FACULTY OF LAW, McGILL UNIVERSITY

THE LAW OF DAMAGES

OCTOBER 18-19, 1996

"QUANTIFICATION OF ECONOMIC DAMAGES"

by

Richard M. Wise, FCA, FCBV, ASA

---

1. INTRODUCTION 1

2. BREACH-OF-CONTRACT DAMAGES v. EXTRA-CONTRACTUAL DAMAGES 5

3. BREACH OF CONTRACT 7

4. TORTIOUS CONDUCT 10

5. RECOVERY OF DAMAGES FOR LOST PROFITS 12

5.1 ESTABLISHED BUSINESS V. UNESTABLISHED BUSINESS 12

5.1.1 ESTABLISHED BUSINESS 12
5.1.2 UNESTABLISHED BUSINESS 13

6. DAMAGES FOR LOST PROFITS ¾ METHODOLOGY 17

6.1 BEFORE-AND-AFTER APPROACH 17
6.2 THE YARDSTICK (COMPARABLE) APPROACH 18

6.2.1 REGRESSION ANALYSIS 19

6.3 SALES PROJECTIONS ("BUT FOR") APPROACH 19

7. ESTIMATING REVENUES AND COSTS 21

7.1 LOSS OF GROSS REVENUE 21
7.1.1 CAUSATION 21
7.2 ESTIMATION OF COSTS 22
7.2.1 ABSORPTION COSTING V. DIRECT COSTING 23
7.2.2 RECOVERY OF OVERHEAD COSTS 27

8. DISCOUNT RATE 28

9. DESTRUCTION OF ENTIRE BUSINESS 29

10. QUANTIFICATION OF LOST PROFITS 34

10.1 FACTORS CONSIDERED IN QUANTIFYING PLAINTIFF'S DAMAGES 36
10.2 LOST FUTURE PROFITS OF A START-UP BUSINESS 38
10.3 QUANTIFYING BUSINESS INTERRUPTION LOSS 48
10.3.1 EXAMPLE 49

11. INTELLECTUAL-PROPERTY INFRINGEMENT DAMAGES 60

11.1 GENERAL 60
11.2 BREACH OF CONTRACT 61
11.3 PATENT LITIGATION 61
11.3.1 LOST PROFITS METHOD 62
11.3.2 REASONABLE ROYALTIES METHOD 65
11.3.2.1 THE ANALYTICAL APPROACH 70
11.4 COPYRIGHT LITIGATION 74
11.4.1 ACCOUNTING OF DEFENDANT'S PROFITS 74
11.5 TRADE-MARK LITIGATION 77

12. INCOME TAXES 78

13. CONCLUSION 79

FACULTY OF LAW, McGILL UNIVERSITY

THE LAW OF DAMAGES

"QUANTIFICATION OF ECONOMIC DAMAGES"

by

©Richard M. Wise, FCA, FCBV, ASA*

---

1. INTRODUCTION

My co-panellist, Me Gérald R. Tremblay, QC, discussed the principles of civil liability and the legal considerations relating to economic loss. Once liability is established, the next step is to measure the plaintiff's alleged damages. Not being a lawyer, my comments are made strictly from the perspective of a business valuator/chartered accountant.

Questions relating to damages are usually given consideration at each of the five stages of case preparation: the initial evaluation of the client's position, the preparation of pleadings, pre-trial discovery, the trial itself and settlement negotiations. While damages can be divided into two broad categories, (a) compensatory and (b) other, including exemplary, or punitive, damages, this article will touch on the quantification of compensatory or economic damages claimed by a plaintiff in cases where breach of contract is alleged and those cases where tortious conduct is alleged. If liability on the part of the defendant is established, the court considers evidence with respect to the various heads of damages alleged to have been suffered by the plaintiff, including economic loss.

---

* Of **Wise, Blackman**, Business Valuators and Litigation Accountants.

Even experienced litigators sometimes concentrate so much of their energy and analytical skills on issues of liability that questions of damages fail to receive the attention their importance justifies. Too often, damages are given only cursory attention until trial preparation of liability is near completion. As most cases are settled at the Superior Court level, the philosophy of many trial lawyers all too often seems to be that if the attorney fully prepares to prove or disprove liability — either during settlement negotiations or at trial — damages will somehow take care of themselves. Experienced counsel know, however, that the most effective way to obtain an advantageous settlement for a client is to organize and prepare the case as though it will have to be litigated through to the judgment stage. A good settlement is negotiated from a position strength! Such an attitude shows the opposing lawyer a seriousness of purpose which may well convince him or her that a reasonable settlement is better than a costly defeat. The organization and analysis of the case in a manner consistent with trying it reveals the strengths and weaknesses in the parties' respective positions, making for more effective advocacy in settlement negotiations. Moreover, counsel will not feel obliged to accept a less than adequate settlement because of not being prepared to go to trial.

