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In the first of two articles dealing with forensic accounting calculations, Prof Niamh Brennan of UCD and John Hennessy BL examine the approach to calculating damages in personal injury cases.

Heads of special damage in personal injuries cases

Damages in personal injury cases use a more or less standard methodology which does not differ significantly between cases.¹ Where a plaintiff is asserting that her injuries have affected her capacity for work, the methodology usually includes projecting lost earnings and related fringe benefits over the period the plaintiff would reasonably have been expected to work had the accident not occurred. An accident victim may suffer a reduction in life expectancy, which may in turn reduce her working life. Future costs (such as medical or nursing care) also need to be projected in many cases. Information on life expectancy and working life expectancy can be obtained from statistical data. Actuarial assistance is usually needed in sourcing and analysing this information and in calculating the present value of the future cash effects of the plaintiff's injuries.

Forensic accountants can provide valuable assistance in the calculation of special damages which may include lost earnings (both past and future), additional healthcare, rehabilitation and medical expenses (both past and future), special education or retraining costs, and household services lost. Table 1 lists special damages commonly arising from personal injuries.

Table 1: Damages in personal injury cases
<p>Special damages</p> <ul style="list-style-type: none">• Lost earnings (including other compensation, fringe benefits, etc)<ul style="list-style-type: none">◆ During injury period (past and future)◆ Consequent on potential for higher periods of unemployment◆ Consequent on limitations in earning capacity due to injuries◆ Reduced life expectancy• Pension rights lost• Additional health care and living expenses• Other actual costs (past and future) arising from the injury <p>Mitigating (reduction in) damages</p> <ul style="list-style-type: none">• Earnings post injury (past and future)• Income tax savings• Certain Social welfare benefits received

Table 2 lists items sometimes forgotten in formulating claims for damages.

Table 2: Top ten list of losses plaintiffs often overlook
<ol style="list-style-type: none">1. Loss of household services such as cooking, cleaning and transporting children2. Loss of future social security or pension benefits3. Loss of holiday pay4. Loss of future health insurance and life insurance benefits5. Loss of deferred compensation from a lost job6. Loss of long-term or short-term disability insurance7. Loss of benefits from promotions that were expected or likely8. Loss of personal possessions damaged in an accident9. Loss of estate accumulation, including contributions to retirement plans10. Cost of mileage to and from medical treatment <p><i>Source:</i> Adapted from Long, S. "Top ten things plaintiffs forget in personal injury cases" <i>Frankenfeld Report Newsletter</i>, Vol. 1, No. 1, November 1998, www.frankenfeld.com.</p>

The calculation of damages is based initially on historical earnings. Those earnings are projected using assumed growth rates. The projected earnings (lost because of the accident) are then discounted to their present value using an appropriate discount rate.

In assessing loss of future earnings, loss of earning capacity (rather than loss of earnings *per se*) is the object of the calculations. The loss of earnings capacity assessed in the Irish courts is based on what the plaintiff would have earned rather than what he could have earned. This is clear from a large number of decisions of the courts over the years. Barron J. put it simply and clearly in *Doran v. Dublin Plant Hire Ltd* when he said:

“Although it may be difficult to determine the facts which give rise to future loss of earnings, it still must be done. The fundamental matter is to determine the natural and probable financial loss to the plaintiff. There are two parts to the equation:

- (1) What would the plaintiff have earned throughout his working life, if he had not met with the accident; and
- (2) What will he now earn over the same period.”²

Table 3 shows the various elements comprising the estimate of pecuniary loss.

Table 3: Estimate of pecuniary loss

Total estimated pecuniary loss includes present value of:

- Lost net earnings
 - ◆ Reduction in gross earnings
 - ◆ (Unemployment probability)
 - ◆ (Income taxes)
 - ◆ Fringe benefits
 - ◆ (Work-related expenses)
- Lost household services
- Costs of lifetime health care and living expenses
- Other recurring future costs (*e.g.* equipment)
- Funeral and burial costs (fatal accident cases)
- Other out of pocket costs

Multiplier reflecting duration of losses and time effects of payments in the future applied to the sum of these amounts

Difficulty in Quantifying Awards

The difficulty in assessing damages is not a basis for a refusal to make an award in the plaintiff's favour. In fact, the courts have stated that it is not appropriate to substitute an increase in general damages for an item of special damage on the grounds that the latter is difficult to quantify.³

Difficulties in estimation are common in cases concerning the loss of an opportunity for the plaintiff arising from her accident. In the nature of things, these damages are speculative and much depends on the evidence in a particular case. An obvious and frequent example is damages for lost profits in the case of a self-employed plaintiff. If absolute certainty were required as to the precise amount of the loss that the plaintiff had suffered, no damages would be recovered at all in a majority of cases. In awarding damages, courts take account of uncertainties such as lost earnings capacity, loss of profits and future damages, with a view to arriving at a best estimate.

