



**British Institute of
International and
Comparative Law**

Briefing Note on the Discount Rate applying to Quantum in Personal Injury Cases: Comparative Perspectives

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Ministry of Justice

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Executive Summary

This briefing note examines the discount rate applying to quantum in personal injury claims from a comparative law perspective focusing on Australia, Canada, France, Germany, Hong Kong, Ireland, Spain and South Africa. These jurisdictions represent common and civil law jurisdictions, a diverse geographical spread as well as a range of approaches and rates. The research highlights the great variety of approaches adopted in adjusting damages awards to take account of investment opportunities. The decision maker as regards the discount rate is the legislator in some cases, the judiciary in others and a hybrid solution involving both in others. In some jurisdictions, whilst the rate is set through primary or secondary legislation, the court is empowered to vary it in the interests of justice, though this rarely occurs in practice. There is also considerable variety in the methodology for setting the rate including which institutions are involved in the process and what considerations are taken into account. In practice, the discount rates applied vary considerably across the various jurisdictions from 6% in the Australian State of Victoria to -0.5% for parts of payments in Hong Kong and -0.75% in the case of the UK. Beyond the rate itself, there is also variance as to whether a single rate applies to all personal injury claims or whether different rates apply depending on the type of claim, or the type of loss; as well as whether a single rate applies for the full period or whether different approaches are adopted depending upon the period of time covered by the award. It would seem that these determinations are influenced by a range of factors including economic factors, the availability of various financial instruments as well as broader policy factors such as a desire to avoid exponential increase in the cost of insurance.

Introduction

About The British Institute of International and Comparative Law

1. The British Institute of International and Comparative Law (BIICL) is a leading independent research centre and charity whose remit is to develop and advance the understanding of international and comparative law in the UK and around the world, and to promote the rule of law in national and international affairs. BIICL is unique in the UK and one of the foremost bodies of its kind around the world. The Institute is renowned for its applied research, events, training and publications.

Scope of the Briefing Note

2. The British Institute of International and Comparative Law has been commissioned by the UK Ministry of Justice to undertake a comparative study of the discount rate applying to quantum in personal injury cases. The objective of the work is to examine in respect of a selected group of jurisdictions the issue of how the overall award of personal injury damages is adjusted to take account of accelerated receipt of damages and the associated investment opportunities. In undertaking this work, particular focus will be placed upon the methodology and procedure relating to the setting of the discount rate, as well as the institution responsible for deciding upon the exact level of this adjustment.
3. In the United Kingdom, when damages are awarded for future loss, the award is adjusted to take account of the effect of the claimant being able to invest the money before the loss or expense for which it is awarded has actually occurred. For example, in the case of a birth injury where brain damage has resulted, damages for the future loss – for example, future care costs – may be awarded for a very long future period, effectively a lifetime, and the accelerated receipt of sums to cover loss for that period means that the money can be invested and accrue value for a number of years before the claimant would actually require the money to meet those costs. The value of the lump sum is therefore adjusted by a factor that represents the appropriate rate of return on investing the award. This is what is known as the “discount rate”.¹

Methodology

4. This Briefing Note examines the issue of the discount rate applying to quantum in personal injury cases from a comparative law perspective, focusing on the following jurisdictions: Australia, Canada, France, Germany, Hong Kong, Ireland, Spain, South Africa. These jurisdictions were selected, within the relevant time constraints and availability of information, to ensure the representation of common and civil law jurisdictions, a diverse geographical spread, and to illustrate a range of approaches and rates internationally.
5. In undertaking the study, the comparative law position is based primarily on the findings of reports prepared by external national rapporteurs, chosen through BIICL contacts for their

¹ The term of ‘discount rate’ is used throughout this Briefing Note though, in light of the use of a negative discount rate, the term ‘adjustment rate’ might be a better suited term. See comments of Lord Hope in *Simon v Helmot* [2012] UKPC 5, at [14.]

specific expertise in the field. Research regarding the situation in the United Kingdom, France and Germany has been undertaken in-house by Senior Research Fellows at the Institute who have expertise in this field.

6. The national rapporteurs prepared national reports on the basis of a questionnaire produced by the BIICL research team (and provided in Annex 1), composed of a series of questions which each expert was asked to address in compiling their report. Reference will be made to the relevant national reports in this Briefing Note, which are also included in Annexes 2 – 7 below, as follows: Annex 2: Report by Professor Mark Lunney dated 8 April 2017 concerning Australia; Annex 3: Report by Shane C. D’Souza and Ralph Fenik dated 10 April 2017 concerning Canada, Annex 4: Report of Dr. Felix Chan dated 6 April 2017 concerning Hong Kong, Annex 5: Report by Orla Keane, David Strahan and Grace-Ann Meghen of Arthur Cox concerning Ireland, dated 4 April 2017, Annex 6: Report by Johan de Waal, dated 19 April 2017 concerning South Africa and Annex 7: Report by Dr. Maria Paz García Rubio and Dr. Marta Otero Crespo dated 8 April 2017 concerning Spain.
7. Given the limited time frame for the research, this report is focused primarily on the adjustment of damages awards to reflect the effect of investment opportunities and not on adjustments for other issues including mortality, labour market risks and other contingencies. The research also does not provide in-depth analysis of the basis for damages or the approach to quantum applied in the countries examined.
8. It should be noted that BIICL provides legal research and information but does not in any way provide legal advice. This Briefing Note cannot thus be relied upon as legal advice, and the comparative law conclusions herein are predominantly based upon the information contained in the aforementioned national reports.

Comparative Law Perspectives

9. As will be observed from the national reports below (in Annexes 2 – 7), a great variety of solutions can be found in the various jurisdictions in quantifying future loss as well as in the methodology of the adjustment made to lump sum damages awards. This is perhaps not surprising given that the exercise of assessing damages for future loss is itself a difficult and speculative one; it was thus observed by Lord Oliver in the case of *Hodgson v Trapp*, that it was a task which “requires not the services of an actuary or an accountant but those of a prophet.”² Indeed, as Lord Steyn remarked in *Wells v Wells*, “perfection in the assessment of future compensation is unattainable.”³ Despite this, it is nonetheless possible to identify some tentative comparative law trends in light of the results of the reports of the national rapporteurs.

Personal Injury Damages Awards

10. It is worth stating at the outset that a common point of the jurisdictions studied is that the

² [1989] 1 AC 807, at 833.

³ [1999] 1 AC 345, at 383

objective of damages in tort law / delict in these systems is to provide *restitutio in integrum*, thereby restoring the injured party to the position in which he or she would have been absent the tort.⁴ Although *restitutio in integrum* is the declared goal, the rules which have been adopted to achieve this have nonetheless diverged, and this is very much the case, as will be seen, in respect of the discount rate in personal injury cases.

11. Another preliminary point of commonality is that lump sum payments for damages awards are generally the norm in the jurisdictions examined.⁵ Whilst periodic payments are available in theory in many jurisdictions, they continue in general to be an under-utilised option and are often applied only with the consent of the parties involved. Australia is illustrative in this respect. Statutory provisions in the Australian States of South Australia and Western Australia do provide for the use of periodic payments in limited circumstances.⁶ But Professor Mark Lunney notes however that “a leading text comments that there are no reported cases in which the power to make such an award has actually been exercised.”⁷ In Ireland, there are no Court Rules or (as yet) statutory basis for periodic payments and these are made on an ad hoc basis by the courts and generally only where all parties to the proceedings agree.⁸
12. Even in Germany, where payment by annuities is generally the rule, the approach has differed in practice. In this jurisdiction, where compensation is in principle provided by payment of an annuity under section 843(1) of the German Civil Code, the injured person may only demand a lump sum payment where there is a compelling reason for doing so (sec. 843(3) BGB). In practice, however, the payment of damages by lump sum is a frequent occurrence, for instance in the case of involvement of an insurer. The approach is similar in another continental jurisdiction, France. Although the French trial judge in civil matters has entire discretion as to whether periodic payments or a lump sum would be the most adequate remedy,⁹ it is in practice much more common for lump sums to be awarded. As is noted in the standard text on the topic, *L’Evaluation du Préjudice Corporel*, “[i]n practice it is very rare for the whole of the damages ... to be paid through periodic payments.”¹⁰
13. There is however evidence of movement towards greater consideration of periodic payments in some of the countries examined. In Ireland, a Bill is currently making its way through the legislative process with the stated purpose of empowering the courts, to make consensual and non-consensual periodic payment orders to compensate injured victims in cases of catastrophic injury where long-term permanent care would be required.¹¹ In Hong Kong, the Law Reform Commission of Hong Kong has recently set up a committee to explore the possibility of introducing the option of periodical payments.¹²
14. The current reliance in law and practice on lump sum payments for personal injury damages necessarily thereby raises the issue of how the accelerated receipt of a lump sum award of

⁴ See for example the Report on Canada by Shane C. D’Souza and Ralph Fenik dated 7 May 2017, paragraph 2.

⁵ See below though for the position in Germany.

⁶ Report of Professor Mark Lunney dated 8 April 2017, paragraph 4.

⁷ Report of Professor Mark Lunney dated 8 April 2017, paragraph 7.

⁸ Report of Orla Keane, David Strahan and Grace-Ann Meghen dated 4 April 2017, paragraph 9. See below for ongoing reforms in Ireland.

⁹ Cass 2, 13 June 1979, Bull Civ 1979.II.N°178, page 124.

¹⁰ M.Le Roy, J-D, Le Roy, F.Bibal, *L’Evaluation du Préjudice Corporel* (20th Edn, Paris, LexisNexis, 2015) para 195.

¹¹ The Civil Liability (Amendment) Bill 2017.

¹² Report of Dr. Felix Chan dated 6 April 2017, paragraph 7.

damages to compensate recurring heads of future loss is adjusted to take account of the associated investment opportunities. It is this issue which was the focus of the research undertaken, and to which we will now turn.

Application of Discount Rate(s)

15. In all the jurisdictions examined in this research, a discount rate (or adjustment rate) is applied to lump sum payments so as to take account of the accelerated receipt of amounts recovered as compensation for future recurring loss. Full details of the ways in which the various systems proceed with such an adjustment is provided in the national reports found in the annexes. Procedures and methodologies vary greatly, and the resultant approach to the discount applied is also varied. In this section, we will identify some comparative law themes arising from that analysis.

Decision-maker as regards the Discount Rate

16. A **first** point to consider relates to the **designation** of the primary decision-maker in respect of the application of a discount rate. Different decision-makers can be found in the various jurisdictions studied, but **three** broad approaches can be identified as to how the discount rate may be set.

17. In many jurisdictions, the institutional decision-maker is the legislator, and thus the discount rate is set through legislation. In Australia, for instance, the basis for the application of the discount rate is statutory in all but one State.¹³ This is similarly the case in the majority of Canadian provinces.¹⁴ In these circumstances, the relevant statute sets a specific discount rate which is then applied by the Courts.¹⁵ Within these jurisdictions, differences may however arise. In those countries where there is a federal constitutional structure, then the decentralised States / Provinces may have competence in this sphere (such as in the case of Australia and Canada), in which case this results in an additional layer of complexity, with different processes (and rates) applicable across different States / Provinces. Another related model is where statute appoints a member of the executive to determine the appropriate rate. This is the case in the United Kingdom¹⁶ and Spain,¹⁷ where a member of the executive has been statutorily empowered to set the relevant rate.

18. A **second** approach leaves the decision on the discount rate entirely in the hands of the

¹³ Report of Professor Mark Lunney dated 8 April 2017, paragraph 7.

¹⁴ Notably the Canadian provinces of British Columbia, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island, and the Northwest Territories and the territory of Nunavut. See further Report by Shane C. D'Souza and Ralph Fenik dated 10 April 2017, paragraph 5.

¹⁵ Report of Professor Mark Lunney dated 8 April 2017, paragraph 8.

¹⁶ Damages Act 1996.

¹⁷ The discount rate is set according to an actuarial formula: see Report by Dr María Paz García Rubio and Dr Marta Otero Crespo dated 15 April 2017, paragraph 9.

judiciary,¹⁸ so that the trial judge is empowered to make findings as regards both liability and quantum. This is the case in Hong Kong, Ireland, South Africa as well as the Canadian provinces of Alberta and Newfoundland and Labrador and the Yukon Territory. Such a court-centered process gives rise to a variety of different possibilities in terms of the methodology applied by the court to reach the discount rate, which we will discuss below.

19. A **third** approach is a hybrid situation allowing for a combination of the above. In Ireland, despite the option given to the Minister for Justice to set the rate by Section 24 of the Civil Liabilities and Courts Act, the current practice is that the rate is determined by the courts (and indeed no discount rate or actuarial tables have been prescribed). In the Canadian Province of Ontario, where despite the fact that the bifurcated discount rate is set by regulation, Shane C. D'Souza and Ralph Fenik note in their national report that "an Ontario Court has the discretion to depart from the prescribed discount rate if justified by the evidence and circumstances."¹⁹ In Spain, the statutory provision is for injuries caused by road traffic accidents however the Courts, using general principles including those of equality, equity and legal certainty, have applied the same approach to other personal injury claims.²⁰ However even here the Courts have clearly articulated that the established scales are not binding in cases that fall outside the limited scope for which they were intended. The Court therefore plays a strong role in the setting and application of the discount rate.

Process for setting the relevant discount rate

20. An additional consideration is the **actual procedure** for setting the discount rate. These patterns are again quite diverse, and to a certain extent dependent upon the identity of the decision-maker.
21. In those jurisdictions where the competence for setting the **discount rate is statutory**, then a number of issues may arise as to how exactly the rate is reached by the legislator. In some jurisdictions, the actual level of the discount rate can specifically be set by statute. In Australia, the rate to be applied is primarily to be set by secondary legislation, with a default rate set in the initial primary legislation. However, Professor Mark Lunney has noted that the default rate has remained applicable in all those Australian States adopting a statutory approach: "No jurisdiction has altered the rate by secondary legislation so the default figure operates in all jurisdictions."²¹
22. In other jurisdictions, the legislation may not have provided for a specific figure and instead the methodology for reaching the required rate has been specifically prescribed in the relevant legislation. Spain is a good example of this approach. In this jurisdiction, the discount interest rate is set following an elaborate actuarial basis.²² The actual variable was used to set the scales included in the legislation, but is in practice calculated by the

¹⁸ Note that in the US, the presence of juries in civil cases means that it is the jury which plays a predominant role in determining damages awards, and this thus makes it very difficult to study methodologies as to quantum. In Canada, there are jury trials for civil matters, though they are significantly rarer than in the US.

¹⁹ Paragraph 8. Though they recognise that this in practice rarely occurs.

²⁰ Report by Dr María Paz García Rubio and Dr Marta Otero Crespo dated 15 April 2017, paragraph 2.

²¹ Report of Professor Mark Lunney dated 8 April 2017, paragraph 8.

²² See Report by Dr María Paz García Rubio and Dr Marta Otero Crespo dated 15 April 2017, paragraph 9.

