit outside Singapore.[170]

174 I now turn to the plaintiff's requirement that his caregiver be a native English speaker. Again, I consider this requirement can reasonably be met by a live-in caregiver. It is true that the experts gave evidence that live-in caregivers, being from overseas, generally have only a basic facility with English. But this evidence was of a general nature. It does not follow that *all* private nurses are more proficient in English than *all* live-in caregivers just because the former is a Singapore citizen or permanent resident and the latter is not. Further, the experts did not focus specifically on live-in caregivers provided by the agency identified by the defendant, Active Global Specialised Caregivers Pte Ltd. That agency says that the live-in caregivers it recruits "speak good English".[171] In addition, it is always possible to ask the agency to recruit a live-in caregiver who has greater facility with English than the usual live-in caregiver.

175 The plaintiff's next requirement is that the caregiver possess socio-cultural sensitivity. Again, I consider this requirement can reasonably be met by a live-in caregiver. Once again, it is too much of a generalisation to assume that *all* private nurses will be more socio-culturally sensitive than *all* live-in caregivers just because the former are Singapore citizens or permanent residents. In any event, socio-cultural sensitivity is a matter of experience. And there is nothing to suggest that a live-in caregiver will not acquire the requisite sensitivity in the course of assisting the plaintiff.

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170 Exhibit D4A.

171 Exhibit D4A.

176 The plaintiff's final requirement is that the caregiver work only 12 hours a day. I consider that a full-time, live-in caregiver will offer more complete care for the plaintiff than a part-time private nurse. First, the experts have given evidence that a caregiver will have to assist the plaintiff with his activities of daily living. A full-time, live-in caregiver will offer the plaintiff substantially more assistance with his activities of daily living than a part-time private nurse. Secondly, part-time private nurses work on rotation. This means that the plaintiff will get a different private nurse to care for him on different days. The experts agree that this may not be ideal because no single private nurse would be able to build up familiarity with the plaintiff and his specific needs.[172] The plaintiff's main concern about a live-in caregiver is that his residence has no physical space to accommodate her, and that engaging a live-in caregiver would create a noisy and crowded environment which would aggravate his condition.[173] However, I take the view that the plaintiff's concern is exaggerated, and that the advantages of having a full-time caregiver would outweigh the disadvantages. I also bear in mind that a private nurse is more expensive than a live-in caregiver by a factor of ten.

177 For all of these reasons, I am satisfied that a live-in caregiver is the appropriate and reasonable mode of giving care to the plaintiff. The rates for a live-in caregiver vary according to the caregiver's qualifications and experience. Given the serious nature of the plaintiff's injuries and his resulting needs, I take the view that a live-in caregiver of the highest level of qualifications and experience would be the most appropriate. On the evidence presented to me, such a live-in caregiver would be one with a Bachelor of Science (Nursing) degree from her home country and more than a decade of

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172 Certified Transcript (24 January 2020) at p 34, ln 27 to p 35, ln 10.

173 Plaintiff's Reply Submissions at para 194.

experience. The salary for such a live-in caregiver is **$1,000** per month or **$12,000** per year.[174]

Transport expenses

178 For the avoidance of doubt, this head of claim is for the plaintiff's cost of transport for *recurring* medical treatment only, *ie*, treatment which the plaintiff will have to undergo for the rest of his life. The parties disagree both on the number of trips that the plaintiff will reasonably need per annum for his recurring treatment as well as on the reasonable cost of each trip.

179 I start with the reasonable number of trips per annum. This number depends on the types of treatment that can be considered recurring. The parties agree on the number of trips which will be reasonable for recurring: (a) audiology consultations (five); (b) psychiatric consultations (13); (c) botox treatments (two); (d) psychotherapy (52); (e) neurology reviews for epilepsy (six). That makes a total of 78 agreed trips per annum.[175]

180 The treatments for which the reasonable number of trips per annum is disputed are as follows:

(a) Neuropsychological consultations and reviews: I agree with the defendant that the number of recurring neuropsychological consultations and reviews is only *one* per year, *ie*, for the annual review. The weekly consultations will last only two years. This cannot be counted as a treatment which will recur every year for the rest of the plaintiff's natural life.

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174 Exhibit D4B.

175 Plaintiff's Closing Submissions at para 52; Defendant's Closing Submissions at para 496; Defendant's Reply Submissions at para 541.

(b) Hospital treatments for seizures: the defendant submits that the plaintiff's number for these trips should be discounted by 50% because the plaintiff may not suffer indefinitely from seizures. I do not accept this submission. There is no evidence that the plaintiff's seizures will, or even may, cease. The reasonable number of trips for treatment for the plaintiff's seizures is therefore awarded as claimed by the plaintiff: four per year.

181 The number of trips per annum which the plaintiff will have to make for recurring medical treatment is thus the agreed 78 trips plus a further five trips for recurring treatment for neuropsychological consultation and reviews and his seizures. That gives a total of 83 trips per annum.

182 I turn to the reasonable cost per trip. The plaintiff's evidence is that the taxi fare from his home to the various clinics is between $10 and $15 one way.[176] The plaintiff claims the cost of his future trips at the upper end of this range at $30 per return trip. The defendant submits that the cost should be at the lower end of the range at $20 because private-hire transport fares (such as Grab) from the plaintiff's home to the clinics is below $10 per one-way trip.[177]

183 I accept the defendant's figure. First, there is no reason why the plaintiff ought not to take private hire vehicles, which are the more cost-effective option. The plaintiff asserts that he takes only taxis as private hire vehicles are, in his view, unsafe.[178] The plaintiff is of course entitled to his view. But I do not consider that view to be reasonable today. Private hire vehicles and their drivers

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176 Plaintiff's Closing Submissions at para 56.

177 Defendant's Closing Submissions at para 497.

178 Plaintiff's Closing Submissions at para 55.

are now regulated, and I consider them to be reasonably safe. Second, while the defendant offers evidence in support of his position on private-hire fares,[179] no such evidence was offered by the plaintiff in relation to the taxi fares.

184 For completeness, the plaintiff also asserts that his estimate of $30 is a conservative one because it does not account for the peak surcharge.[180] It suffices to note that the evidence shows that he rarely incurs peak hour surcharges as his medical appointments are not usually scheduled during peak hours.

185 Accordingly, the transport expenses work out to $20 per trip x 83 trips per annum = **$1,660** per annum.

The total

186 The multiplicand for the plaintiff's claim for future medical expenses (leaving aside for the time being psychiatric treatment) is therefore as follows:

S/N	Claim	Quantum per annum
Agreed items		
1	Neuropsychological review assessments	3,000.00
2	Anti-seizure medications	12,840.00

179 See the screenshots tendered by the defendant over the course of trial in relation to the Grab fares.

180 Plaintiff's Closing Submissions at para 56.

3	Neurology outpatient clinic reviews	856.00
4	Tinnitus treatment device	1,264.74
5	Hearing aids	2,782.00
6	Audiologic assessments	401.25
Disputed items		
7	Botox	6,000
8	Psychotherapy	9,880
9	Caregiver expenses	12,000
10	Transport expenses	1,660
	Total	50,684

187 The plaintiff's award for future medical expenses (excluding psychiatric treatment) is therefore $50,684 x 18 = $912,312.

Psychiatric expenses

188 I have calculated the cost of the plaintiff's future psychiatric care separately because the parties have agreed the cost for psychiatric care between 2020 and 2025. The only dispute on this head of loss, therefore, is the multiplier for the period from 2025 onwards.

189 For the period from 2025 onwards, the number of periods of future loss are only 37 – 5 = 32. Strictly speaking, a multiplier would be the starting point for calculating the present value of a lump sum which will be drawn on immediately and the value of which will fall to zero five years before the plaintiff reaches 81 years of age. But in this case, I am attempting to calculate the present value of a lump sum which will not be drawn on until 2025 and the value of which will fall to zero when the plaintiff reaches 81 years of age. Accordingly, the income earned on this lump sum at the discount rate will compound without any deduction for the first five years. In other words, this lump sum will not be drawn down to pay for psychiatric care until 2025. So, from 2020 to 2025, the entire income which the plaintiff earns on this lump sum will augment the capital and itself yield a return. Be that as it may, I do not consider the differences to be material.

190 On the arithmetic method, applying the selected discount rate of 4.25%, the formula yields a multiplier of 17.31. I round that to 17 as the nearest integer. This is roughly consistent with the multiplier obtained from the Singapore Tables (for a starting age of 44 + 5 = 49) at between 17.35 and 18.58.[181] Adopting the multiplier of 17, the claim for the plaintiff's recurring psychiatric treatment is $10,700 x 17 = $181,900.