The quantification of economic damages may involve, among other things, determining the loss in value of the plaintiff's business which was affected by the alleged acts of the defendant, determining the plaintiff's loss of profits, or both. Depending on whether the defendant is liable in a breach-of-contract claim or tort, the plaintiff's lost profits may be past, present and/or future.

There are a number of fundamental differences with respect to valuation objectives in a valuation for, say, corporate reorganizations, mergers and acquisitions, estate planning and financing. In these types of valuations, the focus is on the determination of the company's "fair market value"; in some situations, a specific shareholding (be it a control position or a minority interest) is to be valued. In such valuations, a willing-buyer/willing-seller scenario is adopted. The concept of "fair market value" contemplates that the parties are informed, dealing at arm's length and are uncompelled to transact.

In damage quantification, on the other hand, apart from situations where a company is totally destroyed because of the alleged illegal acts of the defendant[1], it is generally unnecessary to value the entire entity; perhaps only a division or department of a company has to be valued. In certain cases, particularly with respect to intellectual-property infringement or construction claims (see below), the valuation exercise might be limited to a single product, product line or project.

The procedures are substantially similar: Valuing a business as a going-concern and quantifying lost profits both involve (a) determining a representative level of economic income and (b) converting that stream of income into a capital sum by applying a capitalization rate or discount rate.

One fundamental difference between a business valuation for commercial or fiscal purposes and a lost-profits quantification in measuring economic damages is that hindsight (use of retrospective evidence) is generally inadmissible in business valuation; however, in quantifying damages in respect of breach, for example, the very basis of the damage claim may be the business plan and/or the forecasts and projections of the plaintiff. Assuming that the business plan and/or projections are credible, the projections would be a key source of information to quantify the lost-profits damages, particularly if the plaintiff historically had a good track record in making projections. In business valuation, while value is prospective, i.e., forward-looking, the firm's projections are only one factor.[2]

In valuations for commercial or fiscal purposes, the two fundamental components of business value are (a) the current fair market values of the net *tangible* assets of the enterprise and (b) the firm's *intangible* value, being the present value of the future benefits in terms of earnings or cash flow over and above a normal commercial return on the tangible capital employed in the busi-

(1) For example, in cases involving trespass and conversion, predatory pricing, illegal interference, etc.

(2) See, for example, R.M. Wise, J.E. Fishman and S.P. Pratt, *Guide to Canadian Business Valuations*, Carswell (loose-leaf service).

ness. Typically, a business — indeed, any investment — is worth what it can earn. If an entire business is not being valued, the element of value which is measured is, generally, lost profits, i.e., the profits foregone by the plaintiff as a result of defendant's alleged illegal acts. That is, the business valuator or accountant will focus on the *incremental* profits lost by the plaintiff rather than on the plaintiff's business as a whole.

My presentation will focus on the quantification of economic loss arising under one of the two general legal concepts, contract and tort. An accountant or business valuator who is retained as an expert to quantify economic damages will rely on counsel with respect to the relevant recovery theory, more specifically, (a) the theory under which damages are being claimed, (b) the requisite measure of damages and (c) the underlying facts.

The expert must therefore (a) have a proper understanding of the legal issues (liability and damage quantification), (b) quantify only those damages which result from the breach of contract or tortious conduct ("factual causation" as opposed to proximate or legal causation — the latter being for legal counsel to establish) and (c) exercise reasoned judgment in analyzing and quantifying the plaintiff's economic loss.

As the quantification of economic damages is in the accountant's or valuator's domain, the financial expert will review the various heads of damages with counsel to ensure that there is a statutory, contractual or other legal basis for each compensable element. My paper will identify the critical areas in quantifying economic losses when defendant's liability has been established relative to contract and extra-contractual claims.

It is beyond the scope of this paper to address the myriad issues which arise in the quantification of damages. Each type of litigation has its own specific set of factors and issues. For example, the considerations which typically surface in securities litigation are totally different from those arising in construction claims, minority shareholder remedies, business interference, antitrust, product liability, personal injury and so forth.

2. BREACH-OF-CONTRACT DAMAGES v. EXTRA-CONTRACTUAL DAMAGES

Where an award is made to a plaintiff because defendant was in breach of contract, plaintiff is entitled to be placed in the same position that he or she would have been had the contract been honoured[3]. In tort, the intention is to place the plaintiff in the position he or she would have been had the tort not been committed.