Assumptions

Many questions concerning personal injuries calculations cannot be answered with precision, even with the benefit of expert evidence, because they relate to the future. Accordingly the experts, and ultimately the court, must make certain assumptions about the future in order to arrive at an estimate of the present value of future losses. In making such assumptions the court must consider the probability of occurrence of possible future events (*e.g.* promotion, change of job, redundancy, death, further disabling accident, etc.) and the relative probabilities of these events must be factored into the award for future loss of earnings. It is accepted in the courts that these calculations of damages will be based on assumption and estimation.⁴

Probability versus possibility

The courts distinguish between probability and possibility.⁵ *Reddy v. Bates*⁶ is regularly referred to in personal injuries cases to this day as it is regarded as having established as a matter of law 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.

Loss of Earnings

Lost earnings comprise the monetary loss, expressed in present values, arising from the individual's inability or reduced ability to provide certain services. Lost earnings damages comprise the present value of the difference between the plaintiff's projected 'but for' earnings and her projected actual earnings. The calculations include both actual or estimated lost past earnings and projected lost future earnings.

This can be summarised in the following equation:

Lost earnings =
('But for' – actual past earnings) + Present value ('But for' – projected future earnings)

The legal principles for calculating damages for lost earnings were set out for the purposes of English law in *Cookson v. Knowles*⁷ as follows:

- Past lost earnings can include expected increases in income (*e.g.* wage increases that have been granted to employees performing similar tasks as the plaintiff);
- Future loss is based on earnings at the date of the trial, *i.e.* no allowance for inflation. However, account may be taken for expected increases in earnings (*e.g.* arising from promotion);
- Future loss is usually calculated by applying a multiplier (derived from annuity tables) to the multiplicand (*i.e.* the estimate of the annual loss).

Calculation of past earnings loss

Past losses may be calculated by applying to a periodic (*i.e.* weekly, monthly, annual) amount (called the multiplicand) a multiple for the period of loss. Adverse contingencies must be taken into account (such as ill-health, strikes, unemployment) which would have reduced the plaintiff's earnings in the pre-trial period had she not been injured. This adjustment is similar to that in calculating future losses, except that a deduction for life expectancy is not appropriate.

Estimate of annual earnings

Earnings will include basic earnings, overtime, shift premium, bonuses, commissions, fringe benefits and deferred benefits. Finding appropriate base earnings requires the accountant to calculate or estimate the amount of earnings of the injured party prior to the accident. The plaintiff's earnings history prior to the incident is a good source for understanding the base-year earnings. Earnings should be reduced by taxation and certain social welfare payments⁸ and by any costs incurred by the plaintiff in making those earnings such as travel costs and clothing costs.⁹ In the case of foreign currency earnings lost, the court will award damages in the foreign currency¹⁰ or convert the foreign currency amount into Irish pounds at an appropriate rate.¹¹

Fringe benefits

Lost earnings may include lost fringe benefits. If the earnings are lost, the benefits that accompany them are generally also lost and should therefore be included in lost earnings calculations. Fringe benefits are compensable damages¹² because their absence is an economic loss to the plaintiff which must be replaced and they are part of the payment for the injured person's services. Details of the benefits the plaintiff was receiving before the accident, and was likely to receive in the future, should be obtained. Lost fringe benefits then need to be estimated. Courts have, for instance, compensated plaintiffs for loss of board and lodging,¹³ and loss of the opportunity to buy duty free goods.¹⁴ In cases where the employer and employee share the cost of the fringe benefit, the calculation should only include the employer's contribution towards the fringe benefit.