Directorate-General of Insurance and Pension Funds, a body under the auspices of the Ministry of Economy and Competitiveness.²³ In the Canadian Province of Ontario, Shane C. D'Souza and Ralph Fenik explain that the bifurcated discount rate is "set annually by the Attorney General, following receipt of advice from the Civil Rules Committee, a body which is composed of 29 members predominantly drawn from the judiciary, but which also includes representatives of the Court services administration as well as the private bar."²⁴

23. In those jurisdictions **where the Courts are empowered to set the relevant rate**, then the approach is equally varied. Across the jurisdictions, the Courts have adopted different methodologies for arriving at the relevant figure. **First**, according to what is often known as the conventional approach to the quantification of recurring future loss, the courts proceed in applying the standard multiplicand / multiplier approach with, in general, the latter multiplier being adjusted so as to apply a discount. This was the traditional approach under English law.²⁵
24. **Second**, in other jurisdictions, there has been an evolution away from the strict adherence to the conventional approach, with it being accepted that the **courts can examine statistical data** in determining the approach to recurring future loss, in particular as to the adjustment that should be made to the lump sum, for instance in determining what is a realistic rate of return to take into account. Thus, the national rapporteurs for Ireland, Keane, Strahan and Meghen of Arthur Cox have noted that in setting the discount for accelerated receipt, the judges accept that the claimant can adopt "the most risk averse investment reasonably available."²⁶ In other systems, such a **modified conventional approach** has also led the courts to take into account statistical analysis by tailoring the rates and the approach to different time periods over which the loss is to be calculated. This is the case in Hong Kong, where the national reporter Dr Chan indicates that the basic approach to the quantification of recurring future loss includes the multiplicand / multiplier approach with the latter being determined in accordance with the actuarial tables, but with an adjustment made to the lump sum to take account of accelerated receipt. He thus notes that the "discount rate is the annual net rate of investment return in excess of inflation that a claimant is assumed to achieve on the lump-sum award", and that in the leading Hong Kong decision of *Chan Pak Ting (No.2)*,²⁷ the judge set 3 different discount rates, reflecting the investment choices of each class of investors as driven by their specific needs and goals.²⁸
25. **Third**, there are also jurisdictions in which the courts have undertaken a much more ambitious reappraisal of the approach to assessing future harm, which is heavily reliant upon statistical and actuarial evidence provided by experts. This evidence-based approach is reflected in the Privy Council's decision in *Simon v Helmot*,²⁹ concerning a claim originating in Guernsey, Channel Islands. The Privy Council adopted earlier House of Lords methodology of compensation for future losses and brought it up to date, upholding the decision of the Guernsey Court of Appeal that, on the facts of that particular case, the

²³ The current interest rate is 3.5 %.

²⁴ Paragraph 6.

²⁵ See e.g. *Wells v Wells* [1999] 1 AC 345 (House of Lords).

²⁶ Report of Orla Keane, David Strahan and Grace-Ann Meghen dated 4 April 2017, paragraph 15.

²⁷ [2013] HKC 365

²⁸ The rates were 2.5% for needs exceeding 10 years, 1% for needs exceeding 5 years but not exceeding 10 years, and -0.5% for needs not exceeding 5 years.

²⁹ [2012] UKPC 5.

discount rate should be -1.5% for earnings-related losses and 0.5% for other future losses. This approach requires extensive use of expert evidence. In South Africa, the courts also rely upon actuarial principles and calculations to reach the discount rate,³⁰ rejecting the idea of the judge making a round estimate of an amount which seems fair and reasonable as “entire guesswork” and a “blind plunge into the unknown.”³¹ The use of actuarial principles by the courts was recently confirmed by the Supreme Court of Appeal (second highest Court in South Africa) in *RAF v Sweatman*.³²

26. Over and above these differences in process, most countries have in place measures for **review of the discount rate**. The approach here again differs somewhat across jurisdictions. In those countries where there is a statutory basis to discount rates, there can be a formal procedure for review such as in Spain, where a monitoring committee has been formally established with a mandate to undertake a periodical review, and which can theoretically give rise to the Directorate-General of Insurance and Pension Funds revising the technical actuarial basis and discount rate.³³
27. Revisions to the discount rate should be distinguished from amendments to the methodology for setting the discount rate. For instance, in Ontario the method for setting the rate is established by law and therefore whilst the Attorney General revises the rate annually, revisions to the methodology will necessarily require legislative action.³⁴

Concrete Application of Discount Rates

28. We have examined in broad terms the identity of the decision-maker and the process for setting the discount rate across the different jurisdictions, and will now turn to examine the different **levels of discount rate** found in the various jurisdictions. As with the previous aspects, there is also considerable divergence in *how* the rate is applied in practice.
29. The variances discussed throughout this briefing paper have a real impact on the actual discount rates applied. Indeed, it is striking from the different national reports that there is a broad range of rates, ranging from 6% in the Australian State of Victoria (for motor vehicle and workplace accident victims)³⁵ to 3.5% in Spain,³⁶ to -0.5% for claims not exceeding 5 years in Hong Kong,³⁷ and to -0.75% in the case of the United Kingdom. These variances have considerable practical impact on the size of damages awards, and relate to a different series of applicable factors.

³⁰ Though note the limitations on how far the statistical evidence will be used to take account of individual circumstances : Report by Johan de Waal, dated 19 April 2017, paragraph 16.

³¹ *Southern Insurance Association Ltd v Bailey NO 1984 (1) SA 98 (A)* at 113F – 114A. See further Report on South Africa by Johan de Waal, dated 19 April 2017.

³² 2015 (6) SA 186 (SCA). See Report by Johan de Waal, dated 19 April 2017, paragraph 10.

³³ Report by Dr María Paz García Rubio and Dr Marta Otero Crespo dated 15 April 2017, paragraph 10.

³⁴ Report by Shane C. D’Souza and Ralph Fenik dated 10 April 2017, paragraph 10.

³⁵ Report of Professor Mark Lunney dated 8 April 2017, paragraph 8. And it is 5 per cent for other accident victims.

³⁶ Report by Dr María Paz García Rubio and Dr Marta Otero Crespo dated 15 April 2017, paragraph 9.

³⁷ Report by Dr Felix W.H Chan dated 06 April 2017, paragraph 14.

Unitary or diversity

30. In some jurisdictions, a single, unitary rate has been adopted. This is often the case where the rate has been set by the legislator or by the executive. Simplicity has thus dictated that a single rate is applicable, and this is the case under the current approach in the UK. It has also been the case where the courts have been given the task of setting the discount rate. At common law, the courts in Australia have set a single rate in order to further legal certainty, applying in the case of *Todorovic v Waller*,³⁸ a unique discount rate of 3% for future economic losses in personal injury cases, though in practice this only applies to one Australian jurisdiction (the Australian Capital Territory).³⁹
31. In other countries, a single rate has been rejected in favour of a more nuanced approach by means of a bifurcated or tripartite approach, thereby allowing for a number of different rates to apply. Thus, as we have seen above, a bifurcated approach has been adopted in the Canadian state of Ontario, and a tripartite approach was adopted in the leading Hong Kong decision of *Chan Pak Ting (No.2)*,⁴⁰ where the judge set 3 different discount rates, reflecting the investment choices of each class of investors as driven by their specific needs and goals.
32. In other jurisdictions, a degree of discretion is allowed in respect of the relevant discount rate level. This is also the case in the Canadian Province of Ontario, where despite that fact that the bifurcated discount rate is set by regulation, Shane C. D'Souza and Ralph Fenik note that "an Ontario Court has the discretion to depart from the prescribed discount rate if justified by the evidence and circumstances."⁴¹ In France, despite sectoral legislation and a plethora of guidelines,⁴² the Supreme Courts have always underlined that the trial judge exercises broad discretion in setting the multiplier applicable to reach a lump sum.⁴³
33. Finally, there are jurisdictions in which a full statistical approach to the assessment of future harm has been adopted, which is heavily reliant upon statistical and actuarial evidence provided by experts. As we have seen above, this is notably reflected in the Privy Council's approach in the decision of *Simon v Helmot*.⁴⁴

Applicable factors

34. Where a single rate has not been applied, then a number of different factors can be identified as having influenced the approach of the courts.
35. **First**, whilst in many jurisdictions the discount rate applied is the same across the broad range of personal injury claims, in some other jurisdictions a more fragmented approach

³⁸ (1981) 150 CLR 402.

³⁹ Report of Professor Mark Lunney dated 8 April 2017, paragraph 7.

⁴⁰ [2013] HKC 365. See: Report of Dr. Felix Chan dated 6 April 2017.

⁴¹ Report by Shane C. D'Souza and Ralph Fenik dated 10 April 2017, paragraph 8. Though they recognise that this in practice rarely occurs.

⁴² See generally M.Le Roy, J-D, Le Roy, F.Bibal, *L'Evaluation du Préjudice Corporel* (20th Edn, Paris, LexisNexis, 2015) paras 198 – 200.

⁴³ Cass 2, 18 Oct 1995, Bulletin 1995 II N° 248 p. 145; CE 4 Dec 2009, N°309521.

⁴⁴ [2012] UKPC 5.

has arisen, with the rate depending on the circumstances of the injury. Australia is a good example of this phenomenon, with a plethora of different rates applying in different States and for different types of accident. An excerpt from Professor Lunney's survey of the different rates reveals that "[i]n Victoria, the rate for motor vehicle and workplace accident victims is six (6) per cent but is five (5) per cent for other accident victims. In Queensland, the rate is five (5) percent for all accident victims. In Tasmania, it is five (5) per cent for non-workplace accident victims and three (3) per cent for workplace accident victims."⁴⁵

36. **Second**, in some jurisdictions, the rate varies according to the type of loss sustained, in particular whether this relates to earning or non-earning related losses. In some countries, the discount rate thus applies exclusively to earnings related losses. In others, as is the case in Ireland, a different rate applies to earnings related losses (1.5%) as opposed to non-earnings related losses (1%).⁴⁶ This also applies in several Canadian provinces where the rate for future wage loss is lower than the rate for future care. In Quebec for instance, the rate for wage loss is 1% whilst that for future care (goods) is 3.25%. Some jurisdictions do not create such a distinction. For instance, in Hong Kong, Dr Chang notes that in *Chan Pak Ting (No. 2)* the Court held that "the economic data of Hong Kong show that the difference between price inflation and wage inflation (from 2001 to 2012) was only 0.43%, which was not substantial enough to justify separate discount rates for earnings-related and non-earnings related losses."⁴⁷

37. **Third**, the relevant time period may constitute a relevant factor in terms of the level of the adjustment applied to a lump sum. In the Canadian Province of Ontario, where the rule is set by Regulation, the discount rate differs depending upon the relevant time period concerned, with a bifurcated rate varying between the first fifteen years and any years thereafter. In the Canadian Province of Ontario, Shane C. D'Souza and Ralph Fenik explain that "[t]he rate applicable to damages in the 15 years following the start of the trial is the greater of either (a) zero, or (b) the average return rate on a prescribed day for specific long-term Government of Canada real return bonds, less ½ per cent and rounded to the nearest 1/10 per cent...The rate applicable to losses after 15 years from the start of the trial is 2.5% per year for each year in that period."⁴⁸ In Hong Kong, Dr Chan explains that the judge in *Chan Pak Ting (No.2)* accepted that different time periods of investment were relevant, relating to needs exceeding 10 years, those exceeding 5 years but not 10 years, and those not exceeding 5 years, and that these "set 3 different discount rates, reflecting the investment choices of each class of investors as driven by their specific needs and goals."⁴⁹

⁴⁵ Report of Professor Mark Lunney dated 8 April 2017, paragraph 8. (footnotes removed)

⁴⁶ Report of Orla Keane, David Strahan and Grace-Ann Meghen of Arthur Cox, dated 4 April 2017, paragraph 17.

⁴⁷ Report of Dr. Felix Chan dated 6 April 2017, paragraph 18.

⁴⁸ Report by Shane C. D'Souza and Ralph Fenik dated 10 April 2017, paragraphs 7 - 8. See also paragraph 11 on the likely trajectory moving forward.

⁴⁹ Report of Dr. Felix Chan dated 6 April 2017, paragraph 12.

Conclusion

38. The comparative analysis in this Briefing Note reveals a number of trends and differences across the jurisdictions both in terms of the level of the discount rate, the process and basis for setting that rate and the methodology and frequency of its review. It is particularly striking that the level of the discount rate across the representative countries is so different.⁵⁰ It is thus tempting to ask why this is so? Whilst it is difficult to draw definitive comparative law conclusions on the basis of this short Briefing Note, undertaken on the basis of a limited number of jurisdictions in a limited time-scale, it is perhaps possible to make some tentative comments.
39. **First**, it is possible to identify particular contextual factors in certain jurisdictions which have played a role in shaping the overall approach to the discount rate in personal injury cases. This can relate to particular economic factors in the jurisdiction concerned. Such an example can be found in Hong Kong, where as noted above,⁵¹ the economic data has shown that price differential between price and wage inflation has been relatively low, which has meant that there was no need to make a difference between specific types of loss for the purpose of the discount rate. As the national reporter, Dr Chan noted, the economic data showed that the average differential between price and wage inflation was relatively low, and thus the court held that this was “not substantial enough to justify separate discount rates for earnings-related and non-earnings related losses.”⁵² A different approach was adopted in Ireland, however, in which the Irish Court of Appeal held in the decision of *Gill Russell (a minor) v Health Service Executive*⁵³ whereas the discount rate should be 1.5% for future loss, but that in respect of the “claim for future care”, “the rate was reduced to 1% to take account of the extent to which wage inflation was likely to exceed the Consumer Price Index over the course of [the claimant’s] lifetime.”⁵⁴
40. Another contextual factor is related to the availability of various financial instruments in particular jurisdictions. In certain jurisdictions, there would appear to be no equivalent of the Index Linked Government Securities (‘ILGS’) which were introduced into the UK in the 1980s, and allowed for a stable rate on return whilst protecting a claimant against inflation. This is certainly the case in Hong Kong, as noted by the National Reporter,⁵⁵ and thus without the presence of government index-linked bonds, the courts are thus deprived of a ready financial instrument allowing for a stable rate of return whilst protecting a claimant against inflation.
41. **Second**, it is important to take into account the issue of policy factors underpinning certain decisions as to discount rates. At first glance, that might seem a surprising position, given that the ostensible reason for applying a discount to lump sums is the desire simply to take

⁵⁰ See paragraph 29 above.

⁵¹ See paragraph 36 above.

⁵² Report of Dr. Felix Chan dated 6 April 2017, paragraph 18.

⁵³ *Gill Russell (a minor) suing by his mother and next friend Karen Russell v Health Service Executive* [2015] IECA 236.

⁵⁴ Report of Orla Keane, David Strahan and Grace-Ann Meghen of Arthur Cox, dated 4 April 2017, paragraph 17.

⁵⁵ Report of Dr. Felix Chan dated 6 April 2017, paragraph 17. A similar reason of the lack of inflation-proof investment products was cited in Singapore as a reason for the reluctance to move away from the conventional approach to discount rates : see *Lai Wai Keong Eugene v Loo Wei Yen* [2013] SGHC 123, at [75.]

account of investment opportunities associated with accelerated receipt, so as to avoid over compensation.⁵⁶ That however does not lead to a merely mathematical process. In fact, what transpires is that the setting and use of such a discount rate is not solely a mechanical process or mathematical equation, but is also a process which is also swayed by policy concerns. Thus, in certain jurisdictions, the recognition of the overall importance of legal certainty is recognised, and that may well have played a role against the adoption of a full actuarial or statistical approach which can lead to complex evidential issues and associated increase in litigation costs. In Australia, where the discount rate at common law is 3%, Professor Lunney notes that “a primary driver” of the majority in the leading case was “to promote uniformity in the discount rate given the discrepancy that had arisen between the rate chosen in different state courts.”⁵⁷ In England and Wales, the adoption of a single rate by the Lord Chancellor was said to be underpinned by the desire “to promote certainty and because it would be easy to apply in practice.”⁵⁸

42. Other factors are also relevant, and as a counterpoint to any suggestion that the approach to discount rates is merely a neutral application of figures, the comments of Professor Mark Lunney in the report on Australia are revealing. Professor Lunney observes that that the setting of the level of discount rate in Australia -as no doubt must apply in other systems- represents a balance between competing considerations, resulting in a “compromise between a discount that accurately reflects the real rate of return a tort plaintiff might obtain if investing in reasonably safe investments and one that takes into account the fact that too low a rate of return might have adverse consequences on the provision and cost of liability insurance.”⁵⁹ The complex interface of those competing considerations might therefore be one explanation for the noticeable reluctance of certain legislatures and executives in shying away from setting a rate due to the controversial policy ramifications.⁶⁰

Annexes

- Annex 1: Questionnaire
- Annex 2: Australia Report
- Annex 3: Canada Report
- Annex 4: Hong Kong Report
- Annex 5: Ireland Report
- Annex 6: South Africa Report
- Annex 7: Spain Report

⁵⁶ See Report of Professor Mark Lunney dated 8 April 2017, paragraph 6; Report of Orla Keane, David Strahan and Grace-Ann Meghen of Arthur Cox, dated 4 April 2017, paragraph 26; and Report by Dr María Paz García Rubio and Dr Marta Otero Crespo dated 15 April 2017, paragraph 6.

⁵⁷ Report of Professor Mark Lunney dated 8 April 2017, paragraph 10.

