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Brennan, Niamh and Hennessy, John [2001] Forensic Accounting and the Calculation of Commercial Damages, *Bar Review*, 7(1)(October/November): 6-11.

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

Commercial damage is a business loss of profits or loss of asset value resulting from the actions of another party.¹ The economic damage to be calculated in a commercial suit will follow from either a lost profit or lost asset value model. The former is frequently associated with business interruption cases and the latter with business valuation and share fraud cases. Either model might be appropriate in breach of contract, commercial tort, or competition cases depending on the situation. In such commercial loss claims, forensic accountants can assist in evaluation of damages, reconstruction of records, quantification of damages, dispute resolution and provision of expert testimony. This article concentrates on the calculation of lost profits.

Computation of lost profits

Commercial damages calculations tend to vary considerably as the circumstances underlying them vary widely from case to case. In addition, the industries involved may be very different and may present unique issues. As a result of this variability, commercial damages cases present a greater degree of complexity for the damages expert.

The computation of lost profits arising from an alleged wrongful act can be expressed as follows:

Lost profits = Loss of sales revenue – Savings in variable costs due to reduced output
+ extra costs incurred due to the wrongful act

These equations may need to be modified depending on particular circumstances. For example, in some cases there may be no loss of revenues, only additional costs incurred. In other situations, there may be a loss in sales revenue without a corresponding saving in variable costs.

Computation of lost profits

The law does not clearly define lost profit damages – rather they vary by type of action and jurisdiction. The general principles guiding the calculation of lost profits are on the face of it simple. Net profits defined as revenues that the plaintiff would

¹ Many aspects of commercial damages calculations cannot be covered in this short article, including forecasting techniques, application of statistical methods in estimation, loss of asset values, taxation of commercial damages, valuing businesses and shares, etc. Further information on these topics is to be found in Brennan, N. and Hennessy, J. *Forensic Accounting* (Round Hall Sweet & Maxwell, Dublin, 2001).

have received but for the defendant's wrongful actions, less the costs saved as a result of not having to earn those revenues, must be computed. The computation can be broken down into a number of steps as follows:

- Define the damage period;
- Estimate lost revenues from sales for that period;
- Subtract costs associated with lost revenues;
- Subtract net profits from efforts made to mitigate losses;
- Express lost profits in present value terms;
- Estimate and add any other loss of worth arising from the defendant's wrongful acts.

Damage period

Determining the damage period can be relatively straightforward or may be difficult. The choice of length of a damage period depends on the length of time necessary for the damaged firm to complete its adjustment to the loss of business so that the remaining effects of the wrong suffered are negligible. In a business interruption case, losses may be measured until such time as the sales or profits of the plaintiff's business have recovered. The length of time must also take account of the fact that other causal influences on the firm's profits may overwhelm the influence of the wrongful act. If the incremental profit margin shrinks with each successive period, and/or if the discount rates fully incorporate risk factors, then usually the present value of each future year's lost profit will fall off quickly. As the present value in each period decreases towards zero, it will be normally be clear where the damage period can be cut off with negligible effect on the total present value of the losses suffered.

The further into the future one forecasts, the greater is the uncertainty surrounding the forecast. Courts are reluctant to award damages where calculations are based on assumptions incorporating a high degree of uncertainty. As a result, losses will generally only be recoverable in respect of the time period within which they can be estimated with reasonable certainty. In a US case⁸ the court ruled that "as a general principle" lost future profits are deemed too speculative to allow a recovery for their loss unless the plaintiff presents sufficient proof to bring the issue outside the realm of conjecture, speculation or opinion unfounded on definite facts. In the US, the legal basis for establishing damages to the satisfaction of the courts requires that damages⁹:

- must be proven with a reasonable degree of economic certainty and
- may be estimated and do not have to be exactly measured, but
- cannot be speculative.