Damages recoverable in tort are usually broader than those recoverable in contract, as there are more available categories of damages which a court may see as reasonably foreseeable.

In contract, there can be exclusion or disclaimer clauses which may limit the defendant's exposure in a damage claim. In tort claims, such limits would not apply unless the parties have expressly agreed to limit or waive tort liability.

As breach of contract law is intended to put the plaintiff in the position he or she would have been had the contract been honoured by the defendant, the court must consider what benefits would be viewed as reasonably accruing to the plaintiff had the contract been performed:

> "It is the general intention of the law that, in giving damages for breach of contract, the party complaining should, so far as it can be done by money, be placed in the same position as he would have been in if the contract had been performed … . That is a ruling principle. It is a just principle."[4]

Although both breach of contract and tort actions seek compensatory damages, they do not share an identical standard for such damages. One author has expressed this as follows:

---

(3) *Robinson* v. *Harmond*, (1848),1 Exch. 805, 154 ER 363.

(4) *Wertheim* v. *Chicoutimi Pulp Company*, [1911] AC 301, at page 307 (Privy Council).

> "The primary aim in measuring damages is compensation, and this contemplates that the damages for a tort should place the injured person as nearly as possible in the condition he would have occupied if the wrong had not occurred, and that the damages for breach of contract should place the plaintiff in the position he would be in if the contract had been fulfilled."[5]

Lord Blackburn stated in *Livingstone* v. *Rawyards Coal Co.*[6]:

> "I do not think that there is any difference of opinion as to its being a general rule that, where any injury is to be compensated by damages, in settling the sum of money to be given for payment of damages you should as nearly as possible get that sum of money which will put the plaintiff who has been injured, or who has suffered, in the same position as he would have been in if he not sustained the wrong for which he is now getting his compensation or reparation." (At page 39.)

Such legal subtleties may, for example, affect the definition and calculation of "income" or "cash flow". For example, where an award is not taxable (such as in certain personal injury cases), the present-value discount rate should be a tax-free rate. On the other hand, where a plaintiff is awarded damages for lost future salary or wages pursuant to an employment contract, the award will be taxable[7] and therefore must be calculated on a pre-tax basis, with the discount rate reflecting taxable income.

Where an action for damages may be brought either under contract law or under tort law (e.g., where the cause of action can be construed as both a breach of contract and tortious conduct),

---

(5) C.T. McCormick, *Handbook on the Law of Damages*, West Publishing Co. (1935, reprinted 1975), page 560.

(6) (1880), 5 AC 25 (HL).

(7) See Revenue Canada *Interpretation Bulletins T-365R2*, dated May 8, 1987, "Damages, Settlements and Similar Receipts" and *IT-467R*, dated February 19, 1992, "Damages, Settlements and Similar Payments".

plaintiff's counsel may prefer to elect a tort action in order that a claim may be made for exemplary damages.[8]

3. BREACH OF CONTRACT

The basic legal principles which apply in the calculation of compensatory damages arising from breach of contract are:

- *Expectation Interest* — Compensation for the loss of benefit that would otherwise have inured to plaintiff had the contract been carried out by the parties. Therefore, the profit that would reasonably have been earned by plaintiff from the contract is sought from defendant.
- *Reliance Interest* — Compensation for wasted expenditure incurred by plaintiff in reliance on defendant's promise to perform.
- *Restitution Interest* — Restitution for those benefits plaintiff has conferred on defendant in reliance of the latter's promise to perform.

As a plaintiff is entitled to be placed in the position he or she would have been had the defendant performed under the contract, the measurement of damages in respect of the plaintiff's expectation interest is the expected profit which would have been reasonably anticipated from the performance of the contract. Accordingly, the plaintiff must show (a) that there was a loss of profits and (b) the measurement of these lost profits has been determined with reasonable certainty. If a business or an asset has diminished in value, the plaintiff must establish with reasonable certainty the amount of the reduction in the value. The foregoing rule is subject to the qualification

(8) See, for example, *BG Checo International Ltd.* v. *B.C. Hydro & Power Authority*, (1993), 99 DLR (4th) 577 (SCC). (In that case, the Supreme Court did not address the quantification of damages but decided only on the liability issue and ordered a new trial with respect to quantum of damage.) See also, *Central & Eastern Trust Co.* v. *Rafuse*, [1986] 2 SCR 147.

that the extent of the losses may depend on whether the plaintiff took steps to mitigate the damages (*Red Deer College* v. *Michaels*, [1976] 2 SCR 324 and *Asamera Oil Corp.* v. *Sea Oil & General Corp.*, [1979] 1 SCR 633)

The first step in the damage quantification process is for the valuator/accountant to ascertain the effective quantification date. There are four possible dates a court may choose for assessing damages for breach of contract:

(a) The date of the contract;

(b) The date of the breach;

(c) The date of the trial (or, if applicable, the date of the reference); and

(d) A date between the breach and the trial.