In Ireland, the inclusion of fringe benefits and the deduction of expenses directly attributable to employment are generally accepted practices and these adjustments to the basic earnings figures tend to be made in the actuary's report and to form part of the actuary's calculations. The general principle that the amount recoverable by a plaintiff is limited to the difference between losses resulting from the damage and any gains arising as a consequence of the accident was clearly stated by Walsh J. in the Supreme Court in *O'Looney v. Minister for the Public Service*.¹⁵

Projection of future earnings

In an award where a plaintiff is compensated for the loss of earning capacity, the court compares the plaintiff's pre-accident earning capacity with his post-accident earnings capacity, and awards damages to represent the difference. In theory, compensation under this head is for the loss of a capital asset (*i.e.* the ability to earn) rather than for loss of income in the form of earnings. (*e.g.* see the judgment of Barr J. in the High Court in *Phelan v. Coillte Teoranta*¹⁶).

In order to calculate a lump sum to compensate for loss of future earnings, a projection of future earnings will be required. A growth rate must be determined to project future earnings over the expected working life of the injured person. This is the percentage rate that earnings would be expected to increase during the damage period. The growth rate must accurately reflect the expected increases in the plaintiff's earnings. A variety of sources are used to estimate this rate including industry standards, historical data and government statistics. A Plaintiff's historical earnings are frequently used as a predictor of future earnings growth rates. If a solid historical record is available, it may be used to calculate a growth rate directly. Alternatively, it may be necessary to resort to average earnings statistics for the relevant occupation. The accountant may project 'but for' earnings based on the past trend in the plaintiff's earnings, provided these follow a consistent pattern and are a reliable indicator of the future. Earnings may also increase because of the plaintiff's prospects of promotion,¹⁷ even where the prospects of promotion are not certain¹⁸ (see also *State (Thornhill) v. Minister for Defence*¹⁹).

Projecting income streams for self-employed people is likely to be more difficult than for employees. For self-employed people a distinction must be made between their

income from equity in the business (which should not be affected by the injury) and income in compensation for their work in the business. One approach is to calculate what it would cost to pay a manager to do the work of the owner.

As stated earlier, the measure of damage is not loss of earnings *per se* but loss of earnings capacity. The effect of loss of earnings capacity is that the plaintiff is disadvantaged in competing with others for work in the labour market. Thus, damages may also be awarded in respect of 'disadvantage in the labour market' where the plaintiff's employment prospects are adversely affected by the injury.²⁰ The quantum of damage depends on the present value of the risk that the plaintiff will, at some future time, suffer financial damage because of his disadvantage in the labour market.

Calculating the lost earnings of children involves greater estimation and subjective judgement than for adults.²¹ Two approaches have been used, the latter being less likely in practice:

- The use of government statistics of average earnings (possibly subject to adjustment for the particular circumstances of the individual child);²² and
- Based on the earnings and employment history of the child's father.²³

Lost social welfare benefits

In some cases, the plaintiff's earning capacity is so reduced that he will not be able to make social welfare contributions resulting in lower social welfare entitlements than before the accident. In such cases, the claim for damages should include the lost social welfare benefits.

Valuation of Pension Benefits / Loss

In some personal injury cases, the lost compensation includes lost pension rights or benefits which would have been earned during the projected working life of the plaintiff and received following retirement. These projected lost pension benefits must be added to lost earnings in calculating damages. There are two ways of calculating the present value of the loss. The open market approach involves obtaining quotations on the insurance market for the amount of lost pension for the plaintiff. Alternatively, an actuary can be asked to assess the present value of payment for life of the amount of the loss of pension commencing at the date of retirement of the plaintiff. The method used in *Auty v. National Coal Board*²⁴ for calculating pension loss in personal injury claims has been accepted in England as the primary way for computing losses of pension in lump sum calculations. The open market approach was followed, together with application of a 5% discount rate.

Mitigating Lost Earnings

Plaintiffs have a duty to take reasonable steps to minimise the damages they incur, for example by finding alternative employment after an accident. Actual earnings after the injury may not be the best measure of damage mitigation – the plaintiff may not have made a sufficient effort to mitigate damages.

The basic rule is that damages are based on the net consequential loss. Receipts arising from the accident must therefore be deducted from the plaintiff's losses. However, the general rule in Irish law (subject to specific exceptions) is that compensating benefits are not taken into account in reducing the plaintiff's damages for loss of earnings in a personal injury action.²⁵

Other items to be considered include the following :

- Statutory sick pay should be deducted ;²⁶
- Redundancy payments should not be taken into account in assessment of damages ;²⁷
- Savings on living expenses (e.g. travel costs to/from work) should be deducted as an expense to earn lost earnings ;²⁸ and
- Any tax rebate must be deducted from lost earnings.²⁹

Although defendants have attempted to have entitlements to pension rights or accelerated payment of pensions taken into account in assessing compensation for loss of earnings by plaintiffs, the courts have resisted this. For such benefits to be taken into account in assessing loss of earnings claims would be to allow the wrongdoer to benefit from his wrong.