Where the wrongful act has caused the plaintiff to go out of business, the loss period is infinite. Although the loss period may have no definite termination date, this does not imply that the losses themselves are infinite. The practice of discounting projected lost profits to present value means that losses in the far-off future are discounted to

⁸ *Cargill v. Taylor Towing Services, Inc.*, 642 F 2d 239, 241 (8th Cir. 1981).

⁹ Gaughan, P. A. "Economic and financial issues in lost profits litigation" in *Litigation Economics* Gaughan, P. A. and Thornton, R. J. (Eds) (JAI Press, Greenwich, Connecticut, 1993) p. 182 quoting Cerillo, W., *Proving Business Damages*, (Wiley, New York, NY, 1991), pp. 1-20.

increasingly lower values. In effect, this discounting process represents a calculation of the value of the business based on the amount and timing of the cash flows it would have generated had it not gone out of business.

The Irish courts will tend to look at the specific circumstances of each individual case and to rely, where appropriate, on the evidence of experts when deciding on the appropriate period to use for the calculation of damages for business interruption. An example of this arose in *Herlihy v. Texaco (Ireland) Ltd*¹⁰ where Pringle J. arrived at a loss period of two years, in a case involving the termination of a tenancy, partly on the basis of evidence given by a chartered surveyor.

Estimate of lost revenues

Sales are usually a function of volume sold and unit price. Estimation of lost revenues will therefore involve looking at historic patterns and future expectations of volumes and prices. In a typical business interruption case, the projection of revenues that the plaintiff firm has lost as a result of the alleged wrongdoing is based on the plaintiff firm's historical rate of revenue growth, as well as other relevant factors. An expanding business will have to support claims made by reference to budgets, forecasts, investment appraisals and market surveys. Market conditions in the industry generally will also need to be considered. Losses are measured by projecting revenues and then converting these amounts to profits through the application of a relevant profit margin.

Deduction of costs saved

In general, defendants are only required to compensate plaintiffs for net profits, not gross profits or gross selling price.⁵ In England, the Court of Appeal has held that damages for loss of gross profit or gross contribution can only be claimed if the overheads could not reasonably be avoided and/or where there was no substitute business available.⁶

It should be noted that the basis of calculation for compensation for loss of profits is often set out in a relevant insurance policy and, if so, this will determine the components of the compensable loss and the manner in which it is calculated (*e.g.* see *Superwood Holdings Ltd v. Sun Alliance & London Assurance plc*⁷). In particular, if only losses in excess of a pre-determined amount are recoverable, this will be factored into the calculation. Also, any conditions or limitations imposed on margins recoverable under the policy must also be considered.

¹⁰ [1971] I.R. 311.

⁵ *West Coast Winery, Inc v. Golden West Wineries* [1945] 69 CA 2d 166.

⁶ *Western Web Offset Printers Ltd v. Independent Media Ltd* (1995) 139 Sol. J. 212 LB.

⁷ [1995] 3 I.R. 303.

Concepts of profit

The profit calculation in annual financial statements consists of sales revenues for the period, less all expenses incurred in that period. The concept of profit in calculating damages or lost profits in litigation is quite different. Lost profit is incremental revenue lost less incremental (variable) expenses saved in not earning those revenues.

It can be difficult, and sometimes ill-advised, to attempt to measure lost net profit streams directly. An understanding of why the gross or net profit margin is not suitable for measuring the change in profits is an important concept in lost profits analysis. Firms usually account separately for sales and keep accurate and detailed sales data. Trends and seasonal patterns in sales are usually easy to observe. Profits, however, are a residual. Inaccuracies can arise in the recording of costs resulting from mis-allocations between periods, the use of estimates and subsequent corrections, and a mixture of cash and accrual accounting. This can lead to material fluctuations in margins, making it unwise to use recorded margins to project profitability. In addition, historic margins may conceal a mixture of variable, semi-variable and fixed costs and may not therefore approximate the margin on the incremental sales actually lost as a result of the defendant's alleged wrongful act.