⁵⁸ See the comments in *Simon v Helmot* [2012] UKPC 5, at [20].

⁵⁹ Report of Professor Mark Lunney dated 8 April 2017, paragraph 15.

⁶⁰ Professor Mark Lunney has noted that, despite the fact that the discount rate to be applied is primarily to be set by **secondary** legislation, the default rate found in **primary** legislation has remained applicable in all those Australian States adopting a statutory approach: “No jurisdiction has altered the rate by secondary legislation so the default figure operates in all jurisdictions.” (Report of Professor Mark Lunney dated 8 April 2017, paragraph 8.)

Annex 1

Questionnaire

Comparative law research concerning the discount rate applying to quantum in personal injury cases: Questionnaire for National Rapporteurs

Introduction

1. The British Institute of International and Comparative Law has been commissioned by the UK Ministry of Justice to undertake a comparative study of the discount rate applying to quantum in personal injury cases. The study will examine specifically, in respect of a selected group of jurisdictions, the issue of how the overall award of damages to compensate recurring heads of future loss is adjusted to take account of accelerated receipt of damages and the associated investment opportunities. Particular focus will be upon the methodology and procedure, as well as the institution responsible for deciding upon the exact level of this adjustment.

Application of the discount rate to Lump Sum Payments

2. An amount for future financial losses is often included in compensation for tort / delict, such as future care and/or future lost earnings. Across different jurisdictions, the rules for the calculation of quantum in respect of such losses can vary, but in English law, as in many other common law systems, such compensation is calculated by applying a "multiplier" to an annual amount of financial loss (the "multiplicand") so as to take account of that future loss (though in certain civil and common law jurisdictions a very different approach is adopted, such as by means of a tariff system).

The Situation in the United Kingdom

3. In the United Kingdom, when damages are awarded for future loss, the award is adjusted to take account of the effect of the claimant being able to invest the money before the loss or expense for which it is awarded has actually occurred. For example, in the case of a birth injury where brain damage has resulted, damages for the future loss – for example, future care costs – may be awarded for a very long future period, effectively a lifetime, and the accelerated receipt of sums to cover loss for that period means that the money can be invested and accrue value for a number of years before the claimant would actually require the money to meet those costs. The value of the lump sum is therefore adjusted by a factor

that represents the appropriate rate of return on investing the award. This is what is known as the “discount rate”.

Recent developments in the UK and context for this research

4. On 27th February 2017, the Lord Chancellor announced a change in the personal injury discount rate as it applies to England and Wales. The new rate is minus 0.75%. The Lord Chancellor is empowered to set the rate under section 1 of the Damages Act 1996, and the courts must take into account the rate set when settling the size of lump sum damages awards for future pecuniary loss caused by a personal injury. When the Lord Chancellor made her announcement of the new rate she said she would consult on whether the method for setting the discount rate should be changed. The current survey is undertaken within the context of that consultation.

Issues to be covered by National Rapporteurs

5. We envisage that the following issues should be addressed in the report of National Rapporteurs :-
 - a) **On what basis are personal injury damages awards assessed in your jurisdiction?**
6. National Rapporteurs should give a very brief overview of the approach to the award of damages for personal injuries in their jurisdiction. It should be explained (briefly and only in general terms) whether the award is meant to compensate fully for the losses suffered as a result of the injury and how the assessment of future loss in personal injuries cases is undertaken in the jurisdiction. Is this undertaken by means of the award of a lump sum? If so, is the multiplicand/multiplier approach used in setting the lump sum? If so, briefly explain how the multiplicand and multiplier are calculated. If not, please indicate briefly the main differences.
7. It would also be helpful if National Rapporteurs could indicate whether instead of a lump sum for future loss it is possible for periodical payments to be awarded for personal injury damages in their jurisdiction so that the defendant or, for example, its insurer pays the expected losses at the times they are planned to occur in a series of inflation protected payments. If so, it would be useful to have a brief description of the circumstances in which periodical payments can be awarded. How, if at all, is the erosion of monetary value taken into account (e.g. are periodical payments index-linked)? It would be helpful also to have an indication from the rapporteurs on the extent to which the option of periodic payments is in fact taken up.

b) Application of a discount rate, or rates, to lump sum awards

8. National Rapporteurs are asked to confirm whether in their jurisdiction lump sum awards are adjusted to take account of accelerated receipt i.e. an adjustment is made to an award for the effect of the claimant being able to invest the money before the loss or expense for which it is awarded has actually occurred.
9. National Rapporteurs should explain how the award is so adjusted. How is the adjustment rate ("discount rate") determined? Does it relate to a specific rate of return on capital? Is reference made to a particular financial instrument / or alternatively to central bank figures? If not, what are the relevant factors / parameters for defining how the rate is set? Is allowance also made for the effect of inflation (e.g. is a "real" rate of return set)?
10. In undertaking the adjustment, is any distinction made between different types of harm, such as between earnings and non-earnings related losses, or when the loss is expected to occur? If so, National Rapporteurs are asked to provide a very succinct explanation of the relevant types of loss, and how the method of adjustment/discount rate is calculated for each type of loss.
11. It would be helpful if a word could be included about whether contingency deductions are made for other factors such as risk of premature death or illness or labour market hazards or the impact of taxes or otherwise? Please also indicate if different rules apply to losses sustained over different time periods in the future.

c) Details concerning the process for setting the relevant discount rate

12. Another concern for us is to know more about **the actual process of setting the discount rate**. Who is responsible for determining the relevant level of the discount rate referred to above? Is the rate in question fixed by the executive, an independent body, or instead determined by the courts? What is the legal basis for this process?
13. If there is a court-based procedure by which the judge sets the relevant discount rate, are guidelines (or actuarial tables) provided to guide the judge in this process? If so, by whom? If a broad discretion is accorded to judges in undertaking this exercise, is it possible to give a steer as to how the judge exercises this discretion (with, if possible, reference to judgments)? Which factors are relevant? Are the parties in litigation expected to provide evidence on this issue in order to assist the judge?
14. If the discount rate is instead set by the Executive / or an independent body, what is the relevant procedure for setting the discount rate? How frequently are reviews undertaken? What factors are taken into account by the Executive / or an independent body in undertaking the review?

15. The aforementioned issues in this section are closely related to those in the previous section, and National Rapporteurs might want to answer these issues in a combined response.

National Report & Timings

16. We would like to ask you to prepare a short report responding to the series of issues above. At this stage, we require simply a brief description of the relevant legal rules as they currently stand and it is not necessary for any critical appraisal to be given of those rules.

17. Given the MoJ consultation deadlines, we would need your report by 7 April 2017.

18. BIICL will then produce a comparative law report based on the country reports provided by the National Rapporteurs.

Duncan Fairgrieve

Jean-Pierre Gauci

British Institute of International and Comparative Law, London

20 March 2017

Annex 2

AUSTRALIA

Professor Mark Lunney*

A) On what basis are personal injury damages awards assessed in your jurisdiction?

1. This report is concerned with damages awards in tort claims in Australian jurisdictions. It does not consider awards of compensation under no-fault workers compensation or motor vehicle accident schemes. Such schemes usually award future economic loss by way of periodic payments so discount rates are largely irrelevant in such schemes.
2. Personal injury damages awards in Australia are the province of state jurisdictions. Although damages can be awarded in the exercise of a federal jurisdiction (for example, for a cause of action created by a federal statute), these damages are awarded either by adopting the damages regime of the state in which the court exercising federal jurisdictions sits or by federal legislative damages regimes that mirror in essential characteristics the law of the states.
3. The primary means by which compensation is paid for personal injury suffered as a result of a tort is a once-and-for-all lump sum award.⁶¹ Although there is now significant differences between Australian jurisdictions in the calculation of the lump sum (through caps and thresholds), the lump sum itself is common throughout Australia.
4. There are very few exceptions to lump sum awards in personal injury actions. Statutory provisions in South Australia and Western Australia provide for periodic payments in limited circumstances⁶² but a leading text comments that there are no reported cases in which the

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⁶¹ *Todorovic v Waller* (1981) 150 CLR 402.

⁶² In South Australia, periodic payments can be awarded as a form of interim damages but the provision allows for such payments to be made 'until further order' although the provision seems to assume a final order being made: *Supreme Court Act 1935* (SA) s 30B. In Western Australia the power lies only in motor vehicle accidents: *Motor Vehicle (Third Party Insurance) Act 1943* (WA) s 16. In both jurisdictions the periodic payment can be reviewed on an application by the parties (or in Western Australia on the court's own motion) but no guidance is given as to how the review should be conducted. In New South Wales, a general power is given to the court to make 'one or more payments' on an interim basis which would include some form of periodic payment: *Civil Procedure Act 2005* (NSW) s 82. Again, it is clear the provision contemplates a lump sum award being made as the interim payments are not to exceed 'a reasonable proportion of the damages that, in the court's opinion, are likely to be recovered by the plaintiff' (s 82(5)).

power to make such an award had been exercised.⁶³ Structured settlements – which usually provide a mix of lump sum and periodic payments – can be ordered by a court in all but one Australian jurisdiction⁶⁴ but only with the consent of the parties. In some jurisdictions provisional⁶⁵ or interim⁶⁶ damages are available but these do not change the fundamental nature of the underlying lump sum award.

5. Broadly, damages for future loss are assessed by using the multiplicand/multiplier method. As in English law, the multiplicand is based on the net annual loss that the plaintiff will suffer post-trial as a result of the tort. The multiplier is multiplied by a figure that is based on the length of time for which the loss will be suffered but the actual figure used reflects a discount that is applied to awards of damages relating to future economic losses. The amount so calculated is then adjusted (usually downwards) by a percentage for contingencies, the primary one being that the plaintiff may have suffered the losses in future even in the tort had not occurred.

b) Application of a discount rate, or rates, to lump sum awards

6. Australian courts take account of the investment possibilities given to a plaintiff by receiving a lump sum award which covers losses that will be incurred post-trial. At common law, this was affirmed by the High Court of Australia in 1981 where a majority held that some form of discount on damages awarded to compensate future losses was required to prevent the plaintiff from being overcompensated.⁶⁷
7. Although in practice the discount is reflected in the multiplier that is chosen, the multipliers themselves are based on the particular discount rate that is chosen by which the award is to be reduced. At common law, the amount of the discount is three (3) percent.⁶⁸ However, the common law discount only applies in one Australian jurisdiction (the Australian Capital Territory). In all other jurisdictions the discount rate is set by statute. Moreover, in some jurisdictions the discount rate is set separately for workplace and motor vehicle accident plaintiffs than for other accident victims. In all Australian jurisdictions, the discount applies generally to any future economic losses. In practice, the discount primarily affects claims

⁶³ R Balkin & J Davis, *Law of Torts* (Lexis Nexis, 5th edn, 2013) 378.

⁶⁴ The Australian Capital Territory.

⁶⁵ These awards are available only in relation to dust or asbestos related diseases in South Australia, New South Wales, Victoria and Tasmania: *Dust Diseases Act 2005* (SA) s 9; *Dust Diseases Tribunal Act 1989* (NSW) s 11A; *Asbestos Diseases Compensation Act 2008* (Vic) s 4; *Civil Liability Act 2002* (Tas) s 8B. Provisional damages are awarded when there is a risk that the plaintiff may suffer a dust or asbestos-related condition as a result of the tort which has not manifested itself by the date of trial. Damages are awarded on the basis that the condition will not occur with leave given to the plaintiff to return to court at a later date to seek additional damages if the condition does materialise. Awards are only available for contracting a new condition, not an increase in severity of an existing condition. There are considerable limitations attaching to these awards (e.g. that only one further application for additional damages may be made in relation to each condition specified in the award: see *Asbestos Diseases Compensation Act 2008* (Vic) s 5; *Dust Diseases Tribunal Rules* (NSW) Reg 5).

⁶⁶ Interim awards of damages are made where the defendant's liability is established but it is ordered that quantum be assessed at a later date. In the interim period between the liability judgment and the quantum judgment, interim damages can be awarded in a number of Australian jurisdictions (see n 2, above).

⁶⁷ *Todorovic v Waller* (1981) 150 CLR 402.

⁶⁸ *Ibid.*

for future loss of earning capacity but it can apply to any economic loss to be incurred post trial (such as claims for the cost of future caring services).

8. The current discount rates are as follows. In New South Wales, the discount rate is five (5) per cent for all accident victims.⁶⁹ In Victoria, the rate for motor vehicle and workplace accident victims is six (6) per cent but is five (5) per cent for other accident victims.⁷⁰ In Queensland, the rate is five (5) percent for all accident victims.⁷¹ In Tasmania it is five (5) per cent for non-workplace accident victims and three (3) per cent for workplace accident victims.⁷² In Western Australia the rate is six (6) per cent for all accident victims.⁷³ In South Australia the rate is five (5) percent for all accident victims.⁷⁴ In the Northern Territory the rate is five (5) per cent for accident victims who have a claim in tort.⁷⁵ Where federal legislation provides a damages regime for personal injury, the discount is also five (5) per cent.⁷⁶ Almost all of these provisions are in the form that the rate to be applied is a rate prescribed by secondary legislation but that in the absence of such legislation the rate is set at the amount described above. No jurisdiction has altered the rate by secondary legislation so the default figure operates in all jurisdictions. Once the rate has been set by primary or secondary legislation, courts have no power to set an alternative rate.

(C) Details concerning the process for setting the relevant discount rate

9. Discount rates are set on the basis that they reflect the 'real rate of return' that a plaintiff could expect if the component of the damages award relating to future economic losses was invested. In Australia, this means that the discount takes into account the impact of any personal taxation on income derived from the lump sum and also the effects of inflation.⁷⁷
10. It is extremely difficult to give a simple answer as to how the discount rate is set. In *Todorovic v Waller*, a primary driver of the decision of the majority of the High Court of Australia was to promote uniformity in the discount rate given the discrepancy that had arisen between the rate chosen in different state courts. Individual members of the court were influenced by the then current assumptions about rates of return from various investments which makes the judgements of limited use in determining an appropriate rate today but all recognised

⁶⁹ *Civil Liability Act 2002* (NSW) s 14; *Motor Accidents Compensation Act 1999* (NSW) s 127; *Workers Compensation Act 1987* (NSW) s 151J.

⁷⁰ *Transport Accident Act 1986* (Vic) s 93(13); *Workplace Injury Rehabilitation and Compensation Act 2013* (Vic) s 345; *Wrongs Act 1958* (Vic) s 281.

⁷¹ *Civil Liability Act 2003* (Qld) s 57 (which refers to *Civil Proceedings Act 2011* (Qld) s 61); *Workers Compensation and Rehabilitation Act 2003* (Qld) s 306L. Motor accidents are covered under the general civil liability legislation.

⁷² *Civil Liability Act 2002* (Tas) s 28A. Motor accidents fall under this provision. Workplace accidents are governed by the common law rate: *Mercer v Allianz Australia Insurance Ltd* (No. 2) [2013] TASSC 35, [68] per Blow CJ.

⁷³ *Law Reform (Miscellaneous Provisions) Act 1941* (WA) s 5. Motor and workplace accidents fall under this provision.

⁷⁴ *Civil Liability Act 1936* (SA) ss 3, 55; *Return to Work Act 2014* (SA) s 94.

⁷⁵ *Personal Injuries (Liabilities and Damages) Act 2002* (NT) s 22. Workplace and motor vehicle accidents are the subject of no fault schemes.

⁷⁶ *Competition and Consumer Act 2010* (Cth) s 87Y.