Lost Years Deduction

Irish law allows plaintiffs whose life expectancy has been shortened to recover loss of earnings and other pecuniary benefits in respect of his 'lost years', i.e., years in which the plaintiff would have been alive and earning but for the accident.³³ Lost years are calculated by reference to the likely life expectancy of the plaintiff, were it not for the accident, compared with his life expectancy after the accident. A plaintiff's injuries often result in a reduced life expectancy such that he is expected to die before the "normal" retirement age. In such cases, the court will determine compensation for the income which the individual would have earned between the (expected) age of death and the (previously expected) age of retirement. In principle, the pleasure which consumption of this residual income would have provided during the years which have been lost can be replaced by consumption during the plaintiff's now-shortened lifetime.

Calculation of 'lost years' damages

A plaintiff whose life expectancy has been shortened will not need to be compensated for the full value of the income lost during the years which he/she will not now live. Numerous theories have been put forward for the determination of the amount of compensation to be made for lost years. These range from:

- Reducing full income for those components of income absolutely necessary to the maintenance of life ; to
- Reducing full income for the entire value of the plaintiff's projected expenditure on consumption (*i.e.* deduction of the entire value of income except savings).

A calculation based on reasonable assumptions as to likely future patterns of spending on essential living expenses will usually be sufficient.

Calculation of living expenses

Pecuniary benefits which form the subject of a 'lost years' claim are not confined to, but mainly relate to, lost earnings. The size of the claim depends on the age of the plaintiff and his life expectancy at the date of trial.

The primary difficulty here concerns the measurement of the value of living expenses. One method is to approximate this figure using the average family's expenditures on such categories as food, clothing, shelter and transportation. If the plaintiff were a member of a family, not all income would have been spent on her alone. Indeed, fatal accident litigation in the U.S. suggests that the total amount which most individuals spend on goods and services which benefit them alone is approximately 30 percent of after-tax income. As only some portion of that percentage is spent on necessities, the deduction for personal necessities may be as little as 10 – 15 percent. Although most of the reported cases assume that all expenditures on food, shelter, clothing, transportation, and health care are necessary, two alternative views have been proposed concerning the proportion of the income on which to base the calculations:

- Only that portion of family income which would have been spent on the plaintiff should be deducted. On that basis, the plaintiff was awarded 67 percent of the income which would have been earned during the lost years;
- Courts have based their awards on the percentage of personal income which would have been devoted to necessities. This has led to awards lying between 50 and 60 percent of the lost years income.

A number of approaches to calculating the deduction have been applied in the UK:

- Deduction has been calculated in a manner similar to the value of dependants' dependency in fatal accident cases ;³⁴
- Damages have been limited to the sums which the victim would have saved during the lost years ;³⁵ and
- Damages have been calculated by reference to the available surplus remaining after deducting from the net earnings the cost of maintaining the victim in his station of life.³⁶

Given these different approaches to the calculation of the deduction of living expenses, the English Court of Appeal in the combined appeals, *Harris v. Empress Motors Ltd* and *Cole v. Crown Poultry Packers Ltd*³⁷ provided some general guidance

as to the principles to be applied. In both cases, the judge had adopted the Fatal Accidents Act dependency approach and had deducted 25 per cent from the net earnings in assessing damages for the lost earnings during the lost years. Three principles were set out:

1. The elements comprising living expenses should be the same regardless of the age of the injured party;
2. The sum to be deducted as living expenses should be the proportion of the victim's net earnings spent on maintaining himself at the standard of living appropriate to his case; and
3. Sums expended to maintain others should not form part of the victim's living expenses and should not be deducted from net earnings.