Instead of measuring and projecting profits as recorded, it is preferable to measure and project sales and costs separately. Using this approach, the before and after gross revenue streams are measured or estimated, and the related costs are then separately deducted to arrive at incremental profits lost. The incremental profit margin measures the change in net profits as a result of a specific change in revenue.

A common technique to calculate the incremental profit margin is to identify each expense category (using profit and loss accounts or more detailed underlying financial data such as adjusted trial balance amounts) as being fixed or variable. The distinction lies in the importance of distinguishing between which categories of cost are fixed (do not vary with the level of revenue) and which are variable (do vary with the level of revenue). Another way of expressing this is that variable costs are those costs that can be cut back or avoided when revenues are lost. Fixed costs are those that would be incurred with or without the revenue loss.

Methods of calculating lost profits

When a company has been damaged or forced out of business, the most reasonable measure of damages is generally lost profits. Lost profit claims typically rest on a comparison between the injured firm's 'but for' situation and its actual situation. The 'but for' situation is a hypothetical construction of the facts as they would exist but for the wrongful conduct, a scenario based on the premise that the wrongful conduct never occurred. The difference between the 'but for' and actual is a measure of the firm's loss – the extent to which the firm is worse off because the wrongful conduct occurred.

The nature of the 'but for' vs. actual comparison to be made depends on the ramifications of the wrongful act. Given the complexity of business enterprises, wrongful conduct frequently has fundamental and long-lasting consequences for the injured firm. Wrongful conduct may disrupt the stream of transactions by upsetting

the firm's market relationships or internal workings. Many lost profits cases involve continued transactional losses from continuing wrongful conduct. When a firm's operations are disrupted, the changes forced on the firm can be expected to impair profitability for some time, or may be so drastic that the firm is unable to recover and must liquidate. To assess the extent of the loss caused by such disruption entails a longer view of the divergence between 'but for' and actual. The focus is on the firm's capacity to make profits, not solely on the profit lost on a particular transaction or series of transactions.

Determining the revenue that would have been received had the damage not occurred can be difficult. There are several methods the plaintiff can employ to establish lost profits. Three distinct economic loss models can be used in varying types of commercial litigation cases. Lost profits are generally calculated using one or more of the following methods:

- *"Before and after"* approach – Business profits before, during and after the defendant's alleged acts are examined to show specific losses suffered by the plaintiff;
- *"Yardstick"* approach – Financial information about companies similar to the plaintiff is obtained and used as a benchmark to estimate the profits the plaintiff would have earned but for the wrong perpetrated by the defendant;
- *"Market model"* approach – A model to project lost profits is developed using assumptions arising from a study of the industry and of the plaintiff's operating results in the context of the industry.

"Before and after" approach

This method is also called the "with and without" method or "differential analysis". The before and after method compares the plaintiff's profits prior to the alleged wrong with profits thereafter using historical data (e.g the injured plaintiff's past volume).

Applying this method generally involves estimating lost revenue and then multiplying it by the incremental profit margin. The concept is to isolate factors that changed as a result of the wrongful acts or events. The "before and after" method computes the differences between actual results and assumed results that would have been achieved in the absence of the wrongful acts or events.

The logic of the assumed results rests on a series of hypothetical assumptions that can be subject to dispute. Basing those assumptions on verifiable third party data such as industry, professional or economic trends is always preferable. Study and comparison can be made of factors such as changes in the economic environment, changed industry conditions, the customer base, business facilities (where the interruption entailed a move of premises), etc. The defendant may try to undermine the damages calculation by proving that the 'after period' is different to the 'before period', and this difference and not the injury led to the reduction in profits. For example, the defendant may allege that the plaintiff's own mismanagement or an economic downturn was responsible for poorer performance in the after period.