The final value

191 The total of the plaintiff's claim for future recurring medical expenses, including psychiatric expenses, thus totals $912,312 $+\$181,900 = \$1,094,212.$

One-off future medical expenses

[181] PB2 at p 96.

The applicable principles

192 The principles applicable to awarding damages for medical expenses have been set out at [150]–[152] above. Much like recurring medical expenses, one-off medical expenses are recoverable insofar that they are reasonable. Whether the treatment is necessary and effective are relevant factors when determining whether the medical treatment is reasonable.

Plastic surgery procedures

Upper eyelid surgery

193 The defendant accepts that surgery on the plaintiff's upper eyelid is necessary.[182] The dispute is about the cost of the surgery. The plaintiff's expert, Dr Wong, estimates the cost as being between $18,000 and $20,000.[183]

194 The plaintiff submits that he should be awarded damages at the higher end of the range because of healthcare inflation. I have explained why I am not convinced by this argument at [143] above. The defendant submits that damages should be awarded at the lower end of the range but does not explain why.

195 In the circumstances, I am inclined to choose the midpoint of the range quoted by Dr Wong, *ie*, $19,000.

Facial reconstruction procedures

196 The plaintiff's face was seriously injured in the accident. He will therefore require three surgical procedures to his face: a tissue transfer, fat

182 Defendant's Closing Submissions at para 300.

183 Plaintiff's Closing Submissions at para 60.

grafting and a face tightening.[184] The defendant accepts that all of these procedures are reconstructive as opposed to aesthetic, *ie*, that their purpose is to restore the plaintiff to his pre-accident position rather than to improve upon his pre-accident position.[185] Even then, the defendant argues that the cost of these procedures is not recoverable, as these facial reconstruction procedures are not necessary in the sense that they serve no functional purpose.

197 On the point of necessity, the defendant points to Dr Wong's evidence that the facial reconstruction procedures seek to restore the plaintiff's ability to communicate and interact with others. However, the defendant argues that the plaintiff's ability to communicate and interact with others has been irreversibly impaired because of the cognitive damage he suffered as a result of the accident. The facial reconstruction procedures would have no effect on the cognitive damage.[186] As a result, these procedures cannot improve his ability to communicate and interact with others.

198 Further, the defendant rejects the plaintiff's case that these procedures will alleviate the plaintiff's psychological issues arising from the injuries to his face.[187] According to the defendant, any psychological issues arising from the plaintiff's facial injuries are ultimately linked to his ability to communicate and interact with others. It follows that even if these procedures restore the plaintiff (as far as possible) to his pre-accident position, his communication deficits and psychological issues will remain.

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184 Plaintiff's Closing Submissions at para 58.

185 Defendant's Reply Submissions at paras 340–341.

186 Defendant's Reply Submissions at para 347.

187 Defendant's Reply Submissions at para 349.

199 The defendant directs the argument on effectiveness to the tissue transfer. He rejects the plaintiff's position that the tissue transfer is "related to" the plaintiff's synkinesis (in respect of which botox treatment is accepted as necessary – see [154] above).[188] The defendant argues that the tissue transfer, much like the face tightening, targets the plaintiff's facial symmetry, which is a completely different condition from the synkinesis. In this regard, the defendant relies on Dr Wong's evidence that even with the tissue transfer, the plaintiff's face would still be significantly asymmetric. According to the defendant, this means that the tissue transfer is not effective and therefore irrecoverable.

200 I begin with the defendant's argument on necessity. The central premise of this argument is that restoring the plaintiff's facial appearance to its pre-accident state will not enhance his ability to communicate and interact with others. I do not accept this premise. It is true that the parties' experts gave evidence that the plaintiff's *speech* issues are permanent because of his cognitive deficits and brain injuries.[189] But I accept, as the plaintiff points out, that *speech* is only one aspect of communication, *ie,* communication can be verbal *and* non-verbal.[190] In fact, Dr Wong gave evidence in cross-examination that:[191]

> And Your Honour, you mentioned what is the function of the face. … But humans have a higher function that is communication. That means when you look at me, you can tell whether I am afraid, whether I'm comfortable, whether I'm---I'm concerned about something. *All these communicate through very subtle muscle of facial expressions - the eyes and the mouth and especially around the eyes.* So, with deformities in the face, it affects your ability to communicate. If anything, it distracts people.

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188 Defendant's Reply Submissions at para 359.

189 Certified Transcript (16 January 2020) at p 7, ln 12 to p 8, ln 20.

190 Plaintiff's Reply Submissions at para 169.

191 Certified Transcript (17 January 2020) at p 18, lns 15–21.

It is evident from Dr Wong's testimony that restoring the plaintiff's facial appearance may have a tangible effect on his ability to communicate *non-verbally*. To that extent, I am satisfied that the facial reconstruction procedures are reasonable and therefore recoverable.

201 A subsidiary premise of the defendant's argument on necessity is that the plaintiff's psychological issues are solely, or substantially, attributable to his inability to communicate. Given that I have accepted that facial reconstruction procedures may improve the plaintiff's ability to communicate non-verbally, this premise no longer assists the defendant even if true. However, I am not even satisfied that this premise is true. I am satisfied that the plaintiff's psychological issues are substantially caused by more than just the plaintiff's inability to communicate. Dr Henn-Haase[192] and another expert, Dr Calvin Fones ("Dr Fones")[193] gave evidence that the plaintiff is understandably embarrassed and self-conscious about his looks. Given this evidence, I accept that the plaintiff's psychological issues are caused both by his inability to communicate and by his embarrassment and self-consciousness.

202 I turn now to the defendant's argument on effectiveness. I reject this argument also. It is true that the plaintiff will continue to suffer from facial asymmetry even after the tissue transfer and the face tightening. But that does not mean that these procedures are so ineffective as to be unreasonable and therefore irrecoverable. The defendant's submission assesses effectiveness on an *absolute* basis. On the defendant's submission, a treatment is effective only if it alleviates *completely* the consequences of a particular injury. This position is in my view incompatible with the nature of post-accident medical treatment,

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192 Dr Clare Marie Henn-Haase's AEIC at pp 35–36.

193 Dr Fones Calvin Soon Leng' AEIC at p 26, para 43.

which is to *mitigate* the damage caused by the accident. Inherent in the idea of mitigation is a recognition that a complete return to the pre-injury condition may not always be possible. In my view, effectiveness is better assessed on a *relative* basis. A treatment is effective, and its cost is therefore recoverable, if it is likely to produce a reasonable improvement in the plaintiff's condition as compared to his current condition, even if his improved condition is not identical to his pre-accident condition. I find that the tissue transfer and the face tightening will effect a reasonable improvement in the plaintiff's facial asymmetry, even if they may not eliminate the asymmetry.

203 For these reasons, I find that the cost of the surgical procedures to the plaintiff's face are recoverable. I will take the cost of the treatments as the midpoint of the range quoted by Dr Wong, which amounts to:[194]

(a) Tissue transfer: $125,000.

(b) Fat grafting: $87,500 (being $17,500 per treatment x 5 treatments).

(c) Face tightening: $50,000.

The total of these sums is $262,500.

Scar revision

204 The defendant submits that scar revision is neither necessary nor effective.[195] It is not necessary because the plaintiff does not complain that the scars cause him any discomfort. It is not effective because the plaintiff's scars

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194 AB1 at p 383; Affidavit of Dr Wong Chin Ho (23 October 2019) at p 22;

195 Defendant's Closing Submissions at para 318.

will remain quite visible even after the procedure as a result of the plaintiff's hair loss.

205 On the issue of necessity, there is in fact evidence that the plaintiff has complained of discomfort. I refer to Dr Wong's evidence in cross-examination:[196]

> [Defendant's counsel]: Would you then agree with me that the scars are actually---presence of the scars only affect [the plaintiff]s aesthetics?
>
> [Dr Wong]: I think that is---it's---it's also a functional problem because the---the scars, they are---they are hard, firm and tender. So, you know, *he* feels uncomfortable and---and tight around---around all those scars.
>
> [emphasis added]

206 As for effectiveness, I disagree with the defendant's position for the reasons set out at [202] above. The scar revision is reasonable because it is likely to *effect a reasonable improvement* in (and not necessarily *eliminate*) the plaintiff's scalp scars.

207 I therefore allow the costs of the scar revision at $11,000, which is the midpoint of Dr Wong's quoted range.[197]

Shoulder procedures

208 There are two components to the plaintiff's claim for medical treatment for his shoulder injuries: the cost of the shoulder operation itself and the costs of the physiotherapy sessions after the shoulder operation.

Shoulder operation

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196 Certified Transcript (17 January 2020) at p 16, lns 7–11.

197 Dr Wong Chin Ho's AEIC at p 22.

209 The plaintiff's expert, Dr Ang Kian Chuan ("Dr Ang") estimates the cost of the shoulder operation as between $26,857 and $34,347.[198] The plaintiff claims an award at the top end of Dr Ang's estimate, given healthcare inflation.