⁷⁷ *Todorovic v Waller* (1981) 150 CLR 402.

that any figure chosen was essentially a matter of judgement. Perhaps the best general guidance was given by Gibbs CJ and Wilson:

It would seem to accord with the general approach of the common law that the rate should be that produced by reasonably safe investments - such investments as a prudent man in the position of the plaintiff, very much concerned to preserve his capital, but not over cautious, would make - such investments as loans issued by public authorities such as electricity commissions and water boards, or debentures issued by large well-established industrial companies.⁷⁸

11. Statutory provisions setting discount rates provide no detail on when or how any regulation setting the rate should be determined. Apart Western Australia, which refers to the Governor making an order-in-council determining the rate 'on the recommendation of the Attorney General'⁷⁹, the process is left entirely unregulated.
12. The best evidence obtainable for reasons behind the rates set lies in the evidence to and recommendations of ad-hoc reports of bodies entrusted with reviewing aspects of civil law. In 2002, the Ipp Panel was commissioned to report on ways in which liability under the law of negligence could be reduced in response to what was widely perceived to be an insurance crisis. In that context, the Panel recommended that the common law rate of 3% was the preferred rate. Despite evidence that statutory rates were set at 5% or higher, the Panel thought a 3% discount appropriate in light of evidence from the Australian Government Actuary that a realistic after-tax rate might be 2-4%.⁸⁰ Subsequent tort reform legislation did not adopt this recommendation.
13. It is difficult to generalise but it may fairly be said that there have been two phases in statutory reform of the discount rate. The first reflected the view that the actual returns on investments were sufficiently high to justify an increase in the discount rate beyond 3%.⁸¹ The second and most recent phase recognises that the choice of a discount rate is a balance between fairness to the individual plaintiff and the impact of greater damages awards in individual cases on insurance premiums if a lower discount rate is chosen.

⁷⁸ Ibid, 415.

⁷⁹ *Law Reform (Miscellaneous Provisions) Act 1941* (WA) s 5(2).

⁸⁰ D Ipp et al, *Reform of the Law of Negligence: Final Report* (Commonwealth of Australia, 2002) para 13.106.

⁸¹ See the comments on the Acting Tasmanian Attorney General on introducing legislation in 1986 to increase the discount rate to 7 percent, referring to a plaintiff investing 'at something like 15%': Tasmanian Hansard, House of Assembly, 26 November 1986, 4511. For similar views in Western Australia see the comments of the Premier of Western Australia in 1986 introducing legislation increasing the discount rate to 6% suggesting that 6% was an appropriate rate in the economic circumstances (Western Australian Hansard, Legislative Assembly, 17 June 1986, 299).

14. A good example of this second phase is the report of the Victorian Competition and Efficiency Commission, *Adjusting the Balance: Inquiry into Aspects of the Wrongs Act 1958*, published in February 2014.⁸² Using data on yields on 10 year Commonwealth bonds, the Commission thought that the rate of 5% was too high and could be reduced to 4%.⁸³ However, it did not make this one of its recommendations to government because, while the figure chosen should represent a real rate of return, it was also necessary to consider the effect of changes in the discount rate on the cost of insurance premiums. Given that a discount rate of 5% was widely adopted in Australian jurisdictions and that evidence presented to it from insurers that premiums would rise if a 4% discount rate was chosen, the potential for an unduly adverse impact on insurance premiums — up to eight per cent for medical indemnity premiums — and the greater inconsistency between discount rates across Victorian personal injury Acts if 4% was introduced under the Wrongs Act, led the Commission to make no recommendation in this area.⁸⁴
15. As evidenced by the Victorian report, the discount rate in Australia seems to be set by reaching a compromise between a discount that accurately reflects the real rate of return a tort plaintiff might obtain if investing in reasonably safe investments and one that takes into account the fact that too low a rate of return might have adverse consequences on the provision and cost of liability insurance.⁸⁵ Whether the first phase described above was ever entirely based on market conditions may be doubted, but in the second phase the increase in the discount rate for non-workplace and motor vehicle accidents to the level applying in those categories through tort reform legislation in the early 2000s was a direct response to concerns from the insurance industry. These concerns as to the availability and price of insurance continues to play a role in determining as to the appropriate discount rate.
16. As is apparent from the above, while the factors that influence the setting of the rate are known, the mechanism for determination is much more ad-hoc. When opportunities for reviewing the discount rate arise, the battle lines drawn are predictable: the insurance industry suggests decreases in the rate will raise premiums while plaintiff advocates note the unfairness of setting a rate which does not reflect market conditions.⁸⁶ As the question is decided in each jurisdiction in Australia,

⁸² *Adjusting the Balance: Inquiry into Aspects of the Wrongs Act 1958: Final Report* (State of Victoria, 2014).

⁸³ *Ibid*, Ch 5.3.

⁸⁴ *Ibid*, Ch 5.4.

⁸⁵ See the comments of the New South Wales Government, *Response to the Legislative Council General Purpose Standing Committee No. 1 Inquiry Report into Personal Injury Compensation Legislation* (<https://www.parliament.nsw.gov.au/committees/DBAssets/InquiryReport/GovernmentResponse/5450/Govt%20Response%208%20June%202006.pdf>), June 2006, 6: 'As the Government sees it, the task is to strike a balance between the rights of the injured person to compensation, and the ability of the rest of the community to pay for that compensation.'

⁸⁶ *Adjusting the Balance: Inquiry into Aspects of the Wrongs Act 1958: Final Report* (State of Victoria, 2014), Ch. 5.4.

See also Legislative Council of New South Wales, General Purpose Standing Committee No. 1, Personal Injury Compensation Legislation, 28 February 2006: <https://www.parliament.nsw.gov.au/committees/DBAssets/InquiryReport/ReportAcrobat/5450/Final%20Personal%20Inj>

insurers are also able to argue that reducing the rate in one jurisdiction would mean it would be 'out of line' with rates in other jurisdictions.⁸⁷ Given that primary or secondary legislation is required to change existing rates so that the decision is essentially political, this creates something of a stasis in the absence of compelling evidence to change the status quo.⁸⁸ This may well explain the dearth of legislative change to rates once initially established. Moreover, the availability in Australia of a variety of no-fault benefits payable to accident victims in workplace and motor vehicle accidents – where periodic payments are the norm – mean that the discount rate may be less significant in practice, albeit that it highlights the disparity between the treatment of accident victims depending where the accident took place.

Date: 8 April 2017

[ury%20Report%208%20Dec%202005.pdf](#), Ch. 16, finding that the 5% discount rate was too high and suggesting a rate of 3% be adopted.

⁸⁷ See the response of the New South Wales Government to the recommendation made in the report by General Purpose Standing Committee No. 1, above n 19, that in no other jurisdiction was the prescribed rate less than 5%.

⁸⁸ Cf. *Discount Rate Reduction (Miscellaneous Acts Amendment) Bill 2017* (NSW), a private members bill to reduce the discount rate in New South Wales for all accidents to 3%. Despite the coincidence, the member introducing the bill made no reference to contemporary debates on the issue in the United Kingdom.

Annex 3

CANADA

Shane C. D'Souza and Ralph Fenik*

(A) On what basis are personal injury damages awards assessed in your jurisdiction?

General Damages Principles

1. A plaintiff has the onus of proving her damages with cogent fact and expert evidence if liability is established. The plaintiff may be entitled to pecuniary damages (such as past care, future care, past and future loss of income, loss of support, out of pocket expenses), non-pecuniary damages (general damages, statutory damages for family members), and rarely, punitive damages. With respect to future care costs,⁸⁹ a plaintiff must prove that the proposed expenditure is medically justified and reasonable given the plaintiff's specific limitations, and that the quantum sought is fair to all parties.⁹⁰

Personal Injury Damage Awards

2. Currently, awards of damages are, subject to any liability apportionment, intended to provide full compensation for losses sustained. In general terms, compensation is predicated on the principle of *restitutio in integrum*.
3. The assessment of future losses is determined by a multiplier/multiplicand methodology.⁹¹ Specifically, a discount factor is applied to the annual future needs to calculate the present value (i.e. lump sum) required to satisfy the future financial loss.
4. Based on expert evidence led by the parties at trial, or on consent, the Court makes contingency adjustments for both mortality and morbidity in calculating damages.

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⁸⁹ The cost of medical care or treatment, rehabilitation services or other care, treatment, services, products or accommodations that is incurred at a time after judgment.

⁹⁰ *Milina v. Bartsch*, [1985] B.C.J. No. 2762, at paras. 198-200 (S.C.), aff'd. [1987] B.C.J. No. 1833 (C.A.); See also *Andrews v. Grand & Toy Alberta Ltd.*, [1978] 2 S.C.R. 229.

⁹¹ *Andrews v. Grand & Toy Alberta Ltd.*, [1978] 2 S.C.R. 229 (SCC); *Thornton v. School District No. 57 (Prince George) et al.*, [1978] 2 S.C.R. 267 (SCC); and *Arnold v. Teno*, [1978] 2 S.C.R. 287 (SCC).

(b) Application of a Discount Rate to lump sum amounts

5. In Canada, the provinces of British Columbia, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island, and the Northwest Territories and the territory of Nunavut each use a discount rate that is set by statute or regulation; whereas the provinces of Alberta and Newfoundland and Labrador and the Yukon Territory have no statutory discount rate, and instead require that expert evidence, of economists and actuaries, be lead to allow the Court to determine the discount rate applicable in a given action. Appendix “A” herein briefly summarizes the discount rate applied in various Canadian provinces and territories.⁹²
6. For instance, since 2000, Ontario has used a statutory discount rate, the present formula for which is set out in Rule 53.09 of the *Rules of Civil Procedure*⁹³ (see Appendix “B”). The Rule 53.09 discount rate is bifurcated (depending on the period to which the damages relate) and set annually and by the Attorney General, following receipt of advice from the Civil Rules Committee, a body which is composed of 29 members predominantly drawn from the judiciary, but which also includes representatives of the Court services administration as well as the private bar.
7. The rate applicable to damages in the 15 years following the start of the trial is the greater of either (a) zero, or (b) the average return rate on a prescribed day for specific long-term Government of Canada real return bonds, less ½ per cent and rounded to the nearest 1/10 per cent (see Rule 53.09(1)(a) in Appendix B). The choice of this 15-year “select” period is reflective of the duration of these long-term Government of Canada real rate of return bonds, for which there is a sufficiently liquid market that their yields are, generally, reliable. Nevertheless, the negative ½ per cent adjustment in the formula acknowledges that these bonds have more limited marketability (than do other Government of Canada bonds), given that they are primarily the domain of institutional investors, which likely has the effect of reducing their prices and increasing their yields somewhat.
8. The rate applicable to losses after 15 years from the start of the trial is 2.5% per year for each year in that period (see Rule 53.09(1)(b) in Appendix B). Ontario’s 2.5% fixed rate is an attempt to reflect the long-term real rate of return. (During the period from 1950 through 2000, the annualized real rate of return on conventional Canadian bonds was 2.5%.⁹⁴).

⁹² This information is currently as of March 31, 2017.

⁹³ The Civil Rules Committee has the mandate to make recommendations to the Attorney General for rules in relation to civil practice and procedure. The committee members include judges, lawyers, representatives of court services and members of the private bar. See

https://www.attorneygeneral.jus.gov.on.ca/english/courts/civil/civil_rules_committee.php

⁹⁴ Dimson, Elroy, Paul Marsh, and Mike Staunton. *Triumph of the Optimists: 101 Years of Global Investment Returns*, p. 80. Princeton University Press, 2002.

Rule 53.09 ensures that the applicable discount rate is objectively determined, without the need for expert evidence. However, an Ontario Court has the discretion to depart from the prescribed discount rate if justified by the evidence and circumstances, albeit this is rarely done because of the obvious difficulty associated with arguing against the collective wisdom supporting the prescribed rate.

(C) Details concerning the process for setting the relevant discount rate

9. In Ontario, discount rates based on Rule 53.09 are published online by the Attorney General.⁹⁵ (See Appendix “C” for statutory discount rates in Ontario since their inception in 2000.)
10. For amendments to the methodology of Rule 53.09(1)(a), or generally to Rule 53.09, Section 66(2)(p) of the *Courts of Justice Act*⁹⁶ allows the Civil Rules Committee, subject to the approval of the Attorney General, to make rules for the Ontario Court of Appeal and the Ontario Superior Court of Justice in respect of the discount rate, and Section 66(4) of the *Courts of Justice Act*⁹⁷ requires that the Civil Rules Committee review the discount rate rule at least once every four years. The quadrennial review of Rule 53.09 is undertaken by a subcommittee of the Civil Rules Committee, which Subcommittee receives submissions from, among others, economists, actuaries, and the personal injury bar as part of forming its recommendations with respect to any amendments to Rule 53.09. The last such review of Rule 53.09 was conducted in the spring of 2013, and at that time the possibility for negative discount rates during the 15-year “select” period did not form part of the Subcommittee’s deliberations. Given changes in the economic environment over the course of the ensuing 4 years as well as the now several decade long continuation of historically low interest rates, it is likely that the Subcommittee will consider the possibility of negative discount rates when it meets again in 2017, and, potentially, may recommend amending the methodology of Rule 53.09(1)(a) to eliminate the 0% floor.
11. For the Subcommittee, however, to recommend the amendment of the 2.5% fixed real rate of return presently prescribed by Rule 53.09(1)(b) for awards of future pecuniary losses more than 15 years following the start of a trial, an extraordinarily persuasive body of evidence would need to establish that the long-term real rate of return has permanently diverged from its historical norm of 2.5%.
12. Several provinces use differing discount rates for calculating the present value of future care versus future income loss, with the rate for future wage loss currently being somewhat lower than the rate for future care (See Appendix “A”).

⁹⁵ https://www.attorneygeneral.jus.gov.on.ca/english/courts/civil/pecuniary_damages.php

⁹⁶ R.S.O. 1990, C.43.

⁹⁷ R.S.O. 1990, C.43.

13. At the discretion of the Court, and if a structured settlement is not used, the award of future care damages may include a gross-up for future taxation on the investment of the lump sum representing future pecuniary damages (See Rule 53.09(2) in Appendix “B”). Such a gross-up is, of course, not required when a structured settlement providing tax-free periodic payments is purchased. As with discount rates, in Ontario, the gross up rates based on Rule 53.09 are published online by the Attorney General.⁹⁸

Periodic Payments in Personal Injury and Medical Malpractice Cases

14. The provinces of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Nova Scotia, and Quebec each have statutory provisions allowing for Court-ordered periodic payments.

15. In Ontario, the Court assesses damages as a lump sum but has the discretion to order periodic payments. The regime for awarding period payments in personal injury cases is different than that in medical malpractice cases.⁹⁹

16. In **personal injury cases**, the Court may order a defendant to pay all or part of the damages award periodically in two circumstances. First, on consent of all parties. Second, on request of the plaintiff that an amount be included in the award to offset any income tax liability from investment income derived from the award, unless ordering periodic payments in lieu of an award to offset income tax is not in the best interests of the plaintiff.¹⁰⁰ The plaintiff’s best interests must be assessed by also considering the defendant’s ability to fund periodic payments, whether the plaintiff has an alternative available to her that is better able to meet her interests than periodic payments by the defendant, and whether a periodic payment scheme is practicable in the circumstances.¹⁰¹ The Court may revise its order if the affected parties agree to subject the order to the Court’s future review.¹⁰²

17. In **medical malpractice cases**, when damages are higher than the prescribed amount, currently \$250,000, the Court shall, on a motion by any party, order that the damages for the plaintiffs’ future care costs be satisfied by way of periodic payments.¹⁰³ Periodic payments are made from an annuity contract¹⁰⁴ (a) issued by a life insurer, (b) designed to

⁹⁸ https://www.attorneygeneral.jus.gov.on.ca/english/courts/civil/pecuniary_damages.php

⁹⁹ An action for personal injuries alleged to have arisen from negligence or malpractice in respect of professional services requested of, or rendered by, a health professional who is a member of a health profession as defined in the *Regulated Health Professions Act*, 1991 or an employee of the health professional or for which a hospital as defined in the *Public Hospitals Act* is held liable.

¹⁰⁰ Sections 116(1)(b) and (2), *Courts of Justice Act*, R.S.O. 1990, C.43.

¹⁰¹ Section 116(3), *Courts of Justice Act*, R.S.O. 1990, C.43.

¹⁰² Section 116 (4), *Courts of Justice Act*, R.S.O. 1990, C.43.

¹⁰³ Section 116.1(1), *Courts of Justice Act*, R.S.O. 1990, C.43.

¹⁰⁴ Section 116.1(2), *Courts of Justice Act*, R.S.O. 1990, C.43.

generate a tax-free stream of payments, and (c) that includes protection from inflation to a degree “reasonably available in the market for such annuities”.