Yardstick approach

Another means of proving lost profits called the “yardstick” approach involves the plaintiff introducing evidence of the profits made by a business operating in similar market conditions that were not subject to the defendant’s alleged wrong. In situations where it is difficult to estimate the actual lost revenues of the plaintiff firm, one approach is to compare the sales growth, or level of sales of the injured firm with another firm (unaffected by the injury) in the same line of business. This method, for example, is useful where there is an insufficient track record to apply the before and after method. Alternatively the method can be used to support the findings of the before and after method.

This approach is obviously less persuasive in that it is based not on the actual performance of the business in question but on a notional performance determined by comparison. This means that inaccuracies arise in the resulting calculation, as a result not only of approximations inherent in assumptions generally, but also because of the many inevitable differences between the business in question and the business with which it is being compared.

The yardstick approach has been used in start up situations, where businesses with no past history of profits have been permitted to introduce evidence of the profits of similar businesses. Its use has the obvious problem of locating a proper proxy firm. Acceptable proxy firm candidates should be similar in size, product line, markets and other relevant factors. Caution should be used before applying the yardstick approach, given the difficulty in identifying appropriate proxy firms.

Market model / market share approach

In the market model / market share approach, revenues in the pre- or post-loss period are used to establish the firm’s relationship to the total market. The total market data are then used to determine the lost revenues. The following information is required to use the market approach:

- Definition of the relevant product market;
- Historic sales for the relevant market;
- Past sales of the plaintiff firm for the same historic period;
- Demonstration that the plaintiff could have continued to compete in the market and maintain market share.

The first step in developing a market model is to study and evaluate the plaintiff company’s business plan, marketing strategy, and forecasts to identify relevant information and assumptions. The use of information prepared prior to the alleged injury helps to overcome the assertion that damages are too speculative. Then some research of the industry should be conducted, to determine typical growth rates, expenses/cost ratios, cash flow ratios, capital expenditures, etc. for similar businesses.

Once the research is complete, a model is developed to estimate the plaintiff’s lost profits over the time period during which the effect of the defendant’s alleged wrong is likely to continue. By using knowledge of total market sales during the injury period, sales for the injured firm can be estimated by applying the firm’s market share

to total market sales. Variable or direct costs can then be subtracted to arrive at lost profits. When few sales data are available from periods not affected by commercial injury, it may be necessary to assume the enterprise would have maintained a constant share of some relevant product market if the injury had not occurred. An advantage of this approach is that highs and lows in local, regional or national economic cycles are automatically accounted for.

Variations in lost profits calculations

*Start up business*⁸

For businesses not well established (or entirely unestablished), the concept of business interruption is difficult to prove and may be speculative unless the economics or past experience or both indicate a likely successful venture. In the US, courts generally do not award lost profits damages to new companies because such damages are speculative.⁹ Nonetheless, it is possible in exceptional circumstances for a new business to recover lost prospective profits.¹¹

Computing lost profits in a start up business presents unique challenges for a damages expert due to the complete absence of historical data (unestablished business) or to the availability of only limited data (newly established business). The expert is generally limited to using the market model approach, although proxy firms may be used, *i.e.* those which are similar in every respect (size, product line, capitalisation) if they exist. This is most likely to be possible in certain very specific types of businesses such as franchises. The before and after approach is typically ruled out because the company has little or no historical operating result to show a pattern of growth or profitability.

When a new venture or start up business fails, the uncertainty surrounding lost profits and value lost will be controversial. Three principal views of what is lost have been identified.¹⁰ The measure of damages varies depending on the view taken of what is lost. The three views of what has been lost are:

- Investment – the amount invested in the start up business. This is the least uncertain of the three methods and can be calculated based on actual records of expenditure. However, this method ignores the value arising from the prospect of the start up business being successful;
- Opportunity – the expected value of the lost profits. This approach attempts to take into account the lost opportunity to earn profits in the future. This measure of loss is based on expectations at time of injury. No consideration is given to actual

⁸ This is considered in Barchas, I. D. and Weil, R. L. “Loss profits damages to new businesses” in *Litigation Services Handbook. The Role of the Accountant as Expert* (2nd ed., Weil, R. L., Wagner, M. J. and Frank, P. B. (eds.), John Wiley & Sons, Inc, New York, 1995), Chapter 31.