210 I disagree. I have explained at [143] above why the plaintiff's evidence is not a sufficient factual basis to conclude that inflation rates for medical treatment will continue to be high. In any event, Dr Ang's quotation is relatively recent, dated November 2019.

211 The defendant submits that the award should be at the bottom end of Dr Ang's estimate, but does not explain why.[199] I thus choose the midpoint of Dr Ang's estimate as the award, *ie,* $30,602.

Physiotherapy sessions

212 Dr Ang recommends that the plaintiff undergo physiotherapy three times a week for five years at $80 to $150 per session.[200] However, the plaintiff points out that he has been paying $195 for one-hour physiotherapy sessions at PhysioActive Pte Ltd ("PhysioActive").[201] The plaintiff argues that PhysioActive's actual rates should be used instead of Dr Ang's general evidence as to physiotherapy rates for two reasons.[202] First, the plaintiff has been going to PhysioActive for a long period of time and thus is familiar with his physiotherapist there. Second, his physiotherapist at PhysioActive has specific

198 Plaintiff's Closing Submissions at para 73.

199 Defendant's Closing Submissions at para 333.

200 Plaintiff's Closing Submissions at para 75; Dr Ang Kian Chuan's AEIC at p 17.

201 Plaintiff's Closing Submissions at para 75.

202 Plaintiff's Closing Submissions at para 75.

training in brain injuries and is thus better equipped to deal with any complications that arise from the plaintiff's residual injuries.

213 I do not accept the plaintiff's argument. Even assuming that the plaintiff is more familiar with a particular physiotherapist at PhysioActive, and even assuming that that therapist has training in brain injuries and is better equipped to deal with the plaintiff (the latter premise is one which the defendant denies),[203] these two premises show only that continuing the plaintiff's physiotherapy at PhysioActive is *ideal*. However, the threshold for recovery is one of *reasonableness*. In this regard, given that Dr Ang is the *plaintiff's* own expert, and recommends physiotherapy at the lower rate, Dr Ang must consider it *reasonable* for the plaintiff to undergo physiotherapy at those rates. If the plaintiff disagreed with Dr Ang's rates, the onus was on him to clarify with Dr Ang whether a rate higher than this was in fact reasonable in the circumstances of the plaintiff's case. Having failed to do so, it does not lie in the plaintiff's mouth to now argue that Dr Ang's rates are too low.[204]

214 No evidence was given by either party in support of the lower end or higher end of Dr Ang's range. I therefore take the midpoint of Dr Ang's range and find that $115 per session is the reasonable cost of physiotherapy. At three sessions per week for 52 weeks a year for five years, the cost of physiotherapy amounts to $89,700 (being $115 x 3 x 52 x 5).

Speech and communication treatments

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203 Defendant's Reply Submissions at paras 395–397.

204 Defendant's Reply Submissions at para 394.

215 The plaintiff's claim for speech and communication treatment comprises two different items:[205]

(a) speech therapy for himself, aimed at improving his ability to communicate generally; and

(b) communication training for himself and his wife (or other communication partner), aimed at improving his ability to communicate with his wife (or other communication partner) specifically.

Speech therapy

216 I begin with the first type of treatment. The defendant's case is that speech therapy for the plaintiff will not be effective and is therefore not recoverable.[206] The defendant relies on the evidence of his speech therapist expert witness, Dr Phua Sin Yong ("Dr Phua") and the plaintiff's speech therapist expert witness, Ms Sajlia Jalil ("Ms Sajlia"). The experts gave evidence that the plaintiff's communication issues stem from his brain injuries and are thus likely to be permanent. They also agree that any recovery of the plaintiff's communicative faculties would have occurred within the first two years after the accident, known as the "golden period". Past the golden period, any improvement to the plaintiff's communication issues at the "impairment level" through speech therapy will be minimal.

217 It is now necessary to explain the concept of "impairment level". "Impairment level" is contrasted with "activity participation level".[207] To

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205 Plaintiff's Closing Submissions at para 87.

206 Defendant's Closing Submissions at paras 254 and 259–263.

207 Plaintiff's Closing Submissions at para 80.

borrow an analogy from plaintiff's counsel,[208] imagine a painter losing both his hands who learns to paint using his feet. In this analogy, the painter's impairment level is the loss of his hands. That impairment is absolute and irreversible. However, his participation level for the activity of painting is unchanged, because he has learned to paint with his feet instead of with his hands.

218 Applied to the plaintiff, his impairment level refers to the cognitive injuries which are the root cause of his communication difficulties. His activity participation level refers to the plaintiff's *practical ability* to communicate with others. The defendant's argument thus proceeds on the assumption that the activity participation level is related to the impairment level, *ie*, that if the plaintiff's impairment level remains severe even after speech therapy, his activity participation level will consequently and necessarily remain low.

219 The plaintiff disagrees with the defendant's position. He asserts that he *did* undergo some speech training during the golden period.[209] He also argues that speech therapy after the golden period will still be effective at providing the plaintiff with a *workaround*[210] to his communication issues*, ie*, that speech therapy can improve his activity participation level despite his severe and irreversible cognitive impairment. He points to evidence showing that Dr Phua and his neuropsychologist, Dr Simon Collinson ("Dr Collinson"), are both of the view that long-term future speech therapy will be beneficial to the plaintiff.[211] He further argues that even if speech therapy is ineffective at treating

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208 Certified Transcript (16 January 2020) at p 25, lns 5–7.

209 Plaintiff's Reply Submissions at para 145.

210 Plaintiff's Closing Submissions at para 82.

211 Plaintiff's Closing Submissions at paras 83 and 84.

his communication issues, it will nevertheless be effective at alleviating his social anxiety, which is occasioned by his communication difficulties.

220 I accept the defendant's position. The plaintiff's first argument that he did undergo speech training during the golden period is irrelevant, because the effectiveness of the future speech therapy is not predicated on whether he did undergo speech therapy during the golden period.

221 The plaintiff's second argument that future speech therapy will provide a workaround to his communication issues is also unconvincing. He relied on Dr Phua's following testimony in cross-examination:[212]

> [Plaintiff's counsel]: … would I be correct then that one of the objectives of training and therapy is to provide the patient with a workaround of the impairment or deficit in terms of fulfilling the activities that the patient ought or wants to do?
>
> [Dr Phua]: One of the goals of therapy is to help to reduce the functional difficulties, yes.
>
> …
>
> [Dr Phua]: The concept of communication is two-ways. So, in the case of [the plaintiff], if he's unable to get his point across, it is generally sometimes it may be difficult for the caregiver, no matter how trained, to understand. It is also possible that the caregiver when the caregiver responds to or communicates with the patient, he may not understand.
>
> …
>
> [Plaintiff's counsel]: And if you look at somebody with neurocognitive injury like [the plaintiff] and if we assume that there are certain side effects in his behaviour, do you agree that the ability to communicate effectively with his caregiver would improve if it can be done, would improve his quality of life?
>
> [Dr Phua]: I would agree with that.

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212 Certified Transcript (16 January 2020) at p 25, ln 30 to p 28, ln 16.

222 The plaintiff's argument here seem to be as follows: it is necessary for treatment to be focused on *him* and not just the people with whom he communicates, since the people around him, no matter how trained, will not be able to understand him if he himself cannot get his point across. Speech therapy is one such plaintiff-centric treatment. Speech therapy is also effective, because the goal of speech therapy, in Dr Phua's own words, is to "reduce the functional difficulties [with impaired speech]".[213] In other words, speech therapy will give the plaintiff a workaround and allow him to restore his participation level in relation to the activity of communication even though his impairment level in relation remains severe and irreversible. The plaintiff never quite elaborated on how this workaround would work, but I assume him to mean that he can be taught to communicate *non-verbally* as opposed to *verbally*.

223 I can accept that treatment which focuses on improving the plaintiff's ability to communicate with others must necessarily be plaintiff-centric. However, it does not follow that such plaintiff-centric treatment must necessarily be speech therapy. As the defendant points out, communication training is also plaintiff-centric, since it involves the *plaintiff* and his communication partner.[214]

224 Further, it also does not follow that speech therapy will be effective. In the excerpts relied on by the plaintiffs, the last two questions and answers took place in the context of a discussion on *communication training*, and not speech therapy.[215] I therefore do not give much weight to the last two questions and answers. As to the first question and answer, that exchange on its own may be

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213 Certified Transcript (16 January 2020) at p 26, lns 3–4.