Case law demonstrates that the valuation date chosen by the court generally depends on the particular facts of the case[9]. Such facts may include, for example, the purpose for which the contract was concluded, the types of goods or services under the contract and the ability of the plaintiff to mitigate damages[10]. The courts have ruled either way in their attempt to be fair. There are, of course, valid arguments in favour of the date of breach rule as well as for the date-of-judgment rule.[11] For example, the effective date may be significant where the breach of

(9) H.D. Pitch and R.M. Snyder, *Damages for Breach of Contract*, Second Edition, Carswell (loose-leaf service), pp. 11-1 to 11-20.

(10) C.A. Carron, "Why Hypothesis Should Not Replace History: Admissibility of Hindsight in Damage Claims", paper presented at the 12th Biennial Conference of The Canadian Institute of Chartered Business Valuators, June 1996.

(11) A.I. Schein, "Admissibility of Hindsight in Damage Claims", Proceedings of the 12th Biennial Conference of The Canadian Institute of Chartered Business Valuators, June 1996.

contract occurred in respect of the sale of real estate where the property had significantly changed since the date of the breach.[12]

The Quebec Court of Appeal in *Golden Eagle Canada Ltd.* v. *Ray Gas Bar Inc.*, [1973] CA 680, a case involving damages for lost profits, considered what actually occurred since the breach date as the best proof.

The accountant or valuator must be guided by the attorney as to the effective date of damage assessment.

A plaintiff is entitled to recover damages which can *reasonably* be attributed to defendant's breach of contract. The damages cannot be speculative, remote or unreasonable. The basic principle is that defendant is not liable for losses which were not, or could not have been, reasonably contemplated or foreseen as of the date of the contract.[13] As parties to a contract voluntarily assume risk in return for negotiated consideration, the risk is therefore judged by the parties at the outset of their relationship. To assess the foreseeability of loss at some later point in time, such as the date of breach, carries with it the potential for changing the risks voluntarily assumed, i.e., the bargain.

As regards *remoteness*, in breach of contract cases the key point in time is when the contract is entered into (not when the breach takes place).

In quantifying damages for lost profits, it is the loss of *net* profits (generally before income taxes). Depending on the situation, "net profits" may be interpreted differently. For example, can

---

(12) See, for example, Wr*oth* v. *Tyler*, [1974] Ch. 30 and 100 *Main Street Ltd.* v. *W.B. Sullivan Construction Ltd.* (1978), 20 OR (2d) 401 (CA), leave to appeal to SCC refused. The Supreme Court of Canada, in *Semelhago* v. *Paramadevan*, (1996), 28 OR (3d) 639 (note) (SCC), dismissing appeal of (1994), 19 OR (3d) 479 (CA), confirmed that where equitable damages are allowed, and where there are increasing values, the date for the assessment will be the trial date. The Supreme Court also chose the trial date in *Findlay* v. *Howard* [1919] 58 SCR 516, which related to the breach of a partnership agreement.

(13) See *Hadley* v. *Baxendale*, (1854), 9 Exch. 341, 156 ER 145 (H.L.).

the term mean "net profit before owner's remuneration" or "net profit before non-recurring expenses"?

It is also important to avoid "double-counting". Plaintiff will not be entitled to double the recovery which might be available if the appropriate expenses were *not* deducted. For example, if extra space had been leased in contemplation of the contract being performed, plaintiff may be entitled to claim from defendant the "wasted" rent; however, in calculating plaintiff's loss of profits, such rent must be deducted. Similarly, if plaintiff is claiming loss of remuneration as well as lost profits, the amount of remuneration must be deducted from the future lost profits calculation.

The various types of damages in contract law include general, consequential, nominal, liquidated and punitive damages. For general and consequential damages (i.e., expectation interest, reliance interest and restitution interest), the concept of "reasonable certainty", referred to earlier, is a key factor. The preferred method of making a plaintiff whole is expectation-interest damages; however, if this is not available, then the protection of reliance and/or restitution interest is available.