⁹ *Evergreen Amusement Corp v. Milstead* [1955] 206 Md at 618, 112 A 2d at 904 – 905.

¹¹ *Fera v. Village Plaza, Inc* [1976] 396 Mich 639 242 NW 2d 372: Plaintiffs leased space in a new shopping centre but the landlord gave their space to another tenant. The plaintiff successfully sued for loss of profits. The judgment held that courts should not interpret the new business rule to exclude all claims for lost profits.

¹⁰ Bodington, J. C. “Appraising the profits lost by a failed new venture” *Journal of Forensic Economics*, Vol. 4, No. 1, 1990, pp. 7-14.

experience or new information after the wrongful act and this is the main deficiency with this method;

- Outcome – the actual value of the profits lost. This method seeks to overcome the deficiency of the opportunity method by taking into account all information available after the injury about what would have happened but for the wrongful act. It seeks to restore the plaintiff to the position it would have been in ‘but for’ for wrongful event. The outcome is calculated based on experience to date. However, this method has practical difficulties in that a large amount of evidence and information about post-wrongful act events is required.

Defendants will attempt to show that the business was subject to very high levels of risk which caused the failure. The burden of proof is placed on the plaintiff and it can be very difficult to provide acceptable evidence especially where the defendant provides data on the other risk factors that might have caused the business to collapse.

Losses causing business failure

In severe cases, losses suffered by a business consequent on injury are so great that they cause the business to fail.¹¹ The dilemma for the lost profits expert is to quantify and separate out the influence of the wrongful act from other causal forces that may have also contributed to failure. One technique is breakeven point analysis of price and sales volume. This is a method of examining relationships between changes in volume, sales, expenses and net profit based on a knowledge of how costs behave, i.e. whether costs are fixed or variable with production. The objective is to establish the impact on financial results of specified fluctuations in level of activity/volume. The contribution of each product (i.e sales revenue less variable costs) must be known.

The court will distinguish between the failure of a young, unestablished business and of an established business. If a business is young, small and undercapitalised, then it is considered to be vulnerable to a myriad of different causes of failure and consequently it may be difficult to prove that the wrongful act was the fatal blow. Experts for the defence will frequently point to the high failure rate of small businesses in their first years of operation. Plaintiff experts will point out that the risk of failure goes down dramatically if the firm survives a certain period.

For larger firms that are clearly established businesses, it is possible to measure the impact of a particular loss of revenue on the financial ratios of the firm. Then, it is possible to draw inferences from the change in those key financial ratios as to the risk of failure of the firm. There is considerable literature on predicting the failure rate of larger firms based on changes in key financial ratios.

The quantum of damages to be claimed when a business fails completely is the value of the business immediately prior to the wrongful act that caused the failure. Fair market value is generally accepted as the most appropriate valuation method to use. Fair market value is the price the business would be exchanged at, given a willing buyer and willing seller, and assuming neither are under compulsion to buy/sell and both are reasonably informed as to the relevant facts. The position of the firm being valued, updated for events after the wrongful act that would have affected it in the

¹¹ *Bader v. Cerri* [1980] 96 Nev 352, 609 P. 2d 314.

absence of the wrongful act, and the economics of the industry as a whole, must be factored into the calculations.

The costs element of lost profits

The calculation of lost profits should take account of all costs (including direct costs, variable costs and semi-variable costs) that vary with output or sales. All such costs should be considered in the calculation irrespective of where the various costs are included or charged in the company's accounts.