214 Defendant's Reply Submissions at paras 287–288.

215 Certified Transcript (16 January 2020) at p 27, ln 23 to p 28, ln 16.

interpreted as support for the plaintiff's idea that speech therapy *may* provide a workaround. However, the plaintiff has left out this critical piece of evidence from Dr Phua:[216]

> [Plaintiff's counsel]: … For the person who's making the---communicating---the person who's got the problem like Mr Pollmann, you can either make him talk better or you can teach him to work around the impairment, right? Dr Phua?
>
> [Dr Phua]: For the use of the limbs without the brain injury. *it might be a lot easier than to train a person with brain injury to overcome a---a huge deficit.*
>
> …
>
> [Plaintiff's counsel]: It will be difficult but that's one aspect you can work on, right?
>
> [Dr Phua]: It is not---*it is not that you can't work on it. There might be a lot of resources needed to get there.*
>
> [Plaintiff's counsel]: That's right, so you can.
>
> [Dr Phua]: *Then I don't know how much can be gained from doing it even if something were done.*
>
> [emphasis added]

225 Dr Phua was thus of the clear view that even if the plaintiff can be taught a workaround, *ie*, to learn to communicate non-verbally, such an effort would be a herculean one that may not ultimately bear fruit. Dr Phua's position is consistent with the defendant's premise, that the plaintiff's impairment level is connected to his activity participation level: if the first is poor, generally so will the second, and to improve the second without a corresponding improvement of the first would require a herculean effort.

226 In the circumstances, while I am not prepared to accept the defendant's blanket assertion that speech therapy *will* be ineffective, I do find that speech therapy *is likely to be* ineffective, or would likely involve an unreasonable level

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216 Certified Transcript (16 January 2020) at p 27, lns 3–18.

of effort and resources in order to be effective. This means that the plaintiff's second argument does not take him very far.

227 I also find the plaintiff's third argument unconvincing: that both Dr Phua and Dr Collinson recommended that he undergo future speech therapy. First, he claims that Dr Phua recommended intensive speech therapy – three times a week – in a telephone call to the plaintiff's wife in the broader context of the plaintiff's general future treatment.[217] However, my impression is that the plaintiff's interpretation of Dr Phua's testimony may have been too critical. I set out the exchange for ease of reference:[218]

> [Plaintiff's counsel]: … when you did the evaluation on Mr Pollmann, you also had a fairly long conversation with his wife. Am I right?
>
> [Dr Phua]: That's correct.
>
> [Plaintiff's counsel]: And she discussed with you possible treatment options, am I right?
>
> [Dr Phua]: Not during that time.
>
> [Plaintiff's counsel]: And subsequently, did she deal with you---discuss with you possible treatment options?
>
> …
>
> [Dr Phua]: She rang to ask about frequency and intensity. She did not ask about options in terms of what needs to be done, if that's what you're after.
>
> …
>
> [Plaintiff's counsel]: And did you give her an answer?
>
> [Dr Phua]: Yes, I did.
>
> [Plaintiff's counsel]: And what was the answer?
>
> [Dr Phua]: And I did advise her that *for a typical person who's coming for treatment*, our general approach is to start off with intensive work. So that would be at least three times a week.

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217 Plaintiff's Closing Submissions at para 83.

218 Certified Transcript (16 January 2020) at p 28, ln 28 to p 31, ln 17.

> [Plaintiff's counsel]: And the context of that conversation was in the context of her husband, am I right?
>
> [Dr Phua]: *It was for a generic patient who needed treatment.*
>
> …
>
> [Plaintiff's counsel]: … the only context in which you communicated with Mrs Pollmann was in relation to your evaluation of her husband. Am I right?
>
> [Dr Phua]: It---it would be good to assume that it was related to him.
>
> [Plaintiff's counsel]: But Dr Phua, the---you never knew them before Mr Pollmann was referred to you for evaluation---
>
> [Dr Phua]: That's correct.
>
> [Plaintiff's counsel]: … *The only occasion you met Mr Pollmann was on the two days you evaluated him, right? … [He is] not your patient, otherwise.*
>
> [Dr Phua]: That's correct.
>
> [emphasis added]

228 The plaintiff's argument here is that Dr Phua was recommending speech therapy, and Dr Phua must have known that she was talking to the plaintiff's wife about the plaintiff. Therefore, this recommendation of speech therapy must have been directed at the plaintiff. This argument in my view ignores both that Dr Phua expressly qualified what she said by saying that she was recommending treatment for a *generic* patient, and by the fact that the plaintiff was *not* Dr Phua's patient at the time of the telephone call. The more probable interpretation of this testimony to me is that Dr Phua, not having been apprised of the plaintiff's conditions in detail, had to make do with dispensing generic advice that was not tailored to his needs. This cannot be interpreted as Dr Phua endorsing speech therapy for the plaintiff.

229 Second, the plaintiff argues that Dr Collinson also recommended that the plaintiff undergo speech therapy. The plaintiff relies on Dr Collinson's following observation:[219]

> Instead, seeing Mr Pollmann on at least several occasions and, in the case of cognitive and behavioural symptoms, applying appropriate serial testing of cognition with standardised neuropsychological and speech pathology tests is the most accurate way to chart recovery following traumatic brain injury.

230 I do not interpret these observations the same way the plaintiff does. All Dr Collinson is saying is that *speech pathology tests* are an accurate way to chart the plaintiff's recovery. I do not think that speech pathology tests are the same thing as speech therapy. Further, "chart[ing] [the plaintiff's] recovery" in my view simply means *measuring* the progress and extent of his recovery.

231 I end with the plaintiff's final argument that speech therapy may help his social anxiety. The plaintiff's social anxiety comes from his communication difficulties. If speech therapy proves ineffective at alleviating these difficulties (which is likely to be the case), the plaintiff's communication issues will remain and so will his social anxiety. If speech therapy proves effective, the plaintiff's social anxiety may improve. But this would involve an unreasonable level of effort and resources.

232 In summary, I find that the plaintiff is not entitled to recover the costs of speech therapy treatment.

Communication training

233 In relation to communication training, the defendant (rightly) does not argue that it is not effective. Ms Sajlia gave evidence, which was not seriously

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219 Plaintiff's Reply Submissions at para 146.

contested, that communication training can enhance the plaintiff's activity participation level despite his impairment level remaining severe and irreversible. This is because the plaintiff's communication partner will be taught to understand him better. This in turn will alleviate the plaintiff's difficulties in making himself understood.

234 However, the defendant argues instead that communication training is not necessary, at least as between the plaintiff and his wife. The defendant's case is essentially that the plaintiff's wife is already adequately equipped to understand him and take care of his needs, having done so for the six years since the accident.[220]

235 I do not accept the defendant's argument. The defendant refers to the wife's evidence that "she knew and understood [the plaintiff] the best and to the extent that she was the only conduit through which [the plaintiff] could live with and communicate with their domestic helper".[221] When this testimony is read in context,[222] I am satisfied that the wife was merely trying to make the *relative* point that she can understand the plaintiff *better than others*. This does not mean that she can understand the plaintiff *well* or that her ability to understand the plaintiff cannot be improved. In the same vein, that she has been caring for the plaintiff for the past six years does not mean that her caregiving has been without difficulties, and in particular, communication difficulties. In fact, there was no evidence to that effect. I accept that there is room for improving the plaintiff's wife's ability to understand the plaintiff and that further communication training is therefore reasonable.

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220 Defendant's Reply Submissions at para 305.

221 Defendant's Closing Submissions at para 271.

222 Certified Transcript (15 January 2020) at p 61, lns 12–22.

236 In addition, I accept that communication training for the plaintiff and his *caregiver* will also be necessary, given that the caregiver will be looking after the plaintiff's needs daily. The defendant does not dispute that communication therapy for the plaintiff and his caregiver will be necessary, should the caregiver be someone other than the plaintiff's wife.[223]

237 Ms Sajlia gave evidence in cross-examination that communication training is effective only for about six months at a time.[224] The plaintiff relies on this to argue that he is entitled to recover the cost of recurring communication training, since there is evidence that communication training will not be effective for life. The defendant points out that Ms Sajlia's evidence is based on a study which was stopped after half a year.[225] There is thus no empirical evidence on how long the effects of communication training can last past the six-month period, meaning that communication training may very well prove effective for the plaintiff's life. In the absence of empirical evidence, I am constrained to resolving this issue in favour of the defendant, as the burden of proof lies on the plaintiff.

238 The cost of communication training for one partner is $1,800.[226] Since I have found that communication training is justified for the plaintiff's wife and his caregiver, the total cost amounts to $3,600.

Transport expenses

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223 Defendant's Closing Submissions at paras 269–271.

224 Certified Transcript (16 January 2020) at p 53, lns 10–16.

225 Defendant's Reply Submissions at para 306.

226 Plaintiff's Closing Submissions at para 87(b).

239 This head of claim is for the cost of the plaintiff's transport for *one-off* medical treatments. The cost of the plaintiff's transport for recurring medical treatment has been dealt with at [185] above.