4. TORTIOUS CONDUCT

These types of cases are generally categorized among (a) negligence, (b) intentional torts and (c) strict liability in torts:

- *Negligence* includes cases involving personal injury, property damage, etc.
- *Intentional torts* include (i) fraud, (ii) interference with a contract, (iii) business interference, (iv) defamation, (v) nuisance and (vi) unfair competition, such as predatory pricing and antitrusts.

- *Strict liability in tort* is generally limited to physical harm to a user or consumer caused by the product of the vendor.

The numbers of cases involving tort causes of action have increased substantially, with a significant rise in the claims for lost profits damages.

There are two categories of losses in tort:

- *Positive Losses* — Plaintiff is entitled to compensation to the extent that his or her existing assets have been diminished by expenses incurred or by a change of position.
- *Consequential Losses* — Plaintiff is entitled to compensation for having been deprived of the advantage, profits and earnings that would have been realized had the tort not been committed.

As with contract damages, the concepts of "causation" and "remoteness" play a significant role. Plaintiff has the burden of proof and must prove to the court that defendant's acts *caused* the damages. In tort, foreseeability is judged at the time the tortious act is committed, whereas in contract it must be foreseeable at the date the contract is formed, not when it is breached. However, the Supreme Court of Canada, in *Laurentide Motels* v. *Beauport (City)*, [1989] 1 SCR 705, at 829, held that this rule is not absolute and is subject to exceptions:

> " … an estimate of future damages is made on the basis of predictions or extrapolations, methods which necessarily involve some uncertainty. If instead of such projections it is possible to establish the loss actually suffered, there can be no better evidence."

The plaintiff's alleged loss can take many forms. Generally, the plaintiff seeks *reasonably foreseeable*, "but-for" lost profits of the business or property, as well as out-of-pocket costs. In other

words, "but for" the alleged acts of the defendant, the plaintiff had anticipated realizing *reasonably foreseeable* profits.

There are three types of economic damages to be calculated:

- *General Damages* ¾ General damages include economic losses which the plaintiff has not yet sustained (such as future loss of income) and intangible claims for pain and suffering (consequential losses).
- *Special Damages* — Special damages include the actual out-of-pocket disbursements incurred, and loss of income suffered, by or on behalf of a plaintiff up to the time of the trial (positive losses).
- *Other Damages* — These include loss, injury, or damage to, property arising from negligence and damages in personal injury claims (including fatality).

5. RECOVERY OF DAMAGES FOR LOST PROFITS

5.1 Established Business v. Unestablished Business

5.1.1 Established Business

In *Wood* v. *Grand Valley Railway Co.*[14] the Supreme Court of Canada had appreciated that what might hypothetically have happened had there been no misconduct need not be reduced to mathematical accuracy. For justice to be done, a judge must, under many circumstances, do simply the best he or she can without fear that the decision will be set aside on the argument that the outcome is a matter of guesswork.

The problem of determining the quantum of lost profits is accordingly made much easier if the plaintiff has been in business for a number of years and has a proven track record of profits (a) at

(14) (1915), 51 SCR 283 (SCC).

the subject location or (b) at other locations. The plaintiff's experience either before or after may help demonstrate that the profits could have been earned and would thereby remove the speculative character as to the future business profits of the business. Hence, there must be more than pure conjecture; there must be some form of credible evidence which will support the lost profits so calculated. In some cases the plaintiff may be able to satisfy the court that he/she had operated a similar business previously at some other location and that such past experience, when compared with the subject business in respect of which the damages are being claimed, is sufficiently comparable (taking into account relevant adjustments and considerations). Alternatively, a business may have even been run by a party other than the plaintiff and operated successfully. Where the plaintiff can satisfy the court that, as an operator of the business, he or she demonstrated a successful track record as a business person running such an operation, the court may accept the claim for damages for lost profits.

5.1.2 Unestablished Business

Because of the uncertainty surrounding the future of an unestablished business (as opposed, for example, to a mature business with a track record), courts in the past generally did not award loss of profits resulting from a breach of contract relating to an *unestablished* business. This is because it was felt that prospective profits were too uncertain, contingent or speculative. However, because of the increasing acceptance by the courts of expert testimony and credible projections, particularly if the plaintiff can show experienced stewardship, there appears to be more admissibility of such claims. Nonetheless, there must be strong proof. This was expressed, for example, by the Michigan Supreme Court in *Fera* v. *Village Plaza, Inc.*[15] which stated:

(15) 396 Mich. 639, 242 N.W. 2d 372 (1976), at 373,374.