Expenses

For expenses to be recovered, it must be demonstrated that the expenses are necessary because of the defendant's wrong.³⁴ Only reasonable expenses may be recovered.³⁵ In cases of severe injury, additional expenses may have to be considered such as additional healthcare, rehabilitation and medical expenses (both present and future), and special education or retraining costs.³⁶ In the case of severe injuries, calculation of the annual loss often includes the annual nursing/medical costs to be incurred by the plaintiff. Where healthcare costs include a stay in a medical or paramedical institution, the element of that cost relating to the value of board and lodgings must be deducted, as the plaintiff would have had to maintain himself had he not been injured.³⁷ The courts have also allowed expenses of special accommodation and adaptations to existing accommodation in the case of severe injuries.³⁸

Three criteria are generally relevant in evaluating future medical costs. They must be (i) directly related to the wrong of which the plaintiff complains, (ii) generally acceptable by the medical profession and (iii) reasonable in amount.³⁹

Multipliers in relation to future expenses should not be set so as to allow recovery for lost years (relating to reduced expectation of life) in a manner similar to future earnings. Furthermore, compensation for the cost of future care of an individual whose life expectancy is demonstrably impaired need obviously be less than that required for someone whose anticipation of a future lifetime is normal.

Personal / Household Services

Since individuals make valid contributions through their efforts at both paid and unpaid work, the courts have concluded that they should be compensated when they are unable to pursue either type of employment. In the field of personal injury litigation this has implied that calculation of a plaintiff's damages should include the loss (or impairment) of the individual's ability to perform household services. Controversy remains, however, concerning the method which should be used to establish the economic value of that loss. There are two components of the loss of household services: direct labour, including most general housekeeping duties; and management or indirect labour.⁴⁴

*Daly v. General Steam Navigation Co*⁴⁵ involved a claim for household services. Two main principles set out in *Daly* deal with the pre-trial and future loss of household services. First, a future loss of household services was allowed, regardless of the intent, or lack of it, on the part of the plaintiff to hire replacement household labour to compensate for the lost capacity to undertake household work. The second aspect relates to loss of ability to perform household duties in the pre-trial period as a result of the accident. The notional value of those replacement services was not considered an appropriate measure of the loss of housekeeping ability. The loss, rather, should have been assessed as a part of the plaintiff's general damages, and the additional pain, suffering and loss of amenity experienced by the plaintiff should be the measure of that loss. This approach to the impairment of housekeeping ability which awards the plaintiff for her loss of ability rather than relying on the prior "antiquated if not sexist" approach (which sought to calculate the value of the services lost by measuring the loss from the point of view of a third party who had previously benefited from the services provided by the victim) has been supported in the courts.⁴⁶ In addition, in some instances, the household services which were performed by a plaintiff or the deceased cannot be replicated by replacement labour.⁴⁷

Multipliers

Given that damages are awarded in the form of a lump sum rather than in the form of an income stream, the assessment of damages requires the conversion of future cash flows into a capital sum. Actuaries generally advise, and the courts generally apply, a multiplier approach. A multiplier based on the expected duration of the loss is applied to an amount representing the annual losses and expenses (called the multiplicand) producing a capital figure. In personal injury actions, the multiplier is determined at the date of trial. Invariably an actuary advises on the appropriate multiplier.³⁰

The multiplier is the number of weeks or years of loss of earnings, discounted to account for the early receipt of a lump sum. The multiplier is designed to reflect many factors, in particular the plaintiff's life expectancy and the time value of money. In personal injury cases, courts have traditionally relied on doctors for opinions on plaintiffs' remaining life expectancy where it has been shortened by the effects of the injuries.

As the money intended to compensate the future loss is being received at the time the calculation is made (i.e., at the time of the judgment or settlement of the action) rather than when the loss or expense is actually incurred, the multiplier is adjusted downwards to take into account the time value of money. If the loss is not expected to begin until some time in the future, there must be an additional adjustment of the discount for accelerated receipt. A further and separate downward adjustment will be made to the multiplier to reflect the contingencies of life. The multiplier should also take into account contingencies and the rate of return on investment of the lump sum in the future. These principles apply to both future expense and loss of future earnings. In order to effect the discount of accelerated receipt, it is necessary to apply a notional rate of interest which the plaintiff is assumed to obtain by investing the 'accelerated' lump sum. There are therefore two main factors that determine the multiple – the period of loss and the discount rate.

The multiplier is often provided to the court when the facts concerning rate of growth of earnings, discount rate, and age of retirement are not in dispute, but there is some disagreement concerning the plaintiff's starting salary. The determination and agreement of multipliers is usually less difficult than might be expected, for two reasons. First, experts rarely differ significantly with respect to the discount rate or the plaintiff's retirement age. Thus, multipliers would have to be provided only for a selection of growth rates of earnings. Second, growth rates of earnings tend to be associated very closely to education level. Simply by calculating a multiplier for each of four education levels can provide a comprehensive range of multipliers: primary school, secondary school, university, and post-graduate.