240 Based on my holdings in relation to the one-off treatments that the plaintiff is entitled to, the number of trips that the plaintiff will have to take is as follows:[227]

S/N	Treatment	Number of trips
1	Plastic surgery procedures (Upper eyelid surgery – 1 trip; Facial tightening procedures – 6 trips; Scar revision – 1 trip)	8
2	Vagus nerve simulator implantation	1
3	Surgery to correct complications caused by craniectomy	1
4	Shoulder operation	1
5	Physiotherapy post-shoulder operation	156
6	Communication training	20

[227] Plaintiff's Closing Submissions at para 53.

S/N	Treatment	Number of trips
	(10 trips, but allowance given for training with two different partners)	
7	Neuropsychological consultations (weekly consultations for two years at 52 weeks a year)	104
	Total	**291**

241 I have determined that the reasonable cost per trip is $20 (see above). The total award for transport expenses for one-off medical treatment is thus $20 x 291 = $5,820.

The final value

242 The total of the plaintiff's claims for one-off future medical expenses is thus as follows:

S/N	Claim	Quantum
Agreed items[228]		
1	Psychiatric treatment (between 2020 and 2025)	64,200

228 Defendant's Closing Submissions at para 500.

2	Hospital fees for seizures	128,000
3	Neuropsychological consultations	30,000
4	Neurology-related expenses	50,000
Disputed items		
5	Upper eyelid surgery	19,000
6	Facial reconstruction procedures	262,500
7	Scar revision	11,000
8	Shoulder operation	30,602
9	Physiotherapy sessions	89,700
10	Communication training	3,600
11	Transport expenses	5,820
Total		**694,422**

Pre-trial loss of earnings

The plaintiff's loss of earnings

243 The plaintiff's pre-trial loss of earnings is calculated for the period from 2015 to 2019, both years inclusive. The calculation will begin with an assessment of the sum which the plaintiff would have earned during this period

but for the accident, from which his actual earnings during this period will be deducted to arrive at his net loss of earnings during this period.

244 At the date of the accident in 2014, the plaintiff's base salary was $30,000 per month, or $360,000 per year.[229] As I have held earlier in calculating the plaintiff's loss of future earnings, the plaintiff would have been promoted from ED to MDSA only in 2020 (see [107] above). Therefore, for the period from 2015 to 2019, the plaintiff's base salary would not have increased by reason of a promotion. However, he would still have been awarded the usual annual increments, assumed to be a constant 2.5% per annum. The average of the plaintiff's base salary for the period between 2015 and 2019 inclusive would thus be his base salary for the year 2017, which would be $\$360{,}000\ x\ 1.025^3 = \$387{,}680.$

245 In addition to his base salary, the plaintiff would also have earned bonuses for these three years. I have found that the plaintiff would have earned average yearly bonuses of 35% of his base salary from 2020 onwards (see [121] above). I am inclined to adopt a slightly different average yearly bonus rate for the period from 2015 to 2019 inclusive, as evidence exists, and has been tendered, about the state of the economy in general and the private banking industry specifically for this period. Having considered the evidence, I am minded to adjust the average yearly bonus figure downwards to 25%. The plaintiff's average net income for the period between 2015 and 2019 inclusive would therefore be $\$387{,}680\ x\ 1.25 = \$484{,}600$. From this figure, I add the agreed pension contribution of $24,458 (see [123] above), to reach a final value of $509,058 for each of these years.

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229 Plaintiff's Closing Submissions at para 153(a).

246 From this figure for his gross annual salary, the income tax payable would have been [0.22 x ($509,058- $15,000 - $320,000) + $44,550] = $82,842.76. His income post-tax would thus have been $426,215.24. For the period between 2015 and 2019 inclusive, which is five years, the amount that the plaintiff could have earned had the accident not happened would be $426,215.24 x 5 = $2,131,076.

247 I must deduct from this figure the amount of money which the plaintiff actually earned from 2015 to 2019. The plaintiff's notices of assessment for the years 2015 and 2016 show that his gross income for these two years was $361,171 and $364,338 respectively.[230] The defendant points out that the plaintiff's notice of assessment for the year 2015 took into account a $50,000 bonus awarded for the year 2014,[231] which ought to be excluded from his income during this period. I accept the defendant's claim, since a lower value of the plaintiff's actual earned income is to the plaintiff's benefit. The plaintiff's real pre-tax income would be $311,371 for 2015 and $364,338 for 2016. The plaintiff's tax liability, bearing in mind a $15,000 deduction for allowable tax relief,[232] would have been $38,096.78 for 2015 and $50,504.36 for 2016. The plaintiff's net income for 2015 and 2016 would therefore be $273,274.22 and $313,833.64 respectively, or $587,108 in total. The plaintiff did not earn any income from 2017 to 2019.[233]

248 The plaintiff's pre-trial loss of earnings thus amounts to $2,131,076 - $587,108 = $1,543,968.

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230 Plaintiff's Closing Submissions at para 172.

231 Defendant's Closing Submissions at para 416.

232 Plaintiff's AEIC (11 November 2019) at 100–101.

233 Defendant's Closing Submissions at para 416.

The plaintiff's wife's loss of earnings

249 The plaintiff also claims damages in respect of his wife's loss of income.[234] According to the plaintiff, his accident forced his wife to give up her career in order to care for him.[235] Therefore, he submits, the income which his wife would otherwise have earned ought to be recoverable from the defendant.

250 The defendant disagrees with the plaintiff's characterisation of this claim as a claim for the wife's loss of income.[236] According to the defendant, any loss of income which the plaintiff's wife suffered is not the plaintiff's loss but loss suffered by a third party.[237] As a result, that loss is not recoverable in this action *per se*. At most, it can be recovered by proxy as the reasonable cost of the plaintiff's pre-trial care. Given that this claim is properly one for the costs of care, the defendant submits that any award ought to be capped at the reasonable cost of caring for the plaintiff, *ie*, the cost of hiring a live-in caregiver.

251 The defendant also points out that plaintiff had a live-in foreign domestic worker before the accident, and that between 2015 and 2019, there were times when the plaintiff and his wife employed a second foreign domestic worker.[238] During these times, the defendant submits, there was one foreign domestic worker to do the general housework and another foreign domestic worker to be the plaintiff's caregiver. The defendant relies on this to argue that, whenever the plaintiff was being cared for by *both* his wife *and* a foreign

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234 Plaintiff's Closing Submissions at para 115.

235 Plaintiff's Closing Submissions at para 121.

236 Defendant's Closing Submissions at para 403.

237 Defendant's Closing Submissions at para 374.

238 Defendant's Closing Submissions at para 380.

domestic worker, the cost of care which is recoverable is the cost of only one of them, not both, given that the plaintiff does not argue that he needed the care of *both* his wife *and* the second foreign domestic worker.[239]

252 The parties' positions can be presented in tabular form as follows. By way of background, the wife's lost income decreased in July 2018 because she took on a job, albeit at a reduced salary. The plaintiff's claim is thus premised on the difference between what his wife actually earned during this period and $9,600 per month, which is what she could have earned if she did not have to be the plaintiff's caregiver:[240]

Date	**Additional caregiver**	**Plaintiff's claim for wife's loss of income**	**Defendant's position for wife's loss of income**
Jan 15 – Mar 16	Yes (claim: $13,161)	$9,600 per month ("pm")	Cost of hiring additional caregiver
Apr 16 – Feb 17	No	$9,600 pm	Cost of hiring a live-in caregiver
Mar 17 – Aug 17	Yes (claim: $14,203)	$9,600 pm	Costs of hiring additional caregiver
Sep 17 – Jun 18		$4,100 pm	

239 Defendant's Closing Submissions at para 381.

240 Plaintiff's Closing Submissions at para 118, footnotes 96–100; Defendant's Closing Submissions at para 383.

Date	**Additional caregiver**	**Plaintiff's claim for wife's loss of income**	**Defendant's position for wife's loss of income**
Jul 18 – Dec 18	Yes (claim: $7,976)	$4,100 pm	Costs of hiring additional caregiver
Jan 19 – Feb 19	No	$4,100 pm	Cost of hiring a live-in caregiver
Mar 19 – Nov 19		$3,100 pm	

253 I begin by addressing the true nature of the plaintiff's claim for his wife's loss of income. I agree with the defendant that the wife's loss of income is not recoverable as such in an action by the plaintiff. Given that there is no rule in Singapore barring recovery in negligence for pure economic loss, it is conceivable that the plaintiff's wife may in principle have a cause of action against the defendant in tort on the basis that the defendant owed her a duty of care not to injure her husband, on the application of the universal test set out in *Spandeck Engineering (S) Pte Ltd v Defence Science & Technology Agency* [2007] 4 SLR(R) 100. However, the plaintiff's wife is not a party to this action and asserts no such claim.