> "These cases and others since should not be read as stating a rule of law which prevents *every* new business from recovering anticipated lost profits for breach of contract. The rule is merely an application of the doctrine that [in] order to be entitled to a verdict, or a judgment, for damages for breach of contract, the plaintiff must lay a basis for a reasonable estimate of the extent of his harm, measured in money."

In another U.S. decision, *Barbier* v. *Barry*[16], the court stated that a new business will not be denied recovery of damages for lost profits merely because it is not an established business.

In *Standard Machines Co.* v. *Duncan Shaw Co.*[17], the court stated:

> " … it may well be that estimates of the future profits of a business which has just been started, or one which has only recently been launched, are likely to be much too speculative to afford an adequate basis for an award of damages. … but we do not think [this] proposition is necessarily always true. Thus as we see it a sharp line of distinction should not be drawn between old and new businesses, but recourse should be had in both situations to the basic question whether a prospective loss of net profits has been shown with reasonable certainty … ".

A Hawaii case, *Chung* v. *Kaonohi Center Co.*[18], expressed this concept well:

> "In our opinion, it would be grossly unfair to deny a plaintiff meaningful recovery for lack of sufficient 'track record' where the plaintiff has been prevented from establishing such a record by defendant's actions. Thus we hold that where a plaintiff can show future profits in a new or unestablished business with reasonably certainty, damages for loss of such profits may be awarded."

While it is much more difficult to meet the standard of "reasonable certainty" where there is no past history of profits (say in a start-up operation), in Canada the courts appear ready to make an

(16) 345 S.W. 2d 577 (Tex. Civ. App. 1961).

(17) 208 F. 2d 61 (First Cir. 1953), at 64.

(18) 62 Hawaii 594, 606, 618 p. 2d 283 (1980).

award provided that the quantification does not involve speculation. For example, in *Murano et al* v. *Bank of Montreal and Peat Marwick Thorne*[19] Mr. Justice Adams of the Ontario Court of Justice devoted nearly 50 pages addressing the issues relating to business losses, including those regarding unestablished businesses. In this case (which is currently under appeal) the plaintiffs, which operated a chain or retail home-video rental stores in Ontario, alleged that the bank destroyed their businesses by failing to give reasonable notice of demand for repayment of loans and by immediately appointing a receiver over financially strategic assets. With respect to projected profits, Adams J. stated:

> "In assessing the reliability of projected future profits, a record of past earnings will obviously increase the certainty of such a prediction. However, a lack of evidence of past earnings does not automatically preclude a new business from recovering for lost profits. Rather, a new business must be allowed to prove lost profits to a reasonable level of certainty by expert testimony, by evidence of actual profits of similar businesses, by evidence of proven managerial experience and expertise, and by evidence of subsequent earnings if such evidence is available. Nevertheless, damages should not be awarded for lost profits which are entirely speculative and uncertain. See *Al Edwards* v. *Container Craft Carton and Paper Supply Company*, 327 P. 2d 622 (Calif. Dist. Ctr. App. 1958) and *Cooke Associates Inc.* v. *Warnick et al*, 664 P. 2d 1161 (Utah Sup. Ct. 1983). But once a defendant has been shown to have caused a loss, liability should not be escaped because the amount of the loss cannot be proven with precision. Consequently, the reasonable level of certainty required to establish 'the amount' of the loss is generally lower than that required to establish 'the fact or cause of' a loss'. See *Cooke Associates* v. *Warnick, supra*, at p. 156 and *Bradshaw Construction Ltd.* v. *Bank of Nova Scotia, supra*, at p. 28."

In *Murano*, the plaintiff operated a number of retail home-video rental stores in Ontario under the trade name, "BANDITO VIDEO" (the "Hilton Division"). The plaintiff had also just opened five other stores under the trade name "TOP 30" and negotiated leases for a further seven stores to be opened later in the year. There were also plans to open more than seventy TOP 30 stores over the following four years. In addition, a month before the bank's alleged actions, the plaintiff had agreed to purchase the companies which owned and operated BANDITO VIDEO's 8 corporate

(19) (1995), 31 C.B.R. (3d) 1, supplementary reasons 41 C.P.C. (3d) 143 (O.C.J. Gen.Div., Comm'l Court), under appeal.

stores and 44 franchised stores. This transaction was to close a month following the bank's appointment of a receiver. At the time, BANDITO VIDEO was one of the largest video-rental chain store operations in Canada.

The plaintiff claimed that the bank's actions in seizing the HILTON DIVISION destroyed that division and prevented the BANDITO VIDEO transaction and the TOP 30 trade initiatives from being carried out.