Kemp sets out two approaches to calculating damages using multipliers. The single multiplier method is based on average net annual earnings and one multiplier.³¹ The split multiplier approach caters for changing earning capacity of the injured party and applies an increasing amount of earnings (multiplicand) to the multiplier.³²

Assumptions underlying the multiplier

When arriving at an appropriate multiplier to apply to calculated loss of earnings, an actuary will make an assumption as to the extent to which investment returns will exceed wage inflation over the period of the losses. In doing so the actuary is building into his calculation of the present value of future lost earnings an assumption in relation to increases in income and simultaneously applying a discount to arrive at the capital value today of the future income stream that the plaintiff has lost. If it is accepted that, over the long term, wage inflation and investment returns move approximately in tandem with a relatively constant differential between them, this approach has the effect of making it unnecessary to project specific inflation-related pay rises into the future. However, such a calculation ignores any pay adjustments arising from factors other than inflation (*e.g.* by virtue of promotion, productivity changes, etc.) that the plaintiff might enjoy, and these therefore need to be factored into the calculation separately.

The question of the appropriate differential to be assumed between investment returns and wage inflation for the purpose of calculating the present value of future losses is controversial. The controversy has arisen because the formerly widely accepted differential of 4%, arrived at based on historical investment performance in times of medium to high inflation, is regarded by many commentators as excessive when inflation and interest rates are low. The economic environment in Ireland in recent years has given rise to differentials between inflation rates and returns available on secure investments that are much less than 4%. Indeed such differentials have on occasion been negative (*i.e.* inflation rates have exceeded relevant interest rates). The size of the differential is, of course, affected by the interest rate chosen which, in turn, is affected by the risk profile of the investment and the period for which the investment is to be made. It is important to note that a reduction of even 1% (from 4% to 3%) in the discount rate can increase significantly the present value of a series of future cash flows.

This issue has not been determined on a definitive basis in the Irish courts to date. In England, however, the House of Lords addressed the question in *Wells v Wells*.⁴⁹ Their Lordships focused their attention on whether investment returns assumed in

such calculations should be the returns on equities (which involve significant investment risk) or on Indexed Linked Government Securities (which are a much safer form of investment the effect of which is to protect the capital sum from the effects of inflation and provide a return to the investor). All five law lords held that the latter approach was the appropriate one. Lord Lloyd of Berwick said:

“Investment in ILGS is the most accurate way of calculating the present value of the loss which the plaintiffs will actually suffer in real terms. Although this will result in a heavier burden on these defendants, and, if the principle is applied across the board, on the insurance industry in general, I can see nothing unjust. It is true that insurance premiums may have been fixed on the basis of the 4 to 5% discount rate indicated in *Cookson v Knowles* [1978] 2 All E.R. 604, [1979] A.C. 556 and the earlier authorities. But this was only because there was then no better way of allowing for future inflation. The objective was always the same.”⁵⁰

Lord Steyn said:

“...the Court of Appeal have assumed that the same investment policy would be suitable for all investors, regardless of special needs. The premise that the plaintiffs, who have perhaps been very seriously injured, are in the same position as ordinary investors is not one that I can accept. Such plaintiffs have not chosen to invest: the tort and its consequences compel them to do so. ... Typically, by investing in equities an ordinary investor takes a calculated risk which he can bear in order to improve his financial position. On the other hand, the typical plaintiff requires the return from an award of damages to provide the necessities of life. For such a plaintiff it is not possible to cut back on medical and nursing care as well as other essential services. His objective must be to ensure that the damages awarded do not run out. It is money that he cannot afford to lose.”⁵¹

Although these judgments would appear to rely heavily on the availability of ILGS, of which there is no equivalent in the Irish financial markets, it is noteworthy that the court did not stop at approving the use of such investments to calculate the appropriate differential. The lords went on to extract from the evidence presented to them the appropriate percentage, and all agreed that, instead of the figures of 4% to 5% commonly used, the correct differential for the cases before them was 3%, reflecting the altered investment environment and the availability of a suitable benchmark. It is submitted that 3% is likely to be much closer to an appropriate differential in Ireland today than figures of 4% and higher that are commonly used.

Accounting Data

Accounting numbers are essential in computing and supporting financial calculations. The foundation of the calculation must be built securely on all available data. Forensic accountants can assist in the early stages of a case in the acquisition of information by formulating interrogatories and requests for discovery of relevant financial documents. Forensic accountants may also assist in evaluating the quality, integrity and sufficiency of the data available in respect of the case. All accounting information

must be evaluated for its relevance, reliability, comprehensiveness and accuracy. Inadequate information will lead to flawed calculations.