254 The only legal route for the plaintiff to recover his wife's loss is therefore to recharacterise her loss as his loss. This much is clear on the

paragraph cited by the plaintiff himself from *Donnelly v Joyce* [1974] QB 454 ("*Donnelly*") at 461H–462A, *per* Megaw LJ:[241]

> We do not agree with the proposition … that the plaintiff's claim … is properly to be regarded as being … 'in relation to someone else's loss,' merely because someone else has provided to, or for the benefit of, the plaintiff – the injured person – the money, or the services to be valued as money, to provide for needs of the plaintiff directly caused by the defendant's wrongdoing. The loss is the plaintiff's loss. … The plaintiff's loss, to take this present case, is not the expenditure of money … to pay for the nursing attention. His loss is the existence of the need for … those nursing services, the value of which for purposes of damages – for the purpose of the ascertainment of the amount of his loss – is *the proper and reasonable cost of supplying those needs*. That, in our judgment, is the key to the problem. So far as the defendant is concerned, the loss is not someone else's loss. It is *the plaintiff's loss*.
>
> [emphasis added]

255 The loss which the defendant's tort inflicted upon the plaintiff is the *need for care*. The measure of damages for this loss is the *proper and reasonable costs of meeting the plaintiff's need for care*. Contrary to the plaintiff's assertion,[242] it makes no difference whether the wife suffered a loss of *past* or *future* income. In fact, the lost income claimed in *Donnelly* was the income which the tort victim's mother had given up the opportunity of earning *in the past* in order to take care of the victim. Therefore, the income which the plaintiff's wife gave up the opportunity to earn in order to look after the plaintiff ought to be only a *starting point* in assessing the monetary value of plaintiff's loss. If it was reasonable to secure care for the plaintiff at a cost *below* the income which his wife lost, the defendant is not liable for the cost of providing care measured by the plaintiff's wife's lost income.

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241 Plaintiff's Reply Submissions at para 197.

242 Plaintiff's Reply Submissions at para 197.

256 In this case, I have no hesitation in finding that this starting point ought to be departed from. As I have held earlier at [177], the reasonable cost of care for the plaintiff is $1,000 per month. That is true just as much for the plaintiff's pre-trial care as it is for his future care. I therefore find that $1,000 per month is the ceiling for the plaintiff's claim for his wife's lost income.

257 There remains another issue. The defendant argues, in effect, that the plaintiff cannot recover damages for the care given by his wife for those periods when the plaintiff employed a second live-in foreign domestic worker. The plaintiff responds that the additional foreign domestic worker was hired to help his wife and their first foreign domestic worker look after the children, not the plaintiff. And therefore, the plaintiff's wife remained the plaintiff's full-time caregiver throughout the years since the accident, even when they employed a second foreign domestic worker.[243]

258 There is no objective evidence to support the plaintiff's response on this point. Nevertheless, it is true that the plaintiff's two children were just one and three years old at the time of the accident. I accept that the combined pressure on the household of dealing with the plaintiff's injuries and with young children made it necessary to employ a second foreign domestic worker just to look after the children. I therefore allow the plaintiff to recover the reasonable costs of care even during the months in which the plaintiff employed a second foreign domestic worker.

259 The reasonable cost of care which the plaintiff can recover for the care which his wife gave him is $1,000 per month x 59 months (for the entire period between January 2015 and November 2019 inclusive) = $59,000.

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243 Plaintiff's Reply Submissions at para 200.

Pre-trial special damages

Medical expenses incurred in Singapore

260 The medical expenses that the plaintiff has incurred as at November 2019 are $414,246.56.[244] He accepts that, out of this sum, $1,507.60 was incurred for dental expenses and are therefore unrelated to the accident.[245] However, he also claims that from November 2019 to the date of the closing submissions in the assessment phase, he incurred further medical expenses. He therefore claims a total of $431,946.13 as pre-trial medical expenses.[246]

261 It suffices to say that medical expenses must be proven, and in the absence of any objective evidence, the plaintiff's claim for additional medical expenses incurred from November 2019 to date fails. I also deduct the $1,507.60 which the plaintiff accepted was an expense incidental to the accident to arrive at a final figure of $412,738.96 for pre-trial medical expenses.

Past transport expenses

262 The plaintiff claimed past transportation expenses amounting to $13,590.[247] However, he was able to furnish receipts for these expenses amounting to only $634.16.[248] The defendant thus submits the plaintiff should recover no more than $634.16.[249]

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244 Plaintiff's AEIC at p 508.

245 Plaintiff's Closing Submissions at para 92.

246 Plaintiff's Closing Submissions at para 88.

247 Plaintiff's Closing Submissions at para 97.

248 Plaintiff's Closing Submissions at para 96.

249 Defendant's Closing Submissions at para 490.

263 The absence of receipts does not, of course, preclude the court from awarding damages for the plaintiff's pre-trial transport expenses. I can do so on the basis of a reasonable estimate. But I bear in mind that any such estimate should be a conservative one, to avoid putting plaintiffs who fail to produce receipts in a better position than plaintiffs who conscientiously retain receipts (*Tan Hun Boon* at [146]). The plaintiff submits that during the pre-trial period, he made a total of 459 trips.[250] This figure covers a period of six years and the plaintiff was able to furnish particulars of the trips. I accept this figure. At $20 per trip (see [182] above), the claim for past transport expenses amounts to $9,180.

Costs of travel to Zurich for treatment

264 The plaintiff was resident at a neurological rehabilitation clinic in Zurich, Switzerland between April and June 2015.[251] He travelled there to undergo treatment on the recommendation of his neurosurgeon in Singapore, Dr Ivan Ng ("Dr Ng").[252] The plaintiff thus claims the cost of travel to and from Switzerland, for the entire family, the family's foreign domestic worker and the plaintiff's parents.

265 The total sum claimed under this head is $48,806.12, covering the following trips:[253]

(a) Business class flights for the entire family and the family's foreign domestic worker from Singapore to Budapest (transiting in

250 Plaintiff's Closing Submissions at para 96 and Annex B.

251 Plaintiff's Closing Submissions at para 98.

252 Plaintiff's Closing Submissions at para 98.

253 Plaintiff's AEIC at p 1098.

Frankfurt) in March 2015. The plaintiff's wife's parents live in Budapest.

(b) Economy class flights for the plaintiff from Budapest to Zurich (transiting in Berlin) in April 2015.

(c) Economy class flights for the plaintiff's wife from Budapest to Zurich and back to Budapest in April 2015.

(d) Business class flights for the plaintiff from Zurich to Singapore (transiting in Helsinki, Stockholm and Doha) in June 2015.

(e) Business class flights for the plaintiff's wife and children and the family's foreign domestic worker from Budapest to Singapore (transiting in Frankfurt) in June 2015.

Plaintiff's travel costs

266 I begin with the plaintiff's travel costs. There are three relevant flights: Singapore to Budapest, Budapest to Zurich and Zurich to Singapore.

267 For his journey from Singapore to Zurich, the plaintiff first flew to Budapest and stayed there for two weeks before going on to Zurich. The defendant submits that it was not reasonable for the plaintiff to take this indirect route to Zurich.[254] The plaintiff's reply is that he was unsure of how long he would have to spend in Zurich, and therefore it was better to stop in Budapest, where his wife's parents live, so that the children could remain there while the plaintiff proceeded to Zurich for treatment.[255] Moreover, in cross-examination,

254 Plaintiff's Closing Submissions at para 423–425.

255 Plaintiff's Closing Submissions at para 102.

the plaintiff added a further explanation: that flying from Singapore to Zurich via Budapest was in fact cheaper than flying from Singapore to Zurich directly.[256]

268 I do not accept the plaintiff's evidence. The plaintiff's explanation – that he wanted his wife's parents to look after the children while he was undergoing treatment – does not explain why *the plaintiff* had to travel to Budapest let alone why he had to remain there for two weeks. It would have sufficed for his wife and children to have travelled to Budapest without him. Even assuming that he wanted to spend some time with his children before commencing treatment, there was no reason for his stay in Budapest to have been *two weeks* long. It appears to me that the plaintiff found it convenient to stop in Budapest to spend time with his wife's parents before travelling to Zurich for treatment. That means that his two-week stop in Budapest was for reasons unrelated to his treatment and therefore unrelated to the injuries he suffered in the accident. The plaintiff is entitled to recover only the cost of flying direct from Singapore to Zurich.