Avoidable costs

Avoidable costs are those costs that are avoided when sales are reduced. It will be important to determine how different costs vary with levels of service provision or production. Costs that vary with production should be included in the lost profit calculation, while those that are fixed should be excluded. The cost of producing the sales may include sales commissions, material, direct labour and distribution costs. These costs will not be incurred where related sales revenues are lost and therefore lost revenues should be reduced by these avoidable costs in the lost profits calculation. For this reason it is necessary to analyse all costs and categorise them as fixed or avoidable in order to arrive at an accurate estimate of lost profits.

Variable costs in other accounting periods are the best evidence of the avoided marginal cost to the firm of not earning lost revenue. Examples of variable costs include direct materials, direct labour, sales commission, etc. Most variable costs are included in cost of sales. However, certain variable costs not included in cost of sales, such as sales commission, delivery expenses and some administration costs, may also vary with output.

Fixed costs, such as rent, do not vary with different levels of sales or production, at least in the short to medium term. In most models fixed costs are assumed to remain constant, except for possible temporary overhead expenditures directly related to the interruption. Where long run interruption occurs this assumption may not remain valid. Costs that are fixed over the short term may increase in a step, ramp or steady, gradual manner over the longer term.

It cannot be assumed that all costs are either perfectly fixed or perfectly variable; in between behaviour is also found. Some costs can be classified as all fixed or all variable for a specified period of time. Some costs exhibit both variable and fixed elements – sometimes called semi-fixed (step) or semi-variable (mixed) costs. Step costs increase or decrease abruptly at intervals of activity because their acquisition comes in indivisible chunks (e.g rental costs of additional space acquired to increase production capacity). Mixed costs contain both fixed and variable elements (e.g. a telephone bill, which contains a fixed line rental charge and variable call charges).

The fixed and variable behaviour pattern of historical costs may also change after the injury. Additionally, the lost incremental profit as a result of the injury may alter as the period from the date of the wrongful act gets longer. This shrinkage of incremental profit margin over time is related to the obligation of the plaintiff to mitigate damages.

Extra costs incurred due to the injury

Generally, in computing lost profit, fixed costs are ignored. This is because fixed costs generally would have been incurred with or without business interference. However, there are occasions where some fixed costs would be included in lost profits computations. Extra costs (sometimes called incidental costs) incurred by the plaintiff as a result of the injury or interruption must be added to the other losses. For example, the injured party may have to incur fixed costs in an attempt to mitigate the damage caused by the other party.

Cost estimation

Like lost revenues, costs may not be susceptible to precise calculation, in which case they must be estimated. Unfortunately, most financial statements do not distinguish between fixed and variable costs. Given this difficulty in using aggregate amounts as disclosed in financial statements, individual cost categories must be examined to decide which vary with the level of revenue.

The appropriate estimation technique depends on the purposes of the analysis and, in some cases, the information available. The proper sorting of accounting costs into variable and fixed overhead categories requires considerable experience and judgment. The method of estimation itself can become an issue during litigation. Costs can be estimated by analysing historic information and applying professional judgment and/or analytical techniques. In some cases, reports already available within the company may contain cost information; in other cases, data accumulated by the company's accounting systems may be analysed to estimate costs. If this data is unavailable, the analyst may be required to rely on outside information from statistical or industry sources. In the absence of adequate information on variable costs, gross profit percentages from a similar industry can be substituted.

Ex ante and ex post approaches to damage calculations

Controversy surrounds whether projections of losses should be based on expectations at the time of the injury or at the time of compensation. There are two choices for measuring lost profits, based on fundamentally different temporal perspectives, which can significantly affect the amount of damages calculated:

1. The *ex ante* approach (also called the lost going concern value) treats a harm to profitability as a loss in the firm's value suffered at the time of impact which, by definition, ignores the effect of post-impact events on the firm's expected 'but for' and actual experience. The extent of loss is measured *ex ante*, i.e. at the point of impact when the injured firm's 'but for' and actual prospects begin to diverge. Such an assessment compares the expectations, at the time of impact, of the firm's subsequent experience 'but for' the wrongful conduct and expectations, at the time of impact, of the firm's subsequent experience taking into account the wrongful conduct's effects. A time of impact perspective ignores events between the date of the wrongful act and the resolution of the resulting dispute. It avoids hindsight and is therefore useful in judging the propriety of the conduct at issue and matters of causation. It has obvious limitations, however, when used for the calculation of

lost profits, which may be best judged in the light of events occurring after the time of impact of the wrongful act.