Forensic accountants need to double-check the foundations and assumptions on which their calculations are based. Instructing solicitors should:

- Make sure they have supplied the forensic accountant with all available financial information. Forensic accountants are limited by the information provided to them. The failure to use all available data or to have knowledge of what is available can lead to seriously flawed calculations; and
- As far as possible, double check the accountant's stated assumptions and calculations to make sure all relevant information is included therein and has not been misunderstood.

The use of third party endorsements for assumptions in forensic accounting reports will add to the credibility of the report. For example, central statistics office data⁴⁸ or data from industry associations can assist in confirming the accounting data (e.g., average industrial wage, wages in a specific industry) used in the report. Newspaper appointments pages can also provide a useful source of salary ranges for a particular job.

There are occasions, particularly in relation to self-employed persons, where the accounts and the returns to the revenue do not reveal the true financial performance of the business. In the UK, the courts have found that a plaintiff may be compensated for lost earnings even where these were not disclosed to the revenue.⁴⁹

Concluding Comment

There are several aspects of the way in which the courts compensate the victims of personal injuries arising from legal wrongs that merit clarification or review. These include:

- (1) The arbitrary limit placed on general damages payable for pain and suffering in the most tragic and extreme cases;
- (2) The somewhat unclear and imprecise deduction made by courts from calculated special damages to take account of future uncertainties – the so-called '*Reddy v. Bates* deduction';
- (3) The effective subsidisation of the insurance industry by the State that results from the calculation of damages on a 'net of tax' basis; and
- (4) The assumptions made routinely in actuarial calculations regarding the long-term differential between wage inflation and investment returns – a small change in this assumption can have a very significant effect on the calculation of damages.

A clear indication of current judicial and/or legislative thinking in these areas would assist legal practitioners, and forensic accountants, in achieving greater precision in the calculation of damages for personal injuries.

¹ Many aspects of personal injury calculations cannot be covered in this short article, including fatal accident cases, payment of awards, taxation of personal injury damages etc. Further information on

these topics are to be found in Brennan and Hennessy, *Forensic Accounting* (Round Hall Sweet & Maxwell, Dublin, due for publication September 2001).

² [1990] 1 I.R. 488 at 497 – 498.

³ *Ibid.*

⁴ *Mallett v. McMonagle* [1970] A.C. 166.

⁵ *Kennedy v. East Cork Foods* [1973] I.R. 244 at 252-253

⁶ [1983] I.R. 141.

⁷ [1979] A.C. 556.

⁸ *Cooke v. Walsh* [1984] I.L.R.M. 208, 217.

⁹ *Lim Poh Choo v. Camden and Islington Area Health Authority* [1980] A.C. 174, 191.

¹⁰ *Peter Paul Hoffman v. Dr. David Sofaer* [1982] 1 W.L.R. 1350.

¹¹ E.g., see *Conley v. Strain* [1988] 1 I.R. 628.

¹² *Glover v. BLN Ltd* (No. 2) [1973] I.R. 432

¹³ *Liffen v. Watson* [1940] 1 K.B. 556.

¹⁴ *Ashley v. Esso Transportation Co. Ltd* [1956] *The Times* 8 February.

¹⁵ [1986] 1 I.R. 543 at 547.

¹⁶ [1993] 1 I.R. 18.

¹⁷ *Mitchell v. Mulholland* (No. 2) [1972] 1 Q.B. 65, 83–84 (C.A.).

¹⁸ *Ratnasingham v. Kow Ah Dek* [1983] 1 W.L.R. 1235.

¹⁹ [1986] 1 I.R. 1.

²⁰ In the UK *Smith v. Manchester Corporation* [1974] 17 K.I.R. 1 C.A.; in Ireland *Kennedy v. East Cork Foods Ltd* [1973] I.R. 244 (S.C.).

²¹ See, for example, *McNamara v. Electricity Supply Board* [1975] I.R. 1 (S.C.); *Cooke v. Walsh* [1984] I.L.R.M. 208, 217 (S.C.); [1983] I.L.R.M. 429, 435; *Lindsay v. Mid-Western Health Board* [1993] 2 I.R. 147 at 177.