Mr. Justice Adams noted that: " … where expert evidence is tendered and the entrepreneur has a track-record, it may be possible to assess damages with the required certainty: *Harsha* v. *State Savings Bank*, 346 N.W. 2d 791 (Iowa S.C. 1984) at pp. 798-99".

His Lordship also referred to a decision of the Court of Appeals of South Carolina[20]:

> "If the fact of damages is established, the law does not require the amount of damage to be proven with mathematical certainty; damages may be recovered if there is evidence upon which a reasonable assessment of the loss can be made. The estimation of damages, however, cannot be based on conjecture or speculation; it must pass the realm of opinion not founded on the facts and must rest on evidence from which a reasonable accurate conclusion regarding the amount of loss can be logically and rationally drawn. There must be a certain standard or fixed method by which the loss may be estimated with a fair degree of accuracy."

Where a business has been totally destroyed because of a breach of contract, an alternative approach to quantifying damages would be to value the business as a going-concern, assuming a notional sale thereof immediately prior to the breach, and deduct the liquidation proceeds on the realization of the plaintiff's assets.

In Section 10.2 below, an example is provided in which the court awarded damages for breach of contract where the proposed venture was in a start-up mode.

---

(20) *S.C. Fed. Savings Bank* v. *Thornton-Crosby*, 399 S.C.E. 2d 8 (1990), at p. 11.

6. DAMAGES FOR LOST PROFITS ¾ METHODOLOGY

The circumstances surrounding the particular claim for recovery of damages will determine the specific type of claim which is filed, whether it be in respect of breach of contract, loss of business opportunity, business interference, etc. Whatever type of claim is made (except for breach of contract, which may be subject to certain provisions within the contract itself, including liquidated damages), most lost-profits determinations are based on one of the following three approaches:

- Before-and-After Approach
- Yardstick (Comparable) Approach
- Sales Projection ("But For") Approach.

6.1 Before-and-After Approach

Applying this method, the plaintiff's "but for" profit during the affected period (damage period) is estimated, based on (a) results attained prior to the defendant's alleged damaging acts and/or (b) results after the effects of the said acts have subsided. Either or both of (a) or (b) above is/are compared to plaintiff's results during the damage period. This method depends on the expert's ability to establish and support a proven historical track record of the plaintiff in order that the pre-damage period and post-damage period can serve as benchmarks. The analysis must, of course, include consideration of factors such as seasonality (e.g., the damage period being in December for a major department store). Often, only the "before period" or the "after period" is available for purposes of predicting the "but for" results of the plaintiff during the affected period.

6.2 The Yardstick (Comparable) Approach

This approach is sometimes suitable when the plaintiff does not have a long enough period to prove a historical financial track record for the business. Applying this method, the plaintiff's profits during the damage period are compared to those of similar companies or are compared to industry performance. The difficulty with this method lies, of course, in properly identifying substantially similar companies, businesses or industries which would serve as meaningful "comps". This is similar to the method applied in the valuation of companies using the market approach, where valuation ratios and statistics of other companies in the same business are used as guideline companies for purposes of valuing the subject. A high degree of subjectivity and judgment must be used to select those companies having meaningful and objective data for developing valuation ratios to apply.[21] In looking to other companies for purposes of applying the yardstick method, it is necessary to obtain and analyze financial and operating data on the guideline companies, as available. Consideration is also given to adjustments to the financial data of the plaintiff and the guideline companies to minimize the differences in accounting treatments when such differences are significant. Unusual or non-recurring items are also analyzed and adjusted as appropriate.

In certain cases, a comparable but unaffected division or branch of the plaintiff may provide the necessary benchmark. For example, a plaintiff operating a chain of retail stores may, if one of the stores has been injuriously affected, consider the operations of one of its branches assuming that the branch has similar characteristics including, among other things, size, demographics, location, competitive environment, floor space, similar parking availability, etc. In such a case, regression analysis may prove useful.

---

(21) Ideal guideline companies are in the same industry as the company being valued; however, if there is insufficient transaction evidence available in the same industry, it may be necessary to select companies with an underlying similarity of relevant investment characteristics such as markets, products, growth, cyclical variability and other salient factors.