269 The plaintiff submits in response that it was in fact cheaper for him to fly from Singapore to Zurich through Budapest than for him to fly direct from Singapore to Zurich. I do not accept this submission. The plaintiff did not keep the receipt for his Singapore to Budapest flight. Instead, he submitted a screenshot from Lufthansa's website in July 2015 showing that a one-way flexible *first* class flight from Singapore to Budapest was $10,231.[257] He also tenders, in a supplementary bundle of documents, screenshots from Lufthansa's website in July 2020 showing that a one-way flexible *first* class flight from

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256 Certified Transcript (14 January 2020) at p 118, lns 1–4.

257 Plaintiff's Closing Submissions at para 104(a).

Singapore to Budapest and from Singapore to Zurich were $10,677 and $10,710 respectively.[258] In response, the defendant relies on a document dated January 2020 showing that the price of a non-refundable, non-changeable return *business* class ticket from Singapore to Budapest is about $5,700.[259]

270 The defendant argues that since the plaintiff tendered no evidence of the actual cost of the Singapore to Budapest flight, the claim is not recoverable. I do not agree. It is not disputed that the plaintiff *did* take this flight. And the defendant does not suggest that the treatment in Zurich was unrelated to the plaintiff's accident and injuries. Further, both parties have given an estimate of what a direct flight from Singapore to Zurich would reasonably have cost. Therefore, even in the absence of evidence of the *actual* cost, the parties' estimates suffice to make a finding of fact.

271 I further note that the plaintiff claims to have flown *business* class,[260] but has produced evidence of the cost of *first-class* tickets. First class tickets are ordinarily significantly more expensive than business class tickets. I therefore do not find the plaintiff's evidence to be of much weight (leaving aside whether the documents in the supplementary bundle of documents were properly in evidence before me). The plaintiff also criticises the defendant's evidence for not being sufficiently contemporaneous, and for failing to consider that he needed to buy a flexible ticket, instead of non-refundable and non-changeable, because he did not know how long his treatment in Zurich would take. These are both fair criticisms, but they do not detract from the fact that the plaintiff bears the burden of proof. A flexible business class ticket from Singapore to

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258 Plaintiff's Further Supplementary Bundle of Documents ("PB3") at pp 7–10.

259 Exhibit D-3; Defendant's Closing Submissions at para 427.

260 Plaintiff's AEIC at p 1098.

Zurich would undoubtedly have cost more than the defendant's estimate of $5,700. But equally undoubtedly, it would have cost less than the plaintiff's estimate of $10,200. Since the plaintiff bears the burden of proof, I adopt the defendant's quotation of $5,700.

272 As for the plaintiff's Zurich to Singapore flight, the defendant accepted that the cost of this flight was $3,516,26.[261] I thus allow the plaintiff a total of $9,216.26 in respect of his travel costs for this trip to Zurich and back.

Travel costs of plaintiff's wife

273 The plaintiff also claims travel costs incurred by his wife. The defendant cites the Court of Appeal's decision in *Teng Ching Sin and another v Leong Kwong Sun* [1994] 1 SLR(R) 382 ("*Teng Ching Sin*").[262] According to *Teng Ching Sin*, travelling expenses incurred by a member of a plaintiff's family are not recoverable unless the visits by or the company of the plaintiff's family members were important elements in aiding his recovery, because the test is of "the necessity for the visits and thus the expenditure" (*Teng Ching Sin* at [16]). I agree with the defendant's position on the law, which was not seriously disputed by the plaintiff.

274 The defendant accepts that it was necessary for the plaintiff's wife to accompany him to Switzerland and back. However, the defendant argues that there is no reason for the plaintiff's wife to fly business class, nor was there any reason for the plaintiff's wife to travel to Zurich via Budapest.[263]

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261 Defendant's Closing Submissions para 440.

262 Defendant's Closing Submissions para 442.

263 Defendant's Closing Submissions at paras 447 and 448.

275 I agree with the defendant. First, I agree that there was no necessity for the plaintiff's wife to fly business class to Switzerland and back. I would have been prepared to allow the plaintiff's wife to claim business class fares *had it been necessary for her to take care of the plaintiff*. However, on the evidence, the plaintiff and his wife travelled together only on one flight, *ie*, from Singapore to Budapest. The plaintiff travelled by himself from Budapest to Zurich and from Zurich to Singapore. I am thus not convinced that it was necessary for the plaintiff's wife to accompany him on his flights (since she actually did not accompany him for most of his travels). It follows that there was no reason for the wife to fly business class, other than the fact that she was perhaps accustomed to this standard of travel. But this is not a good reason to make the defendant liable for the additional cost thereby incurred (see *Mykytowych, Pamela Jane v V I P Hotel* [2016] 4 SLR 829 at [129]).

276 Second, there was no reason connected to the plaintiff's injuries or treatment for the plaintiff's wife to have flown to Zurich via Budapest. It appears to me evident that the plaintiff's wife flew to Budapest before flying to Zurich in order to entrust their children to her parents' care.[264] This trip thus had little to no nexus with the plaintiff's treatment in Zurich. I am sympathetic to the predicament faced by the plaintiff and his wife in that it would have been difficult for them to leave their children behind in Singapore and go to Zurich for treatment. However, I am not prepared to find that it was *necessary* for the children to go with the plaintiff and his wife, at least not without the benefit of further evidence about the arrangements which could have been made for the children's care in Singapore or in Zurich. Moreover, I note that the wife actually stayed with the children in Budapest for the majority of the plaintiff's treatment

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264 Plaintiff's Reply Submissions at para 218.

in Zurich. It follows that it was possible for the wife to have returned to Singapore to take care of the children after traveling with the plaintiff to Zurich.

277 I therefore am of the view that the measure of recoverable damages for the wife's travel costs is limited to the price of economy class tickets from Singapore to Zurich and back. I am willing to give the wife the benefit of the doubt and allow a claim in respect of two flexible, one-way tickets instead of one flexible return ticket or two unchangeable one-way tickets. I note that the evidence tendered by the parties does not shed light on the price of such a ticket. However, I am not willing to accept the defendant's position that the absence of evidence precludes recovery. Taking into account the general pricing level of economy class tickets to Europe, which I estimate to be $2,000 per sector, I allow the plaintiff to recover $4,000 in respect of his wife's travel costs.

Travel costs of plaintiff's children and family maid

278 The defendant resists the claim for the children's and the family's foreign domestic worker travel costs, arguing that it was not necessary for the plaintiff's children and the family's foreign domestic worker to have travelled with the plaintiff.

279 I agree with the defendant. It appears to me evident that the plaintiff's children and the family's foreign domestic worker did not travel for a reason connected to the plaintiff's injuries or his treatment. Instead, the children and the maid travelled to Budapest because the plaintiff and his wife did not want to leave the children behind in Singapore. As I have explained in [276] above, while I am sympathetic to the plaintiff's predicament, I am not satisfied that this was *necessary*, in the absence of evidence about the care that the children would have received had they stayed in Singapore, and in light of the fact that the wife

did not stay with the plaintiff for the majority of his treatment in Zurich, staying with the children in Budapest instead.

Travel costs of the plaintiff's parents

280 The plaintiff's father visited him twice within three months of the accident. The first visit was when the plaintiff was still in a coma. The second visit was when the plaintiff was undergoing rehabilitation at Tan Tock Seng Hospital. The plaintiff's mother accompanied the plaintiff's father on the first visit.

281 The defendant resists the plaintiff's claim on the ground that there is no objective evidence to show that the parents' presence assisted with the plaintiff's recovery.[265] The defendant characterises as self-serving the plaintiff's statement of subjective belief that he needed to be around his loved ones to recuperate.

282 The arguments raised by the parties in this regard elides a key consideration, that is, whether these tickets were paid for by the *plaintiff*. As stated above (at [253]), the plaintiff can only seek to recover *his own loss* in these proceedings. Therefore, the plaintiff must first show that *he* was the one who paid for his parents' trips, before he can even begin to argue that the trips were necessary. This is because the plaintiff bears the burden of proof. And since this is an item of special damage, and therefore a historical and actual loss, he bears the burden of proof on the usual balance of probabilities. The evidence as tendered by the plaintiff does not show *who* paid for his parents' tickets.[266] It

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265 Defendant's Closing Submissions at paras 474–475.

266 Plaintiff's AEIC (19 November 2019) at pp 1124–1126.

follows that the plaintiff did not show that the costs of the plane tickets were *his* own loss. This head of claim cannot be allowed.

Summary

283 In summary, the total of the plaintiff's claim for the costs of travel to Switzerland is $9,216.26 + $4,000 = $13,216.26.