18. The first two requirements are not controversial. Structured settlement products are sold by several life insurance companies in Canada. The last requirement often leads to a dispute between the plaintiff and defendant about the appropriate indexation rate necessary in the circumstances. Plaintiffs typically seek structured settlements indexed to the Consumer Price Index (“CPI”). Defendants typically seek structured settlements indexed at a fixed rate between 1-3%. Before expanding on this debate, some background about structured annuities in Canada is necessary.

Basics about Structured Annuities

19. There are three main components to a structured annuity: (a) the premium, (b) the duration or term, and (c) the indexation rate. The **premium** is the actual purchase amount going into the annuity, or the cost of the annuity. The **duration** is the length of time over which the periodic payments are made. The duration of an annuity could either be for a “fixed” term or a “lifetime”. A lifetime annuity will continue to make payments as long as an individual is alive. A fixed-term annuity would pay for a specified defined period of time (e.g. 10 years). In most cases, a lifetime annuity includes a minimum guaranteed number of payments, meaning that all of the guaranteed payments must be made regardless of whether the beneficiary is alive. If the beneficiary dies before the termination of the guarantee period, the remaining guaranteed payments will continue tax-free to the estate of the beneficiary.

20. **Indexation rate** is a cost of living adjustment that may be built into the annuity to protect against future inflation. There are three kinds of annuity indexation. Payments can be level payments (no indexation), which means that the amount of the periodic payments will stay the same over the course of the term. Alternatively, an annuity can be indexed either at a fixed percentage (such as 1%, 2%, 3%, etc.) or a variable amount linked to CPI.

21. Ontario’s legislature has granted the Courts the flexibility to determine the appropriate indexation rate for a structured settlement. The option of explicitly requiring settlements to be indexed to the CPI was raised before the Standing Committee on Justice Policy in September 2006. The transcript of this discussion confirms that the current provision is intended not to “tie the hands of the courts”.¹⁰⁵ The Court relies on evidence (from fact or expert witnesses) to assist it in determining the appropriate indexation rate in the circumstances.

¹⁰⁵ Ontario, Legislative Assembly, *Debates*, 12 September 2006 (Jim Simpson), online: http://www.ontla.on.ca/committee-proceedings/transcripts/files_html/2006-09-12_JP023.htm.

Fixed Indexation vs. Variable Indexation

22. Returning to the indexation rate debate referenced earlier, in determining what annuity is “reasonably available” in the market of annuities, the Court will consider the extent to which they are offered and their purchase price.¹⁰⁶ All life insurance companies offer fixed-rate annuities. Fixed rate annuities are the overwhelming product of choice for protecting an individual from inflation.
23. Only a few life insurance companies in Canada offer “CPI-linked” annuities. The “CPI-linked” annuities available in the market do not reflect decreases in the event of deflation. They are based on the September to September Statistics Canada CPI “all Canada all items” figure. This represents the aggregate increase of the total basket of goods (i.e. all of the goods and services listed on the Statistics Canada website¹⁰⁷) for all of Canada. The CPI figure does not necessarily reflect the change in price for any particular basket or category of goods related to future care costs. For example, the January 2017 to February 2017 “all items” CPI increased by 0.2% but the CPI for health and personal care decreased 0.2%. In other words, the CPI for “health and personal care” (a large component of future care damages) is lower than “all items” CPI.
24. As a practical matter, CPI-linked annuities are rarely purchased. According to the sales data of McKellar Structured Settlements Inc. (“McKellar”), a market leading company that specializes in arranging structured settlements, which brokered over 60% of the structured settlements purchased in Canada from 2009-2014, during said period McKellar brokered over 4,000 structured settlements of which only 2 were CPI-linked annuities. CPI-linked annuities are rarely purchased because they are expensive relative to other products, namely, annuities with fixed indexation rates.

¹⁰⁶ *Sandhu (Litigation Guardian of) v. Wellington Place Apartments*, 2006 CarswellOnt 2387 (S.C.J.); aff’d. 2008 ONCA 215 at paras. 17-18.

¹⁰⁷ <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/cpis01a-eng.htm>

APPENDIX A: SUMMARY OF DISCOUNT RATES IN CANADA

DISCOUNT RATES APPLICABLE FOR TORT CASES - ACROSS THE COUNTRY PROVINCE /TERRITORY	ITEM	SOURCE	DISCOUNT RATE
British Columbia	Future Care	Law and Equity Act, s. 56(2)(b)	2.0%
	Future Wage Loss	Law and Equity Act, s. 56(2)(a)	1.5%
Alberta	Future Care & Wage Loss	No mandatory discount rate	
Saskatchewan	Future Care & Wage Loss	Queen’s Bench Rules, Rule 284B(1)(b)	3%
Manitoba	Future Care & Wage Loss	Court of Queen’s Bench Act s. 83(1) and 83(2)	3%
Ontario	Future Care & Wage Loss	Rule 53.09 (Ontario Rules of Civil Procedure)	0% for first 15 years, 2.5% thereafter for trials as of January 1, 2017
Quebec	Future Wage Loss	Civil Code Regulation under Article 1614	1%
	Future Care (goods)		3.25%
	Future Care (services)		2%
New Brunswick	Future Care & Wage Loss	Rules of Court, N.B. Reg. 82-73, Rule 54.10(2)	2.5%
Nova Scotia	Future Care & Wage Loss	Civil Procedure Rules, Rule 70.06 Prev Rule 31.10(2)	2.5%
PEI	Future Care & Wage Loss	Rules of Civil Procedure, Rule 53.09(1)	2.5%
Newfoundland and Labrador	Future Care & Wage Loss	-	No mandatory discount rate
Northwest Territories	Future Care & Wage Loss	Judicature Act, R.S.N.W.T. 1988, c. J-1, s. 57(1)	2.5%

Nunavut	Future Care & Wage Loss	Judicature Act, S.N.W.T. 1998, c. J-1, s. 56(1)	2.5%
Yukon	Future Care & Wage Loss	No mandatory discount rate	

APPENDIX B: Rule 53.09, Rules of Civil Procedure (Ontario)

CALCULATION OF AWARDS FOR FUTURE PECUNIARY DAMAGES

Discount Rate

53.09 (1) The discount rate to be used in determining the amount of an award in respect of future pecuniary damages, to the extent that it reflects the difference between estimated investment and price inflation rates, is,

(a) for the 15-year period that follows the start of the trial, the greater of,

(i) the average of the value for the last Wednesday in each month of the real rate of interest on long-term Government of Canada real return bonds (Series V121808, formerly Series B113911), as published in the Bank of Canada's Weekly Financial Statistics for the period starting on March 1 and ending on August 31 in the year before the year in which the trial begins, less ½ per cent and rounded to the nearest 1/10 per cent, and

(ii) zero; and

(b) for any later period covered by the award, 2.5 per cent per year for each year in that period.

Gross Up

(2) In calculating the amount to be included in the award to offset any liability for income tax on income from investment of the award, the court shall,

(a) assume that the entire award will be invested in fixed income securities; and

(b) determine the rate to be assumed for future inflation in accordance with the following formula:

g rounded to the nearest 1/10 per cent where,

$$g = (1 + i) / (1 + d) - 1$$

"i" is the average of the value for the last Wednesday in each month of the nominal rate of interest on long-term Government of Canada bonds (Series V121758, formerly Series B113867), as published in the Bank of Canada's Weekly Financial Statistics for the period starting on March 1 and ending on August 31 in the year before the year in which the trial begins;

"d" is,

(a) for the 15-year period that follows the start of the trial, the greater of,

(i) the average of the value for the last Wednesday in each month of the real rate of interest on long-term Government of Canada real return bonds (Series V121808, formerly Series B113911), as published in the Bank of Canada's Weekly Financial Statistics for the period starting on March 1 and ending on August 31 in the year before the year in which the trial begins, less ½ per cent, and

(ii) zero, and

(b) for any later period covered by the award, 2.5 per cent per year for each year in that period.

Transition

(3) This rule, as it read on December 31, 2013, continues to apply with respect to actions in which the trial commenced before January 1, 2014.

APPENDIX C: Ontario Statutory Discount Rates Since Inception

Ontario Discount Rates For Both Future Care and Wage Loss		
YEAR	15-YEAR PERIOD FROM THE START OF THE TRIAL (SELECT REAL RATE), pursuant to Rule 53.09(1)(a)	THEREAFTER ULTIMATE REAL RATE (FIXED RATE), pursuant to Rule 53.09(1)(b)
2000	3.00%	2.50%
2001	2.75%	2.50%
2002	2.50%	2.50%
2003	2.50%	2.50%
2004	2.25%	2.50%
2005	1.50%	2.50%
2006	1.00%	2.50%
2007	0.75%	2.50%
2008	0.75%	2.50%
2009	0.75%	2.50%
2010	1.25%	2.50%
2011	0.50%	2.50%
2012	0%	2.50%
2013	-0.50% (amended effective January 1, 2014 to allow real rates during the said 15-year period no lower than 0%)	2.50%
2014	0.30%	2.50%
2015	0.30%	2.50%
2016	0%	2.50%
2017	0%	2.50%

Date: 07 May 2017

Annex 4

HONG KONG

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Associate Professor

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(A) On what basis are personal injury damages awards assessed in Hong Kong?

1. The multiplicand-multiplier approach is adopted in ascertaining the lump-sum awards. Periodical payments are not available in Hong Kong.
2. Hong Kong applies the English common law principles laid down by the House of Lords (now known as the UK Supreme Court) in *Wells v Wells* [1999] 1 AC 345. In awarding damages in the form of a lump sum, the court had to calculate as best it could the sum that would be adequate, by drawing down both capital and income, to provide periodical sums equal to the claimant's estimated loss over the period during which that loss was likely to continue.
3. Hong Kong does not have the equivalent of the UK Damages Act 1996. Assessment of personal injury damages in Hong Kong is governed purely by common law principles.
4. Hong Kong has its own set of actuarial tables (the latest edition is *Personal Injury Tables Hong Kong 2016: Tables for the Calculation of Damages*, Sweet and Maxwell 2016). The tables were jointly prepared by a research team funded by the Hong Kong Research Grant Council. The members of the research team are:
 - Neville Sarony QC, a respected and experienced personal injury practitioner in Hong Kong.
 - Felix W.H. Chan, Associate Professor of the Law Faculty, University of Hong Kong.
 - Wai-sum Chan, Professor of Finance, Chinese University of Hong Kong. He is a Fellow of Society of Actuaries.
 - Johnny S.H. Li, Fairfax Chair in Risk Management at the University of Waterloo, Canada. He is a Fellow of Society of Actuaries.

* Dr Felix W.H. Chan (together with N. Sarony QC, WS Chan and JSH Li) is a contributor to the latest edition of *Personal Injury Tables Hong Kong 2016: Tables for the Calculation of Damages* (Sweet and Maxwell). He is qualified as a solicitor in Hong Kong, England and Wales, and practised in the shipping department of JSM Norton Rose (now JSM Mayer Brown) before entering academia. When he was in private practice, he acted for shipping companies, cargo insurers and Protection & Indemnity Clubs in disputes ranging from bill of lading claims to personal injuries on board.

5. The 2016 edition is based on the revised Hong Kong mortality projections by the Hong Kong Census and Statistics Department (Hong Kong Population Projections 2015-2064), under which there is an increase in life expectancy. Whether a new edition is needed in the future will depend on the next mortality projections to be issued by the Hong Kong Government. It is estimated that on average, a new edition is needed in every 5 or 6 years.
6. The actuarial tables are judicially accepted as the starting point in Hong Kong, just as the Ogden Tables are accepted as the starting point in the UK. (Bharwaney J. in *Chan Pak Ting (No.1)* [2012] HKCFI 1584¹ and *Chan Pak Ting (No.2)* [2013] HKCFI 179; confirmed by the HK Court of Appeal in *Chan Wai Ming v Leung Shing Wah* [2014] HKCA 318² and *Hussain Kamran v Khan Amar* [2016] HKCA 455).³

Periodical payments

7. Periodical payments are not available in Hong Kong. The Law Reform Commission of Hong Kong has recently set up a committee to explore the possibility of introducing periodical payments in the future. Details of this law reform sub-committee can be found on this website: <http://www.hkreform.gov.hk/en/members/personalinjury.htm>

(b) Application of a Discount Rate to lump sum awards

8. Lump sum awards are *adjusted to take account of accelerated receipt*
9. Hong Kong does not have the equivalent of Damages Act 1996. Assessment of personal injury damages in Hong Kong, including the determination of the discount rate, is governed purely by common law principles.
10. In England and Wales, the discount rate of 4 - 5% was set in *Cookson v Knowles* [1979] A.C. 556. The same discount rate of 4 - 5% was followed in Hong Kong until 2013.
11. In *Chan Pak Ting (No.2)* [2013] HKCFI 179, Bharwaney J. departed from the conventional discount rate of 4.5% per annum (set by the House of Lords in *Cookson v Knowles* and endorsed by the Hong Kong Court of Appeal in *Chan Pui Ki v Leung On* [1996] HKCA 678;⁴ [1996] 2 HKC 565).

¹ *Chan Pak Ting (No.1)* [2012] HKCFI 1584 <http://www.hklii.hk/cgi-bin/sinodisp/eng/hk/cases/hkcfi/2012/1584.html>

² *Chan Wai Ming v Leung Shing Wah* [2014] HKCA 318 <http://www.hklii.hk/cgi-bin/sinodisp/eng/hk/cases/hkca/2014/318.html>

³ *Hussain Kamran v Khan Amar* [2016] HKCA 455 <http://www.hklii.hk/cgi-bin/sinodisp/eng/hk/cases/hkca/2016/455.html>

⁴ *Chan Pui Ki v Leung On* [1996] HKCA 678 <http://www.hklii.hk/cgi-bin/sinodisp/eng/hk/cases/hkca/1996/678.html>

12. Having examined Hong Kong's economic conditions, he set 3 different discount rates, reflecting the investment choices of each class of investors as driven by their specific needs and goals.
13. The discount rate is the annual net rate of investment return in excess of inflation that a claimant is assumed to achieve on the lump-sum award. To calculate the real rate of return, net of price inflation, the Hong Kong Court employed the changes in the Composite Consumer Price Index ("CPI") as the proxy for price inflation, as it covers approximately 90% of all households in Hong Kong.
14. For needs exceeding 10 years, he set a discount rate of 2.5% per annum by taking an "average" portfolio of: (1) 10% in time deposits; (2) 70% in high quality bonds; and (3) 20% in high quality blue-chips which qualify as "widows and orphans" stock. For needs extending beyond 5 years but not exceeding 10 years, the court set a discount rate of 1% per annum, by taking a portfolio of: (1) about 15% in time deposits; (2) 85% in HK Government Exchange Fund Notes and high quality bonds. For needs not exceeding 5 years, a negative discount rate of -0.5% per annum was set, following the Privy Council's decision in *Simon v Helmot* [2012] UKPC 5 (an appeal from Guernsey Court of Appeal) that there was nothing wrong in principle to set a negative discount rate. The portfolio is: (1) about 20% in time deposits; and (2) 80% in Hong Kong Government Exchange Fund Notes.
15. Bharwaney J. in *Chan Pak Ting (No.2)* [2013] HKCFI 179 (at [82 & 99]) gave a brief explanation as to the thinking behind adopting a three-fold set of discount rates. He pointed out that given current economic conditions at that time in Hong Kong, the investment choices of the reasonable victim of a tort must be driven by the duration of his future needs. A plaintiff with long term needs will not invest all his damages into short term bank deposits whilst a plaintiff with short term needs will not invest all his damages into long term bonds. A plaintiff with needs not exceeding 5 years should invest in highly liquid assets, while a reasonable plaintiff with future needs extending beyond 5 years ought to invest his award of damages for future loss not only in EFNs, but also in high quality bonds. A plaintiff with needs extending beyond 10 years ought to include an equity content ranging from 10-30% of the award of damages made in respect of future losses. The volatility of the stock markets and the risks of loss of capital can be offset by an investment strategy to hold such stocks, which pay dividends, for the long term.
16. Bharwaney J. cited Ontario of Canada as an example of a jurisdiction with different discount rates. The rate prescribed in Ontario under Rule 53.09(1) of the Ontario Rules of Civil Procedure at that time was a rate of 0.5% for the initial 15 years, and 2.5% after the initial 15 years.
17. It should be noted that Hong Kong does not have the equivalent of I.L.G.S. in the UK. Although Hong Kong iBond are similar to I.L.G.S. in that the interest was adjusted in accordance with inflation (with the minimum return rate set at 1%), there is a sharp distinction between HK iBond and I.L.G.S.. For HK iBond, the principal would be repaid

in full on maturity without adjustment based on inflation. The HK court in *Chan Pak Ting (No.2)* [2013] HKCFI 179 (at [65]) excluded iBond as a possible investment vehicle for plaintiffs because the iBond market in Hong Kong was still in its infancy.