²² A wealth of interesting statistics can be found in an annual publication as follows: Central Statistics Office Ireland *Statistical Abstract* (Stationery Office, Dublin, Annual).

²³ *Cassel v. Hammersmith and Fulham Health Authority* [1992] P.I.Q.R. Q168.

²⁴ [1985] 1 All E.R. 930 (C.A.).

²⁵ See Section 2 of the Civil Liability (Amendment) Act 1964 and the modifications to the general rule, contained in that section, made in sections 75 (as amended by section 20 of the Social Welfare Act 1994) and 237 (as amended by section 17 of the Social Welfare Act 1997) of the Social Welfare (Consolidation) Act 1993. See also *Woodman Matheson & Co. Ltd v. Brennan* [1941] 75 I.L.T.R. 34.

²⁶ *Palfrey v. GLC* [1985] I.C.R. 437.

²⁷ *Mills v. Hassal* [1983] I.L.R. 330; see also *O'Loughlin v. Teeling* [1988] I.L.R.M. 617.

²⁸ Discussed in *Dews v. National Coal Board* [1988] 1 A.C. 1

²⁹ *Hartley v. Sandholme Iron Co. Ltd* [1975] Q.B. 600.

³³ The leading case on this in the UK is *Pickett v. British Rail Engineering* [1980] A.C. 136. However the matter was addressed in an earlier Irish case *Doherty v. Bowaters Irish Wallboard Mills Ltd* [1968] I.R. 277 (S.C.).

³⁴ *Benson v. Biggs Wall & Co. Ltd* [1983] 1 W.L.R. 72; *Harris v. Empress Motors Ltd* [1983] 3 All E. R. 561; [1984] 1 W.L.R. 212.

³⁵ *Sullivan v. West Yorkshire Passenger Transport Executive* 17 December 1980 (unreported), as cited in *Harris v. Empress Motors Ltd* [1983] 3 All E. R. 561; [1984] 1 W.L.R. 212.

³⁶ *White v. London Transport Executive* [1982] 1 Q.B. 489; *Clark v. Sugrue Brothers Ltd* 28 January 1983 (unreported).

³⁷ [1983] 3 All E. R. 561; [1984] 1 W.L.R. 212.

³⁴ White, J. P. M. *Irish Law of Damages for Personal Injury and Death* (Butterworths, Dublin, 1989) p. 230.

³⁵ *Cunningham v. Harrison* [1973] Q.B. 942; *Cassel v. Riverside Health Authority* [1995] P.I.Q.R. Q. 168.

³⁶ E.g., *Conley v. Strain* [1988] 1 I.R. 628.

³⁷ *Shearman v. Folland* [1950] 2 K.B. 43 (CA); *Lim Poh Choo v. Camden and Islington Area Health Authority* [1980] A.C. 174.

³⁸ *Doherty v. Bowaters Irish Wallboard Mills Ltd* [1968] I.R. 227 (S.C.); *Fitzgerald v. Lane* [1987] 2 All E.R. 455 (C.A.).

³⁹ Slesnick, “Forecasting medical costs in tort cases”, in *Litigation Economics* (Gaughan, P. A. and Thornton, R. J. (eds), JAI Press, Greenwich, Connecticut, 1993).

⁴⁴ *Brouwer v. Grewal and Edmonton (City)* [1995] 168 A.R. 342, at 353–4.

⁴⁵ [1980] 3 All E.R. 696.

⁴⁶ *Fobel v. Dean* [1991] 6 W.W.R. 408, at p. 423 (Saskatchewan Court of Appeal).

⁴⁷ *Taguchi v. Stuparyk* [1994] 16 Alta L.R. 3d 72, at 84–5.

³⁰ This is in contrast to the practice in the UK where multipliers are based on actuarial tables called Ogden tables.

³¹ Examples of where this method has been applied include *Brightman v. Johnston* [1985] *The Times* 17 December; *Housecroft v. Burnett* [1986] 1 All E.R. 332 (CA); *Bowden v. Lane* [1990]

³² Examples of where this method has been applied include *Brittain v. Gardner*; *Burke v. Tower Hamlets HA* [1989] *The Times* 10 August.

⁴⁹ [1998] 3 All E.R. 481

⁵⁰ *ibid.*, at page 493

⁵¹ *ibid.*, at page 504

⁴⁸ Central Statistics Office *Statistical Abstract*, (Government Publications, Dublin, Annual).

⁴⁹ *Duller v. South East Lincs Engineers* [1981] C.L.Y. 585.