2. The *ex post* approach (also called the lost future profits approach) treats the harm as a stream of profit losses suffered after impact, and allows post-impact events to influence the measurement of the losses. The extent of loss may be measured *ex post*, i.e. at the time the damages are being litigated. The critical difference is that a time of trial assessment permits reliance on post-impact events in constructing the firm's 'but for' and actual experience.

The two methodologies can yield radically different estimates of the plaintiff's losses.

Opportunity cost

In addition to the best estimate of actual lost profits, an aggrieved plaintiff may also advance a claim based on the opportunity cost resulting from the wrongful act. In doing so, the concepts of loss of profits and loss of opportunity must be distinguished. The concept of lost opportunity caused by a wrongful act is the loss of the chance to earn profits in the future, rather than the loss of profits themselves. The courts normally regard loss of profits as a form of pure economic loss. A number of cases have argued that damages for loss of opportunity should be recoverable but to date there have been no conclusive authorities on the point. However, in *Dunne v. Fox*,¹² where the matter at issue was the basis on which recoverable costs should be calculated on behalf of a firm of accountants engaged in providing non-party discovery, Laffoy J. recognised the concept of opportunity costs and held that they were an appropriate basis for the calculation of costs incurred by the firm.

If the plaintiff is to recover damages in respect of such losses, he must satisfy the courts that he had a reasonable expectation of obtaining the benefits of the opportunity he claims to have lost. A person who is wrongfully deprived of an opportunity to obtain a benefit may recover damages for the loss of an opportunity even though it cannot be proved with certainty that the opportunity would have been taken or any benefit obtained.¹³ Courts may discount the opportunity costs for some element of uncertainty therein.¹⁴ In addition, a careful analysis is necessary to ensure that there is no double count between projected lost profits and opportunity costs.

Role of assumptions

Assumptions play a crucial role in damages calculations. Assumptions may be made by the expert accountant or may derive from instructions to the expert from the client, the instructing solicitor or other experts (e.g. actuaries or economists). The expert may have to make assumptions to compensate for missing information. Assumptions are often outside the expert's own area of expertise and he will have to rely on the evidence of another expert. The assumptions relied upon should be clearly stated in the expert's report.

¹² [1999] 1 I.R. 283.

¹³ *Allied Maples Group Ltd v. Simmons and Simmons* [1995] 4 All E.R. 907 C.A.

¹⁴ *First Interstate Bank of California v. Cohen Arnold & Co* [1996] P.N.L.R. 17 C.A.

Concluding comment

The calculation of lost profits arising from a wrongful act to ground a claim in damages is an area of litigation in which a forensic accountant can add significant value. A combination of accounting knowledge, analytical skill and commercial experience enables him to provide sound, defensible expert assistance and evidence.

However, as in many areas, much of the benefit of this detailed knowledge and expertise will be lost unless the expert can present his opinion, and the information underlying it, in clear and simple language. It is essential that the accountant is in a position to break down his detailed and complex calculations into a clear statement of key assumptions made and the methodology used to convert those assumptions into figures.

In this regard, it is very important that the expert accountant sets out all of the material assumptions on which he has based his expert opinion clearly in his report. He must also be in a position to explain in oral evidence the nature of the assumptions themselves, their source, their role in his calculations and the sensitivity of the results of his calculations and his conclusions to changes in the assumptions made.

The forensic accountant who can do this will be an invaluable member of the team in any commercial dispute.