Distinction between earnings and non-earnings losses

18. In *Chan Pak Ting (No 2)* [2013] HKCFI 179 (at [39]), the economic data of Hong Kong show that the difference between price inflation and wage inflation (from 2001 to 2012) was only 0.43%, which was not substantial enough to justify separate discount rates for earnings-related and non-earnings related losses.

Other contingency deductions

19. Contingency deductions are also made for other factors. The Hong Kong actuarial tables “do not take account of the other risks and vicissitudes of life, such as the possibility that the claimant would for periods have ceased to earn due to ill-health or loss of employment.” (quoted from paragraph 19 of the Explanatory Notes to the 7th Edition of the UK Ogden Tables). The principles regarding the UK Ogden Tables are equally applicable in Hong Kong. The relevant evidence, including expert evidence, can be submitted to prove matters related to ill-health or loss of employment.

20. As explained in the response to Q9 above, different discount rates apply to losses sustained over different time periods.

(C) Details concerning the process for setting the discount rates

21. The discount rates are set by the judges in Hong Kong by applying the common law principles. As explained above, Hong Kong does not have the equivalent of the UK Damages Act 1996. Hence, the actual process is similar to that used in *Simon v Helmot* [2012] UKPC 5 (an appeal from Guernsey Court of Appeal).

22. Judges in Hong Kong can take into consideration the “changed economic landscape” (*Wells v Wells* [1999] 1 AC 345 *per* Lord Stern) in setting and adjusting the discount rates. Economic evidence prepared by economists and actuaries are admissible and given due weight in the process.

23. The discount rates have been substantially adjusted in 2013 (conducted by Bharwaney J. in *Chan Pak Ting (No.1)* [2012] HKCFI 1584 and *Chan Pak Ting (No.2)* [2013] HKCFI 179). Unless there are drastic changes in Hong Kong’s economic landscape, it is anticipated that there will not be substantial changes in the near future.

24. Before the substantial adjustment of the discount rate in *Chan Pak Ting* in 2013, the Hong Kong courts simply followed the 4-5% discount rate indicated in *Cookson v Knowles* [1979] AC 556. This is due to the Hong Kong Court of Appeal’s decision in

Chan Pui Ki v Leung On [1996] HKCA 678 that affirmed the conventional 4-5% discount rate indicated in *Cookson v Knowles*.

25. Because actuarial tables were not judicially recognised in Hong Kong before 2013, it was not very meaningful for the litigants to discuss about the discount rates before 2013 in any event. The multipliers were simply chosen “on impressionist grounds, by reference to a spread of multipliers in comparable cases” (per Lord Lloyd of Berwick in *Wells v Wells* [1999] 1 AC 345.)

26. However, actuarial tables gained formal judicial recognition in *Chan Pak Ting* in 2013.⁵ The same case provides the Hong Kong court with an opportunity to develop the common law principles regarding the setting and adjustment of discount rates in the Hong Kong context.

Date: 6 April 2017

⁵ *Chan Pak Ting (No.2)* [2013] HKCFI 179 <http://www.hklii.hk/cgi-bin/sinodisp/eng/hk/cases/hkcfi/2013/179.html>

Annex 5

IRELAND

Orla Keane - Arthur Cox*
David Strahan - Arthur Cox**
Grace-Ann Meghen - Arthur Cox***

(A) On what basis are personal injury damages awards assessed in your jurisdiction?

1. All personal injury claims in Ireland (except for cases involving medical negligence⁶, claims under the Montreal and Warsaw Conventions, and claims in admiralty) must be submitted to the Injuries Board⁷ for assessment before proceedings can be issued. The Injuries Board is an independent statutory body set up under the Personal Injuries Assessment Board Act 2003. When the Injuries Board was first established in 2004, it published a "Book of Quantum", which provides guidelines for the assessment of compensation to which an injured person may be entitled, in the context of certain specific injuries. The Book of Quantum⁸ was updated in 2016. However, not all types of injuries are covered by the Book of Quantum. In assessing damages, the Court must have regard to the Book of Quantum but it is not bound by it.⁹
2. Upon receipt of an application, the Board sends each defendant a written notice requesting that they consent to an assessment being made of the claim¹⁰. If the defendant consents, or fails to respond within 90 days, the Board will assess the claim. The Board will then inform all parties of the assessment amount. If both parties accept the assessment, the Board will issue an Order to Pay to the defendant(s). If one or both parties reject the assessment the Board will issue an authorisation to commence proceedings.

* Orla is a partner in the Litigation and Dispute Resolution Group. Her practice focuses on healthcare – contentious and advisory. She has advised the Mental Health Commission, the State Claims Agency, the HSE, the Irish Blood Transfusion Scheme, the Medical Defence Union, Medtronic and other clients (public and private). She has represented clients in all Courts, in statutory and non-statutory inquiries and at the Dental / Medical Council. She has a vast experience in judicial review proceedings and has advised a number of State Agencies on various administrative law and corporate governance matters. She also has a wealth of experience in relation to independent reviews of adverse incidents. She lectures on various issues in relation to healthcare.

** David is a senior associate in the Litigation and Dispute Resolution Group. His practice has a particular focus on Insurance based litigation and dispute resolution concerning professional indemnity policies, property damage, D&O policies, employers' liability and public liability. David also advises across a range of areas including financial services and banking disputes, insurance disputes and technology disputes. He has considerable experience in managing large scale commercial disputes before the Irish Commercial Court and in international arbitrations under the International Chamber of Commerce. David has also represented a number of life insurance companies in hearings before the Financial Services Ombudsman.

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⁶ Section 3(d) of the Personal Injuries Assessment Board Act 2003.

⁷ <http://www.injuriesboard.ie/eng/>

⁸ <http://www.injuriesboard.ie/eng/How-to-make-a-claim/compensation-calculator/>

⁹ Section 22 of the Civil Liability and Courts Act 2004

¹⁰ Assessment of the claim under section 20 of the Act of 2003.

3. It is then up to the plaintiff to bring their claim in the appropriate court, having regard to the likely damages that they might be awarded at trial. Those cases not within the remit of the Injuries Boards can issue proceedings immediately. The following jurisdiction limits apply in respect of the Irish Courts:
 - a. Civil claims with a monetary jurisdiction of €15,000 are dealt with in the District Court;
 - b. Claims up to €60,000 (€75,000 in non-personal injury proceedings) are dealt with in the Circuit Court; and
 - c. The High Court has an unlimited monetary jurisdiction.
4. Damages are calculated and awarded by a Judge sitting alone and are assessed on the basis of putting the plaintiff back into the position they were in prior to the cause of action, insofar as this is possible, by awarding compensation. Damages are divided as follows:
 - (a) General damages (Non-economic Damages) – pain and suffering to the date of determination; and pain and suffering into the future.

Case law has established a ‘cap’ on the amount of general damages which can be awarded. This is currently set at €450,000¹¹.
 - (b) Special damages (Pecuniary Damages) – these include:
 - (i) medical expenses;
 - (ii) loss of earnings (past and future);
 - (iii) nursing care (past and future);
 - (iv) maintenance of equipment.
5. In awarding damages for pecuniary loss, the objective of the court is to provide the plaintiff with full (100%) compensation for all of his or her probable future pecuniary loss. Pecuniary loss is assessed by an actuarial calculation by determining the cost and the frequency with which it will recur, the age and the life expectancy of the plaintiff. The actuary will determine in capital terms the value of a € per week of loss, based upon the above criteria of age and life expectancy and the rate of return on investment income. In the case of catastrophic injury, future losses may relate to the cost of future care and loss of earnings.
6. In assessing loss of future earnings, loss of earning capacity is based on what the plaintiff would have earned rather than what he could have earned.
7. The usual method of calculation in assessing future care is to identify the “multiplicand” (the annual net cost of future care), which is multiplied by the “multiplier”. The multiplier

¹¹ This cap relates to catastrophic injuries eg. cerebral palsy or paraplegia.

is derived from annuity tables and can be actuarially calculated based upon life expectancy.

8. A court may also award:

- (a) aggravated damages, where the plaintiff suffers further injury due to:
 - 1. the manner in which the wrong was committed; and/or
 - 2. the conduct of the defendant after the commission of the wrong; and/or
 - 3. the defendant's conduct in the defence of his action, including the trial

and

- ii. exemplary damages where, given the nature of the wrong in question and the manner of its commission, a court wishes to mark its disapproval of a defendant's conduct.

Lump Sum v. Periodic Payments

9. In the vast majority of cases the assessment of future loss in personal injuries cases is undertaken by means of the award of a lump sum. There are no court rules or statutory basis which provide for periodical payments to be awarded for personal injury damages in Ireland. Periodical payment orders are made on an ad hoc basis by the courts and generally only where all parties to the proceedings agree.

10. In 2010, the Working Group on Medical Negligence and Periodic Payments was established which published its first report¹², detailing proposals for draft legislation on periodic payments, in October 2010.

11. In 2015, a general scheme of a Civil Liability (Amendment) Bill 2015¹³ was published by the Minister for Justice, Equality and Law Reform, the expressed intent of which was to provide for damages to be awarded in the form of periodic payments to persons suffering catastrophic injuries.

12. On 13 January 2017, the Civil Liability (Amendment) Bill 2017¹⁴ was published. The Bill is currently at Committee Stage. The stated purpose of the Bill is to empower the

¹²[http://courts.ie/Courts.ie/library3.nsf/\(WebFiles\)/5CEE19C4A5959BC802577DC0055C9F4/\\$FILE/Medical%20Negligence%201.pdf](http://courts.ie/Courts.ie/library3.nsf/(WebFiles)/5CEE19C4A5959BC802577DC0055C9F4/$FILE/Medical%20Negligence%201.pdf)

¹³<http://www.justice.ie/en/JELR/CivilLiabilityAmendmentBill2015.pdf/Files/CivilLiabilityAmendmentBill2015.pdf>

¹⁴[http://www.justice.ie/en/JELR/Civil_Liability_\(Amendment\)_Bill_2017.pdf/Files/Civil_Liability_\(Amendment\)_Bill_2017.pdf](http://www.justice.ie/en/JELR/Civil_Liability_(Amendment)_Bill_2017.pdf/Files/Civil_Liability_(Amendment)_Bill_2017.pdf)

courts, as an alternative to lump sum awards of damages, to make consensual and non-consensual periodic payments orders (PPOs) to compensate injured victims in cases of catastrophic injury where long term permanent care would be required.

13. The Bill contains the following provisions:

- i. Where a court awards damages for personal injuries to a plaintiff who has suffered a catastrophic injury, the court may order that the whole or part of such damages (which relate to future medical treatment; future care; the provision of aids and appliances associated with the medical treatment; and, where the parties consent in writing, damages in respect of future loss of earnings) be paid in the form of periodic payments.
- ii. In deciding whether or not to make a PPO, the court shall have regard to a number of factors including the amount of any payments proposed to be made to the plaintiff and the form of the award preferred by the parties and the reasons therefor.
- iii. A PPO shall provide for the amount of a payment under the order to be adjusted annually by reference to the Harmonised Index of Consumer Prices as published by the Central Statistics Office or such other index as may be specified.
- iv. The index and its suitability for the purposes of the annual adjustment of the amount of payments provided for under PPOs will be reviewed by the Minister for Justice, Equality and Law Reform.
- v. The award of damages by way of PPO is only allowed in cases where a plaintiff has suffered catastrophic injuries.

“Catastrophic injury” is defined as meaning “a personal injury which is of such severity that it results in a permanent disability requiring the person to receive life-long care and assistance in all activities of daily living or a substantial part thereof”. “Activities of daily living” are defined as including activities such as dressing, eating, walking, washing and bathing.

- vi. The courts are empowered to make provision in a PPO for a ‘stepped payment’. This allows the courts, where it is anticipated that there will be changes in a plaintiff’s circumstances during his or her life which are likely to have an effect on his or her needs, to make provision in a PPO that a payment under the order shall, from a specified date, increase or decrease by a specified amount.

(B) Application of a Discount Rate to lump sum payments

14. The real rate of return is the annual percentage return realised on an investment, which is adjusted for changes in prices due to inflation or other external effects. The real rate of return is very much case law driven and is determined by the courts.
15. The courts have stated that the plaintiff's damages are to be calculated on the basis that he or she should be entitled to pursue the most risk averse investment reasonably available to meet his or her needs.
16. Since the decision of Finnegan P. in *Boyne v Dublin Bus*¹⁵ the real rate of return, which it was assumed an injured plaintiff would obtain, was 3% on the investment of any such sum awarded to them in respect of future pecuniary loss. This was challenged in the High Court case of *Gill Russell (a minor) v Health Service Executive*¹⁶ and the court held that the real rate of return should be reduced from the traditional 3% to a rate of return of between 1% and 1.5%. That decision was upheld by the Court of Appeal¹⁷. The State sought leave to appeal to the Supreme Court¹⁸, but this was refused.
17. In its decision, the Court of Appeal stated that *"any court considering a claim for future pecuniary loss must be concerned to ensure that a plaintiff will be able to invest their lump sum in a manner that will provide them with the money they would have had but for the defendants negligence or as in the present case the cost of meeting their tortuously inflicted future needs despite the likely impact of inflation on their award over the period of the loss, because if they are not so protected they will not receive full compensation."* The Court of Appeal further noted however that, up to the time of the High Court's decision, Irish judges did not take any special steps to seek to 'inflation proof' awards of damages for pecuniary loss. The Court of Appeal concluded that the real rate of return to be applied was 1.5% in respect of the plaintiff's outstanding claims for future pecuniary loss, with the exception of his claim for future care where the rate was reduced to 1% to take account of the extent to which wage inflation was likely to exceed the Consumer Price Index over the course of his lifetime.
18. The Court of Appeal upheld the High Court's decision that the real rate of return should be set on the assumption that the plaintiff is entitled to invest the award in the most risk free investment strategy as is available. The Court of Appeal also held that the plaintiff should not be treated as an investor who has income and surplus money to invest. The Court acknowledged that plaintiffs are *"entitled to take their award to Las Vegas or place it on a horse in the Grand National in the hope that they may enhance it"*. However, it said that it is not the function of the Court to enquire into a plaintiff's intentions with regard to the award. If the Court did this, the amount of compensation payable to two plaintiffs with the exact same claim, *"one wise and one foolhardy"*, might be different. The Court concluded that the reduction of the rate was necessary to enable the plaintiff

¹⁵ *Boyne v Dublin Bus* [2003] 4 I.R. 47

¹⁶ *Gill Russell (a minor) suing by his mother and next friend Karen Russell v Health Service Executive* [2014] IEHC 590

¹⁷ *Gill Russell (a minor) suing by his mother and next friend Karen Russell v Health Service Executive* [2015] IECA236

¹⁸ *Gill Russell (a minor) suing by his mother and next friend Karen Russell v Health Service Executive* [2017] IESCDT 10

to meet his future needs without him having to take unnecessary risks to achieve that end. To expect and indeed oblige him to take such risks would, in the Court's view, be both unjust and unacceptable. It is not yet clear whether these rates (1% and 1.5%) will apply only to catastrophic injuries.