Costs of cancelling flights booked before the accident

284 The plaintiff also claims the costs of the flights which he had booked before his accident to visit his parents and for personal leisure, which he had to cancel as a result of his accident. The costs of these flights, which were all first-class flights, was estimated by the plaintiff to be $53,029.10.[267] The plaintiff had to estimate these costs because he was unable to retrieve most of the booking documents for the flights, having booked the flights some months before the accident. His estimate came from a software known as "ITA Matrix", which purportedly "allows users to search for flights using historical data".[268]

285 The defendant resists this head of claim. According to him, this claim is too remote. Even if it is not too remote, it is not sufficiently proven. The defendant takes issue with the plaintiff's lack of documentary evidence, which goes both to the amount of money spent by the plaintiff on the tickets and also to whether the plaintiff had made reasonable efforts to mitigate his loss by cancelling these flights and obtaining a full or partial refund. Further, the defendant also argues that he should only be liable for the costs of economy class, and not first-class tickets.

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267 Plaintiff's Closing Submissions at para 111.

268 Plaintiff's Closing Submissions at para 112.

286 I accept that this head of claim is not too remote. The test for remoteness in the tort of negligence is the same as that in the law of contract, *ie*, that of reasonable foreseeability (see *McGregor* at para 8-086, *Man Mohan Singh s/o Jothirambal Singh and another v Zurich Insurance (Singapore) Pte Ltd (now known as QBE Insurance (Singapore) Pte Ltd) and another and another appeal* [2008] 3 SLR(R) 735 at [45]). It is difficult to see why the plaintiff's loss arising from having to cancel booked flights is not reasonably foreseeable. It is no defence for the defendant to say that he did not know that the plaintiff was someone who had booked multiple flights on business and first class that he would have to cancel.[269] I find it sufficient to refer to Scrutton LJ's well-known *dictum* in *The Arpad* [1934] P 189 at 202–203, approved by the Privy Council in *Overseas Tankship (UK) Ltd v Morts Dock and Engineering Co Ltd, The Wagon Mound* [1961] AC 388:

> You negligently run down a shabby-looking man in the street, and the turns out to be a millionaire engaged in a very profitable business which the accident disables him from carrying on; or you negligently and ignorantly injure the favourite for the Derby whereby he cannot run. You have to pay damages resulting from the circumstances of which you have *no notice*. You have to pay the actual loss to the man … *at the time of the tort*.
>
> [emphasis added]

287 However, I agree with the defendant that the plaintiff has not discharged his burden of proving this head of claim. My concern lies specifically with the plaintiff's failure to adduce evidence of the terms and conditions of the contracts pursuant to which he purchased the flight tickets. Specifically, the issue here relates to the plaintiff's so-called "*duty" to mitigate*. It is not uncommon for ticket vendors to allow refunds, particularly on grounds of supervening events such as accident. It is also not uncommon for air tickets purchased with credit

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269 Defendant's Closing Submissions at para 479.

cards to be covered by insurance. In such a situation, the plaintiff would need to show either that there were no refunds available, or that he could not have availed himself of the refunds in spite of reasonable efforts. In the absence of any evidence to this regard, I find that the plaintiff has not discharged his burden of proof. The costs of cancelling these flights are not recoverable.

The final award

288 The plaintiff's total award for special damages is therefore:

S/N	Claim	Quantum ($)
Agreed items		
1	Medical expenses incurred in Switzerland	161,534.83
2	Professional nursing costs for the period between December 2014 and December 2015	11,920.00
3	Costs of hiring second caregiver	28,000.00
4	Loss of bicycle	5,250.00
5	Replacement of cycling gear and equipment	1,200.00
Disputed items		
6	Medical expenses in Singapore	412,738.96

S/N	Claim	Quantum ($)
7	Past transport expenses	9,180
8	Costs of travel to Switzerland	13,216.26
Total		**643,040.05**

Conclusion

289 In conclusion, having assessed the plaintiff's general and special damages on the evidence which the parties have placed before me and in light of their oral and written submissions, I find that the defendant is liable to the plaintiff in the following sums:

S/N	Claim	Quantum ($)
1	Loss of future income	9,325,541
2	Recurring future medical expenses	1,094,212
3	One-off future medical expenses	694,422
4	Plaintiff's pretrial loss of earnings	1,543,968
5	Plaintiff's wife's pretrial loss of earnings	59,000

6	Special damages	643,040.05
7	Pain and suffering	300,000
Total		**13,660,183.05**

290 I thus assess the damages payable by the defendant to the plaintiff to be the sum of **$13,660,183.05** and award that sum to the plaintiff. The defendant has made interim payments to the plaintiff totalling $3,100,000 (see above at [5]). Those interim payments are to be brought into account against this award. The sum which remains due from the defendant to the plaintiff by way of damages is therefore **$10,560,183.05**.

291 This assessment leaves only three questions to be determined: (i) the quantum of Goods and Services Tax payable on the plaintiff's future expenses; (ii) the interest payable on the damages awarded to the plaintiff; and (iii) the costs of this action. The interest payable to the plaintiff will, of course, have to take into account the reduction effected in the principal by each interim payment from the date of that payment. The parties have asked for an opportunity to come to an agreement on the first two questions.[270] I will allow them that opportunity, and also an opportunity to come to an agreement on the third question.

292 If the parties are unable to come to an agreement on any one or more of these three questions, I now give them liberty to apply for me to make a determination on those questions.

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270 Plaintiff's Closing Submissions at para 199.

Vinodh Coomaraswamy
Judge of the High Court

Narayanan Sreenivasan, SC, N K Rajarh and Daryl Cheong (K&L Gates Straits Law LLC) for the plaintiff;
Simon Goh, Wang Yingshuang and Alvin Ee (Rajah & Tann Singapore LLP) for the defendant.

ANNEX A

AGREED HEADS OF LOSS

Head of claim	Quantum
Pain and suffering	300,000.00
Pre-trial special damages[271]	
Medical expenses incurred in Switzerland	161,534.83
Professional nursing costs for the period between December 2014 and December 2015	11,920.00
Costs of hiring second caregiver	28,000.00
Loss of bicycle	5,250.00
Replacement of cycling gear and equipment	1,200.00
Future one-off medical expenses[272]	
Psychiatric treatment (between 2020 and 2025) (GST inclusive)	64,200.00
Hospital fees for seizures (No GST)	128,000.00
Neuropsychological consultations (No GST)	30,000.00

271 Plaintiff's Closing Submissions at Annex A.

272 Defendant's Closing Submissions at para 558.

Head of claim	Quantum
Neurology-related expenses (No GST)	50,000.00
Total	**$780,104.83**

ANNEX B

DISPUTED HEADS OF LOSS

S/N	Head of claim	Plaintiff's position[273]	Defendant's position[274]
Loss of future earnings			
1	Multiplier	22 years	14 years
2	Multiplicand	Variable	$300,407.24
Future Medical and Related Expenses (Recurring)			
3	Multiplier	55 years	17 years
4	Psychotherapy	$18,200.00 per annum ("pa")	$9,880.00 pa
5	Botox	$6,000.00 pa	$5,457.00 pa
6	Neuropsychological review		$3,000.00 pa

273 Plaintiff's Closing Submissions at Annex A.

274 Defendant's Reply Submissions at para 558.

	assessments (No GST)			
7	Anti-seizure medications (GST Inclusive)			$12,840.00 pa
8	Neurology outpatient clinic reviews (GST Inclusive)			$856.00 pa
9	Tinnitus treatment device (GST Inclusive)			$1,264.74 pa
10	Hearing aids (GST Inclusive)			$2,782.00 pa
11	Audiologic assessments (GST Inclusive)			$401.25 pa
12	Caregiver expenses		$116,070.00 pa	$9,600.00 pa
13	Transport expenses for recurring medical visits		$4,050.00 pa	$1,620.00 pa
14	Psychiatric treatment costs (2025 onwards) (GST Inclusive)			$10,700.00 pa
Future one-off medical expenses				
15	Speech and communication therapy		$1,800 per partner	nil
16	Shoulder procedures	Orthopaedic surgery	$34,347.00	$26,854.00

17		Physiotherapy after orthopaedic surgery	$152,100.00	$66,758.00
18	Plastic surgery	Tissue Transfer	$150,000.00	nil
19		Fat grafting	$120,000.00	nil
20		Brow lift	$20,000.00	$19,260.00
21		Scar revision	$12,000.00	nil
22		Face tightening	$60,000.00	nil
23	Transport expenses for one-off medical visits		$38,070.00	$4,240.00
Pre-trial Loss of Earnings				
24	Plaintiff's pre-trial loss of earnings		$3,340,756.56	$1,069,381.56
25	Plaintiff's wife's pre-trial loss of earnings		$314,460.00	$27,200.00
Pre-trial Special Damages				
26	Medical expenses incurred in		$431,946.13	$412,738.96

	Singapore		
27	Costs of travel to Switzerland for treatment	$48,806.12	$4,046.79
28	Costs of cancelling flights booked before the accident	$53,029.10	nil
29	Past transport expenses	$13,590.00	$634.16