19. We refer you to no. 4 above. In the Court of Appeal's decision in *Gill Russell (a minor) v Health Service Executive*, the court stated that, in calculating the plaintiff's claim for future pecuniary loss, allowance had to be made for any inflation in excess of ordinary inflation that would likely affect any particular expense to which he may be exposed over the period of the loss. The Court of Appeal noted that the cost of the plaintiff's care over future years was at issue. It stated that if wage inflation in the care sector was likely to exceed ordinary inflation then an adjustment in the real rate of return was required to meet that extra cost. Accordingly, the court concluded that the real rate of return was to be reduced from 1.5% to 1% in respect of the plaintiff's claim for future care to take account of likely wage inflation over the course of his lifetime.
20. There are no contingency deductions, as such, in Ireland. However, in any given case involving catastrophic injury, medical experts will give evidence regarding the life expectancy of the plaintiff on behalf of each party and actuaries will then calculate the amount of damages required based on the medical evidence provided.
21. With regard to labour market hazards, the case of *Reddy v Bates*¹⁹ established that the present value of future loss of earnings, as calculated using actuarial techniques and the best estimate of probable actual losses in the future, should be reduced to take account of a degree of uncertainty as to whether a plaintiff would be employed continuously for the period assumed by the calculations. However, this remains at the discretion of the Court in each case.

(C) Details concerning the process for setting the relevant Discount Rate

22. Section 24 of the Civil Liability and Courts Act 2004 provides that the Minister for Justice, Equality and Law Reform "may" prescribe the discount rate that applies for the purposes of the assessment of damages in respect of future financial loss. However, section 24 also provides that the court has jurisdiction to apply a different discount rate to that prescribed if it is satisfied that the application of the prescribed rate would result in injustice being done.
23. Section 23 of the Civil Liability and Courts Act 2004 states that the Minister for Justice, Equality and Law Reform "may" prescribe actuarial tables for the purpose of their being referred to by the courts when assessing damages in personal injuries actions in respect of future financial loss and it further states that a court in a personal injuries action shall, in assessing damages in respect of future financial loss, refer to such actuarial tables (if any) as are prescribed. However, no tables have been prescribed to date. The current practice is that the discount rate is determined by the courts.

¹⁹ *Reddy v Bates* [1984] ILRM 19

Court Based Procedure

24. As noted in no. 7 above, Section 23 of the Civil Liability and Courts Act 2004 states that the Minister for Justice, Equality and Law Reform may prescribe actuarial tables for the courts to refer to when assessing damages in personal injuries actions in respect of future financial loss, however, no tables have been prescribed to date.

25. The Court of Appeal decision in *Gill Russell (a minor) v Health Service Executive* will apply in cases going forward. The courts are unlikely to engage in any further consideration of this unless there is a material change in the economic environment. Prior to the Court of Appeal's decision in *Gill Russell (a minor) v Health Service Executive*, a rate of 3% had been applied since 1996. Prior to 1996, there was only one reported decision of the High Court, which set a rate of 2.5%.²⁰

26. In *Gill Russell (a minor) v Health Service Executive*, the Court of Appeal noted that "the purpose...of fixing the discount to which the defendant is entitled by reason of the upfront lump sum payment is to eliminate the possibility that the plaintiff might be overcompensated". It further stated that the High Court had been correct in determining that the assessment of the real rate of return is to be made on the assumption that the plaintiff should be entitled to invest his award in as risk free an investment strategy as is available.

27. In making its determination, the Court of Appeal considered a number of factors, including:

- The Plaintiff as an investor;
- Investment strategies for the Plaintiff;
- Inflation;
- Currency Risk;
- Lack of Diversification; and
- Volatility in the Equity Market.

The parties to the litigation provided evidence, and called expert witnesses in respect of same, in relation to these factors.

Date: 4 April 2017

²⁰ Cooke v Walsh [1983] ILRM 429

Annex 6

SOUTH AFRICA

Johan De Waal, Chambers, South Africa

With

N Kambaran and R Omardien

(A) On what basis are personal injury damages awards assessed in your jurisdiction?

- 1 The South African courts, unlike those in United Kingdom, place considerable weight on actuarial evidence and it is rare for a damages claim for personal injury or death to be settled in or out of court without the benefit of an actuarial report.²¹ For this reason, I have decided to compile this report with the assistance of Messrs Nilen S. Kambaran and Riyadh Omardien of ARCH Actuarial Consulting in Cape Town. Mr Kambaran has been the signing actuary for ARCH Actuarial Consulting's reports relating to personal injury and other lump sum compensation claims in South Africa for the past 10 years, in more than 10 000 individual matters.
- 2 ARCH Consulting and myself have placed reliance on two works of Robert J Koch, who is both a lawyer and an actuary and who specialises in claims for compensation for personal injury and death. The two works are:
 - 2.1 Reduced Utility of a Life Plan – by R.J. Koch 1993, Chapter 8 (hereafter "*Koch Reduced Utility*");
 - 2.2 Damages For Personal Injury And Death: Legal Aspects Relevant to Actuarial Assessments – by R.J. Koch – South African Actuarial Journal 11 (2011) 111–33 (hereafter "*Koch SAAJ*").
- 3 The structure of this report is as follows:
 - 3.1 I first deal with the issue of whether and when lump-sum payments are used in damages claims for personal injury.
 - 3.2 In the next part, I deal with the question of how and by whom the discount rates are determined.

²¹ Koch SAAJ at p.112, para 1.6

- 4 In the context of the South African law of delict, and subject to the (limited) statutory interventions described below, a claimant in a personal injury matter who proves the other elements of the Aquilian action (unlawfulness, fault and causation) is entitled to be compensated for:
 - 4.1 The full pecuniary loss suffered in respect of past and future medical and other expenses such as adjustments to vehicles and the home;
 - 4.2 The full pecuniary loss for past and future loss of earnings, and
 - 4.3 Compensation for pain and suffering as a result of an injury caused.
- 5 A dependant who lost a breadwinner has a similar claim against the wrongdoer for future loss of support.

USE OF LUMP-SUM PAYMENTS

- 6 In terms of the *“once and for all principle”* which forms part of South African common law, the default position in personal injury law is that the plaintiff is entitled to a lump-sum payment, which is an estimate of the present value of his or her future loss in respect of income, medical expenses or support.
- 7 This principle obliges the Court to award then and there (and consequently to assess and quantify) in one and the same proceeding any claim for damages proved to have been suffered by a plaintiff. This exercise must be performed no matter how difficult it is for the Court to peer into the future when assessing for instance future hospital or medical expenses – nothing may be left over in order to see how things turned out.²²
- 8 The limited exceptions to the once and for all rule are the following:

The Compensation for Occupational Injuries and Diseases Act

 - 8.1 The Compensation for Occupational Injuries and Diseases Act 130 of 1993 (COIDA) governs the Workmen’s Compensation Fund, and abolishes the common law claim which a worker would have against his or her employer in exchange for a limited statutory claim against that fund.²³ COIDA provides for a temporary and permanent disability benefit for workers and a family support benefit. The common law once and for all rule is changed in the following way:

²² RAF v Arendse NO 2003 (2) SA 490 (SCA)

²³ COIDA provides for compensation in the case of disablement and death resulting from injuries or diseases suffered in the course of employment. Employers must pay for cover of their employees.

8.1.1 In respect of future loss of earnings:

- Where the disability is assessed at more than 30%, a pension is payable. The pension, which is a periodic payment, in the case of a 100% disabled worker, is set at 75% of pre-accident earnings with a set maximum and minimum. Workers with lesser degrees of disablement (i.e. less than 100% but still more than 30%) receive proportionally less, i.e. a worker with a 50% permanent disablement will receive a maximum of 50/100 of pre-accident earnings.
- In the case of disablement of less than 30%, a lump sum is payable. The lump sum is 15 times the monthly income subject to a minimum and a maximum. A worker with a 30% disablement receives the full lump sum and those with a lower percentage receive proportionately less, i.e. in the case of a 15% disablement, the lump sum is reduced by multiplying the amount he or she would have received by 15/30.
- The spouse of a deceased worker is entitled to (1) a once-off lump sum payment equivalent to twice the monthly pension that the worker would have received if permanently and 100% disabled and, in addition (2) monthly payments of 40% of the deceased's entitlement (premised on 100% disabled). The benefit ceases with the death of the spouse.
- Children under the age of 18 are entitled to a monthly payment of 20% of the deceased's entitlement (assessed if 100% disabled). The child's payment ceases when the child turns 18 or completes his or her studies (the latter only if it could reasonably be expected that the employee would have contributed to the maintenance of the child during his or her studies) or upon death or marriage before the age of 18. The above is subject to an exception: children over the age of 18 who are unable to earn an income due to physical or mental disability continue to qualify for the benefit.

8.1.2 In respect of future medical expenses COIDA provides for the payment of medical expenses "*necessitated*" by an accident or disease but generally such only payable for a period of two years from the date of an accident or the commencement of a

disease. If, in the opinion of the Director-General, further medical aid will reduce the disablement from which the employee is suffering, the cost of such further aid may be paid. A medical tariff applies.

Road Accident Fund

8.2 In South Africa, a statutory system of compensation for the victims of road accidents came into force in 1946. The system has been under review ever since. Over the decades, the government appointed no less than 9 commissions to review the system, including its funding, management and levels of compensation. Current, the system is govern by the Road Accident Act 56 of 1996 (amended by Act 15 of 2001, Act 43 of 2002 and the Amendment Act 19 of 2005), which is premised on the common law but subject to modifications. The intention is to abolish the common law in *toto* and to replace same with a system of no-fault defined and limited benefits.²⁴ Draft legislation has been published for comment. In terms of the current system, the RAF Act:

8.2.1 Obliges the plaintiff to accept an undertaking in respect of future medical expenses and accommodation in a hospital or nursing home.²⁵ These expenses are paid under the undertaking as and when the cost is incurred – and such payments are not discounted, except for merit apportionments where applicable.

8.2.2 Provides for instalment payments for past and future loss of income or loss of support by agreement.²⁶ This is however for practical purposes irrelevant as such agreements are never entered into.

²⁴ To be called the Road Accident Benefit Scheme.

²⁵ Section 17 of the RAF Act was substituted by s 19 of the Road Accident Fund Amendment Act 19 of 2005, which came into force on 1 August 2008. The relevant portions of the section read as follows:

(4) Where a claim for compensation under subsection (1) —

(a) includes a claim for the costs of the future accommodation of any person in a hospital or nursing home or treatment of or rendering of a service or supplying of goods to him or her, the Fund or an agent shall be entitled, after furnishing the third party concerned with an undertaking to that effect or a competent court has directed the Fund or an agent to furnish an undertaking, to compensate —

(i) the third party in respect of the said costs after the costs have been incurred and on proof thereof; or

(ii) the provider of such service or treatment directly, notwithstanding section 19(c) or (d), in accordance with the tariff contemplated in subsection (4B);

²⁶ Section 17(4)(b) of the RAF Act

(B) Application of a discount rate to lump sum awards

- 9 As we hopefully made clear above, there is a need for a discount rate in all personal injury cases in respect of claims for a future loss of earnings, except:
- 9.1 Future loss of earnings and future medical expenses in respect of occupational injuries and diseases as COIDA replaces the once and for all rule with defined payments.
- 9.2 Future medical expenses in respect of injuries caused by road accidents as the RAF Act as that statute compels the injured person to accept an undertaking from the RAF that the expenses (or a portion thereof if the injured person was partly to blame for the accident) will be paid as when they arise. A tariff also applies to these payments.
- 10 The discount rates are not legislated but actuarially determined with reference to actuarial principles. The South African courts have rejected the idea of the judge making a round estimate of an amount which seems to him or her to be fair and reasonable as “entire guesswork” and a “blind plunge into the unknown”.²⁷ The use of actuarial principles have recently been confirmed by the Supreme Court of Appeal (second highest Court in South Africa) **RAF v Sweatman** 2015 (6) SA 186 (SCA) in the following terms:

“[7] This court thus approved the use of actuarial calculations based on whatever evidence is available. In this matter, following the approach of actuaries over decades, Mr Morris used the assessments of industrial psychologists as to the career path likely to have been followed by Ms Sweatman, her probable remuneration, prospects of promotion, working life span, retirement and other factors that might have affected her income stream over the years. He then calculated the present estimated value of the future income that she would have earned, taking into account the net capitalisation rate, which in turn has regard to the expected investment return. From the amount calculated he made deductions on the basis of future inflation rates, for taxation and likely changes in the rates of taxation, and, importantly, took into account accepted life tables reflecting mortality rates.

[8] The second step taken was to ascertain what difference the injury and disability arising from the collision made to Ms Sweatman: to determine the estimated present value of her future income stream in her injured and disabled state. Once that calculation had been done the two amounts were adjusted, having regard to the contingencies of life: any factor that would influence her life and earning capacity — the hazards of life. The amount calculated in respect of the income stream in the injured state was then

²⁷ **Southern Insurance Association Ltd v Bailey NO** 1984 (1) SA 98 (A) at 113F – 114A:

deducted from the amount she would have earned but for the injury, and that represented the estimated present value of Ms Sweatman's loss."

- 11 The parties, and not the Court, is responsible for each choosing their own actuary which may be called to provide expert testimony regarding the quantification of any aspect of the loss suffered by the plaintiff, including the net discount rate.
- 12 I now turn to deal with these aspects in greater detail.

(C) Details concerning the process for Setting the relevant discount rate

- 13 In matters involving lump sum compensation, the setting of the net discount rate (NDR, also called the net capitalisation rate) is the interest rate for discounting offset by the allowance for inflation.
- 14 In the United Kingdom, the NDR is set by the Justice Ministry, but in South Africa the NDR basis is not set by any particular body – the actuary is free to decide the basis in each matter, subject to actuaries' professional codes of conduct, and an Advisory Practice Note 701 (Delictual and Other Matters). These documents do not however specify how NDRs are to be devised other than that the concepts in relevant documents should be borne in mind.
- 15 The rate of interest / discounting to allow for could be approached from two main angles:
 - 15.1 Allowance for the expected net rate of return that the claimant may earn on the lump sum awarded, given an investment portfolio with an appropriate level of risk.²⁸ This expected will affect the extent to which the lump sum does in fact compensate the claimant by accurately extinguishing future losses, thereby reducing the risk of both over- and under- compensation.
 - 15.2 Allowance for the disutility of delay, i.e. a pure time-money preference, since compensation will always involve removing the delay the claimant would have experienced between date of award and dates of future expected losses.
- 16 In South Africa, both of these approaches are regarded to be problematic if they were considered to be attempts to take into account each claimant's particular circumstances. Time horizon of loss, investment ability, life stage, and anticipated

²⁸The level of risk mainly relate to the idea that people who need more liquidity (e.g. older or poorer) will optimise their investment strategy with lower-risk / lower-expected-return investments compare with their younger richer counterparts who can invest in higher-risk/higher-expected-return strategies since they can afford short-term volatility.

taxation and investment expenses would all have to be considered in each matter. Even the most exhaustive analysis for any particular matter could not claim to yield the single correct basis to apply.

17 Therefore in practice, the same basis is generally applied by a South African actuary to all matters, regardless of circumstances.

(D) Future loss of earnings

18 Historical analysis ²⁹shows that the minimum-risk real rate of return (minimum-risk investment returns less allowance for CPI inflation) has been in the order of 2.5% p.a. in South Africa. This is applied in respect of loss of earnings claims.

19 We should make clear that the rate is not cast in stone but rather the result of the economic climate of South Africa – it varies around the 2.5% mark and is currently closer to 2.4%, even though it was closer to 2.8% a few weeks ago. But the vast majority of lump sum compensation legal matters involving lost earnings in South Africa are settled with plaintiff and defendant agreeing on an NDR of 2.5% p.a. The reason for this is simply that most actuaries in this field use exactly 2.5%. Even if this exact rate is not used, a very similar rate would be used and the range is between 2.5% and 2.7%.

20 A 2.5% p.a. NDR for future loss of earnings is generally supported by yield curve analysis – the common actuarial practice of comparing the current market yields³⁰ of fixed interest versus index-linked SA government bonds, in order to assess the market's expectations of future Consumer Price Index inflation, and the minimum-risk rates of return currently available on the market.

21 By way of example, if general (non-promotional) earnings inflation was projected to be on average 1% p.a. higher than CPI inflation, and the claimant's future investment returns were projected to be 1% p.a. higher than the market-expected minimum-risk rates of return, then a current yield curve analysis would suggest a 2.5% p.a. NDR for future earnings-related loss calculations.

22 To conclude, in South Africa 2.5% p.a. is used as a standard NDR for future earnings-related losses, with very little deviation from this.³¹ Because actuaries set the rate, this technically means that the rate can change in every case but in practice

²⁹Koch The Time Value of Money at pp. 143 to 144 and 148

³⁰ Market yields are directly related to market prices, and can be sourced daily from the Johannesburg Stock Exchange (JSE).

³¹ Components of loss subject to escalation at rates other than earnings inflation, such as the cost of future expected medical procedures, tend to have a different NDR applied, and here there is more variability between the different actuaries.

there have not been matters where the net discount rate has been contested - since the standard 2.5% (or thereabouts) is used.

(E) Future medical expenses

23 Earnings related losses are those related to services provided by people and are expected to increase in line with “*general earnings inflation*”. The discount rate for most calculations is 2.5%, as explained above.

24 As inflation of medical expenses is expected be higher than the inflation of earnings (currently and historically in SA), the net discount rate relating to medical expenses is often set to be lower by actuaries than the net discount rate relating to lost earnings.

25 For future medical/other expense capitalisation calculations the discount rates used by South African actuaries has varied with the lowest net discount rate used being 0% (a few years ago) – the current lowest medical inflation NDR being used now is about 1%.

26 Arch Consulting has noted one explicit instance of a negative net discount rate being used in relation to medical expense inflation (almost a decade ago) but never in relation to earnings inflation – although sometimes industrial psychologists or other sources of prospective earnings information may specify relatively high annual increases in earnings which would effectively (even if only implicitly) have the same effect as having a negative net discount rate.

(F) Allowance for promotions

27 Allowance for promotions and other real increases in earnings is almost always made explicitly by actuaries, and not implicitly. In other words, the computation of the NDR stands separate from the allowance for promotions.

(G) Adjustment for contingencies

28 Risks and uncertainties associated with projected income streams – such as allowance for periods of unemployment, saved travel costs from not having to go to work, and chance of accidents or illness interrupting projected income – are allowed for through the application of simple general contingency deductions to the results of the actuary’s calculations, and not by adjusting the NDR. These much less scientific adjustments can often have a much larger effect than a, say, 1% p.a. change in the discount rate, especially for older people with fewer years of discounting.

CONCLUSION

- 29 The discount rate in South Africa is set with reference to expert testimony from actuaries and applies to all personal injury claims for future pecuniary losses other than a few exceptions created by statutes where periodic payments are permissible.
- 30 The rate for loss of earnings claims has stabilised and it invariably agreed at between 2.5% and 2.7%. For future medical expense, the discount rates used by South African actuaries has varied with the lowest net discount rate used being 0% (a few years ago) – the current lowest medical inflation NDR being used now is about 1%.
- 31 A negative rate has generally not been used in South Africa, other than in an isolated instance in respect of future medical expenses.

Date: 19 April 2017

Annex 7

SPAIN

Dr María Paz García Rubio
Dr Marta Otero Crespo
(Universidade de Santiago de Compostela)

(A) On what basis are personal injury damages awards assessed in your jurisdiction?

1. Personal injuries in Spain are compensated and determined according to provisions of the Annex to the **Act on civil liability and motor vehicles insurances** (Legislative Royal Decree 8/2004), of 29 October, of 2004, as amended by Act 35/2015, of 22 September, and which came into force on 1 January 2016.³² This Annex contains a Scale or Tariff system, known as *Baremo*.
2. Technically, this regulation set out by the *Baremo* has a limited scope of application, as it is circumscribed to the compensation of damages suffered in motor vehicles accidents. In this context, the *Baremo* is mandatory and binding on judges in respect of injuries resulting from road traffic accidents. However, the absence of any other scale system when assessing personal injury damages, led to the Spanish Courts to apply the first version of the *Baremo* as a guidance document in order to assess personal injury damages in general, especially since 2006.³³ In fact, the Spanish Supreme Court (Civil Chamber) sanctioned its general application to other tort cases falling outside the scope of injuries caused by road traffic accidents. In this regard, the Civil Court justified the standard application of the former *Baremo* – as a non binding instrument- to the assessment of damages in other scenarios on general principles such as the principle of equality or the principle of equity (Supreme Court decision of 9 December 2008, Civil Chamber –case: work accident)³⁴ and even the principle of legal certainty (Supreme Court decision of 15 October 2012, Civil Chamber- case: death of a minor caused by electric shock).³⁵
3. It should be noted that apart from the Civil Courts, Criminal, Administrative and Labour Courts also applied the previous *Baremo*, again, as a guidance document when solving cases involving personal injury claims.
4. Furthermore, the Additional Disposition 3 to the Act 35/2015 states that this new *Baremo* would serve as a guide to a future scale system in the health sector (medical malpractice cases). The Spanish Senate (the Health and Social Services Commission) is currently debating this new compensation scheme.³⁶

³² Act 35/2015, of 22 September, Official State Journal of 23 September 2015, available at https://www.boe.es/diario_boe/txt.php?id=BOE-A-2015-10197 - in Spanish.

³³ See Supreme Court decision (Civil Chamber) of 10 February 2006 (RJ 2006/674). Case: death caused by the fall of a garage door.

³⁴ RJ 2008/6976.

³⁵ RJ 2012/9345.

³⁶ Check the Health and Social Services Commission debates

<http://www.senado.es/web/actividadparlamentaria/iniciativas/detalleiniciativa/index.html;jsessionid=4JL4Ykt>

(b) Application of a discount rate to lump sum awards

5. Taking these data into account, it can be stated that under Spanish law, the **Baremo** establishes the **general regime on the assessment of personal injury damages**.
6. The new *Baremo* is not an update of the previous rules and scales. In fact, it is an extensive and far-reaching reform of the system established in 1995,³⁷ inspired by the basic principle of full compensation as it aims at restoring the victim to a situation as similar as possible to the one prior to the damaging event and furthermore requires evaluating and assessing each head of damage separately. In this regard, the new *Baremo* distinguishes three types of damages: (1) basic personal damages, (2) specific personal damages and (3) material losses (see below). Those damages caused under special circumstances and not falling under the rules and limits of the *Baremo*, might be compensated as well as exceptional damages. However, the *Baremo* does not address what happens when the damages suffered by the victim are over the limits set out by the scale system. Additionally, it should be noted that according to its rules, an unjustified enrichment of the injured parties/ victims is prohibited.
7. In general terms, compensation under this *Baremo* scheme takes into account any personal, family, social and economic circumstances of the victim, including those related to the loss of income and loss or diminution of earning capacity. To this end, a new Title IV is inserted in the regulation of 2004, divided into two different chapters: Chapter 1, on general provisions and definitions, and Chapter 2, on rules for the assessment of bodily harm, distinguishing three different situations: compensation for death (Table 1), compensation for *sequelae* or permanent injuries (Table 2), and finally, compensation for temporary injuries (Table 3).
8. In each of these 3 situations, a correlative distinction is made amongst 'basic personal damages' (Tables 1.A., 2.A and 3.A), 'specific personal damages (Tables 1.B, 2.B and 3.b.)' and 'material losses' (including actual damage -*damnum emergens*- and *lucrum cessans*, Tables 1.C., 2.C. and 3. C.). This category of 'material losses' includes future losses, as per *damnum emergens* (for instance, in case of permanent injuries, anticipated expenses for future healthcare or future care or help provided by third-parties are incorporated) and *lucrum cessans*. In this regard, a new actuarial model is set out for the compensation of *lucrum cessans*, establishing two factors: the multiplicand and the multiplier, which will determine the sum awarded. These factors are also applicable to quantify the anticipated expenses for future care or help provided by third parties as well (*damnum emergens*).

[YyXQnN2TQbJm5TvrJQP22qdC77MhvhYG9tqhQKnJJScfB!-1571990532?legis=12&id1=661&id2=000382](https://www.boe.es/buscar/doc.php?id=BOE-A-1995-24262). Please note that in 2011, the Final Provision 5 to the Act

36/2011, of 10 October, on Labour Proceedings also announced a new Scale system for personal injury damages applicable to work accidents and professional diseases. However, the Spanish legislator never approved this *Baremo*.

³⁷ See Act 30/1995, of 8 of November, available at <https://www.boe.es/buscar/doc.php?id=BOE-A-1995-24262>.

9. In **case of death** (Articles 61 ff.) the *lucrum cessans* is the net loss suffered by those economically dependent on the deceased, considered then as injured parties (typically, spouses, children under the age of 30, ascendants, descendants, relatives and siblings). In this regard, the calculation of such loss of future earnings (*lucrum cessans*), is determined by a multiplicand and a multiplier. It should be noted that regarding the multiplicand, there are special rules for unemployed victims and for those who are exclusively, entirely or partly, responsible for maintaining the household (see Articles 83- 85). Once the multiplicand is identified, the corresponding multiplier is set taking into account the coefficient resulting from combining the following factors (Articles 86 ff.): the net income of the injured party is multiplied by a factor, which consists of the following variables: (a) the injured party rate (10% for the injured party alone (minimum), 60% for the spouse, 30% for the children and 20% for others), (b) the entitlement of the victim to statutory pensions, (c) the duration of financial dependency, (d) the risk of death and the (e) **discount interest rate** which takes inflation into account. These factors are calculated according to the technical actuarial basis established by the Ministry of Economy and Competitiveness. These technical actuarial basis have been published by the Directorate- General of Insurance and Pension Funds, depending body of the Ministry of Economy and Competitiveness, and the interest rate is 3.5%.³⁸

(C) Details concerning the process for setting the relevant discount rate

10. Regarding the review process of the discount interest rate, it should be highlighted that the Final Disposition 1 to the Act 35/2015 imposes on the Ministry of Justice and the Ministry of the Economy and Competitiveness the constitution of a Monitoring Committee.³⁹ This Monitoring Committee, established in October 2016, must issue a Report within 3-year period from the entry into force of the new *Baremo* analysing the legal and economic repercussions of the system and the updates ex Article 49.1. (See below), along with the suggested measures to improve the system. In light of this Report, the Directorate- General of Insurance and Pension Funds shall promote the adequate adjustments and the corresponding revision of the technical actuarial basis (which consequently may determine a revision of the discount rate, if deemed necessary).
11. II. In **case of sequelae or permanent injuries** (including psychological and physical damage, organic and sensorial injuries and aesthetic damage, Articles 93 ff.), the compensation amount will include future losses such as foreseeable expenses regarding future medical assistance, prosthesis and orthotics, home and hospital rehabilitation, changes required for home adaptation and the resulting costs for mobility, compensation for the cost of care or assistance provided by a third party (family member or a professional care service). In this latter case, a multiplicand and

³⁸ Available at:
<http://www.dgsfp.mineco.es/direcciongeneral/JuntaConsultiva/Documentos/JCOrden21102016/Publicidad%20Bases%20Técnicas%20JCSFP.pdf>

³⁹ Upon proposal of the Directorate- General of Insurance and Pension Funds.

a multiplier are of application and the final compensation amount is the result of multiplying the cost of the care services with the values for the relevant injured party that is based on the following factors: (a) the right of the injured party to get help and care from a third party, (b) the duration of the need of such help and care, (c) the increase of such needs according to the age of the injured party, (c) the risk of death and (d) the **discount interest rate** that takes inflation into account (see above).

12. In these cases of permanent injuries, the *lucrum cessans* includes the loss of earning capacity and in particular, the net loss or diminution of income from the victim's work. Compensation for *lucrum cessans* is then calculated on the basis of the victim's net income or an estimate of the value of their dedication to housework or earning capacity for those under 30 years old. It also takes into account the severity of the inability to carry out the work as absolute, total or partial permanent disability (multiplicand). The model is similar to the one described above: the victim's net income serves as a basis or, statistical figures in the case of minors and victims who are responsible for the household. Then, this value is multiplied by a coefficient that is the result of the following factors (multiplier, Article 132): (a) the entitlement of the victim to public allowances for absolute, total or permanent disability, (b) length of the damage, (c) risk of death according to the degree of disability and, finally, (d) the **discount interest rate**, which takes inflation into account. Again, these factors are calculated according to the technical actuarial basis established by the Ministry of Economy and Competitiveness (see above). If the victim was exclusively dedicated to housework, 25% uplift is applied to the final compensation award (Article 132.5).
13. On the review process of the *Baremo* (including the discount rate), see above and the final section of this report.
14. III. Finally, in case of **temporary injuries** (Articles 134 ff.), the following patrimonial damages are recoverable: medical sanitary expenses, prosthesis, orthotics, aid and equipment and other expenses such as the increase of mobility costs, family members' travel expenses, etc.
15. In this case, *lucrum cessans* consists of the net loss or temporarily diminution of income from work, or in case of dedication to housework, of an estimation of such dedication when unable to perform. It should be noted that compensation for loss or diminution of dedication to household tasks is incompatible with compensation for expenses incurred by the replacement of such tasks.
16. Under Spanish law, claimants recover damages by way of a **lump sum award**. However, Article 41 establishes that at any time, the parties or the judge at the request of either of them may agree for the total or partial replacement of the lump sum for a **life annuity** in favour of the victim. In these cases, the lump sum is turned into an annuity following Table TT1 (it determines how to calculate the conversion).⁴⁰

⁴⁰ See

<http://www.dgsfp.mineco.es/direcciongeneral/JuntaConsultiva/Documentos/JCOOrden21102016/Publicidad%20Bases%20Técnicas%20JCSFP.pdf> at p. 51.

17. In any event, the judge may determine the abovementioned substitution, at least partially, when the injured parties are minors or persons with disability and the judge considers that this measure protects their interests in a more effective way.
18. Article 42 sets out the calculation of the life-long annuity. The total amount has to be calculated so that it corresponds to the compensation resulting from the *Baremo* system based on the technical actuarial standard coefficients for the conversion between income and capital (Table TT1). The resulting annuity is subject to annual adjustments following the public pensions revaluation rate, determined by the General State Budget Act.
19. The equivalent annual annuity amount is calculated dividing the capital amount by an actuarial coefficient, which takes into account, the duration, the risk of death of the victim or injured party and the **discount interest rate**, which takes inflation into account (see above).
20. This annual annuity may be fractioned in shorter periods as well (months or other time periods).
21. In any case, once the final compensation amount is fixed, this could only be **re-examined** under two specific circumstances: firstly, in case of a substantial alteration of the circumstances taken into account to set the compensation in the first place or, secondly, when additional and unexpected damages arise (Article 43).
22. According to Article 49, the *Baremo* tables will be **updated** at the beginning of each year in accordance with the public pensions revaluation rate (determined by the General State Budget Act – see Article 49 paragraph 1).⁴¹ However, the *lucrum cessans* and compensation for help provided by third parties must be updated following the corresponding technical actuarial basis. Furthermore, the Table on expenses for future care would be updated, if necessary, in accordance with the rules for the provision of healthcare services (Article 49 paragraph 2). The Directorate-General of Insurance and Pension Funds (Ministry of Economy and Competitiveness) is the responsible institution for the publication of the updated compensation schemes (Article 49 paragraph 3).
23. The Final Disposition 1 to the Act 35/2015 imposes on the Ministry of Justice and the Ministry of the Economy and Competitiveness the constitution of a Monitoring Committee.⁴² This Committee, created in October 2016, is the responsible for the

⁴¹ Please note that the General State Budget Act 2016 has been prorogued for 2017. On the pensions revaluation rate for 2017, see Royal Decree 746/2016, of 30 December, which establishes a revaluation rate of 0,25% for 2017. Text available at: <https://www.boe.es/boe/dias/2016/12/31/pdfs/BOE-A-2016-12605.pdf>.

⁴² As mentioned above, upon proposal of the Directorate- General of Insurance and Pension Funds.

required updates according to Article 49.1 (see above).⁴³ Furthermore, it must issue a Report within 3-year period from the entry into force of the new *Baremo* analysing the legal and economic repercussions of the system and the updates ex Article 49.1., along with the suggested measures to improve the system. In light of this Report, the Directorate- General of Insurance and Pension Funds shall promote the adequate adjustments and the corresponding revision of the technical actuarial basis (see above).

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⁴³ See the Order issued by both Ministries:
<https://www.dgsfp.mineco.es/sector/documentos/legislacion/2016/Orden%20Comisi%C3%B3n%20de%20Seguimiento.pdf>.