6.2.1 Regression Analysis

This is a technique which is being used with increasing frequency in financial litigation in order to make forecasts/predictions concerning future events.[22] Conceptually, regression analysis is a time-series method which measures the extent to which one set of data (e.g., the historical sales of a retail store) depends upon, or is influenced by, another (e.g., total retail sales in a geographic area). The regression model will initially establish the level of correlation existing between the two sets of data and then determine the accuracy of using such information to predict future events (e.g., forecasting future sales of the retail store based on total retail sales in a geographic area). In this manner, regression analysis can be more precise than other time-series methods (e.g., percentage change, trend or graph analysis) due to its ability to quantify the reliability of the forecast with statistical accuracy, which is not the case with other time-series methods.[23]

6.3 Sales Projections ("But For") Approach

Adopting this approach, a model is created for the damaged business, based on assumptions as to how the plaintiff would have performed *but for* the adverse effects caused by the defendant's alleged acts. Accordingly, plaintiff's projected sales and profits are estimated during the damage period "but for" the effects of the defendant's alleged acts. These results are then compared to the actual results of the plaintiff during the damage period.

---

(22) Interestingly, during the 1980s the Supreme Court of Canada adopted an "effects theory" with respect to several discrimination-based decisions which indicated that increased used of statistical evidence, particularly multiple regression, would be likely to occur in future litigation-related matters. *Ontario Human Rights Commission* v. *Simpson-Sears Ltd.* [1985] 2 SCR 536; *Bhinder* v. *CNR* [1985] 2 SCR 561.

(23) For a detailed discussion of how regression analysis is applied in lost-profits determinations, see Richard M. Wise, *Financial Litigation ¾ Quantifying Business Damages and Values*, Canadian Institute of Chartered Accountants (loose-leaf service), pages 3-77 to 3-98.

Because this methodology requires the creation of an economic model which includes sales projections along with related net profit estimates, a proven historical track record to support the projections and profits may be necessary to convince the trier of fact, notwithstanding that there may be empirical data and industry publications forecasting industry growth and profitability.

The plaintiff's lost profits are calculated as the excess of the projected results over the actual results during the damage period. To the extent that the value of the business as a capital asset has suffered, such loss is also taken into account. However, the aggregate of the lost profits during the damage period and the decrease, if any, in the value of the business cannot exceed the current present value of the stream of future profits expected to be generated by the business prior to the defendant's alleged acts.

For accounting purposes, in the simplest terms, profits are equal to gross revenues less expenses. The traditional statement of operations or income statement will present the accounting profit of the business. However, in the measurement of lost profits in civil litigation, the financial statements of the plaintiff are, at most, a starting point. In fact, it does not necessarily matter whether or not the business earns a "net profit" from operations. In lost profits damage claims, what matters is the lost profit suffered by the plaintiff due to the alleged acts of defendant. Accordingly, once the loss of gross revenues has been determined, in order to recover damages, the calculation of lost profits on such revenues must be made. If the lost revenues exceed the incremental costs relating to those revenues, such excess would equal the loss of "contribution margin" relative thereto. Generally, loss of contribution margin (explained below) equals loss of profits for damage quantification purposes.

7. ESTIMATING REVENUES AND COSTS

7.1 Loss of Gross Revenue

7.1.1 Causation

A plaintiff claiming lost-profits damages resulting from loss of gross revenues, must show that the alleged acts of the defendant caused a reduction in sales volume, rental income, gross professional fees, etc., i.e., must show factual causation. To be successful, the plaintiff must not only prove that the defendant violated a legal right of the former, but that such violation caused injury. With the onus of proof on the plaintiff, the plaintiff must show that unconnected "external" factors were not the actual cause of the lost revenues. For example, if at the relevant time there was an economic downturn, seasonal or cyclical fluctuations, effects of a recession, mismanagement by plaintiff, loss of key employee, introduction of a significant competitive or replacement product, or the loss of a major customer, to the extent that these latter events caused a decrease of gross revenues, the plaintiff will not be compensated for lost profits attributable to such external causes. Adjustments must be made to take these into account; the effect thereof must not be included in the claim for recovery of lost profits.

The analytical methods used by the accounting or valuation expert to establish whether there has been a loss of revenues due to the alleged acts of the defendant include:

- Comparison to industry statistics
- Comparison to other companies operating in the same field
- Comparison to those segments of the business which were not adversely affected.

For example, a loss in the plaintiff's market share can be converted into the sales volume that plaintiff would have enjoyed *but for* the defendant's acts. Alternatively, comparison may be

made of the plaintiff's sales volume (in units) before the defendant's alleged acts with units sold thereafter. A third approach might be to compare the sales volume of a similar firm (if available) or to other indicators obtained from published statistics (if available). A trend in the industry may be indicated which would assist in estimating a reasonable sales volume "but for" the alleged acts of defendant. Use of industry statistics and other published or empirical data must be made exercising extreme caution and reasoned judgment; it must stand up in cross-examination.

7.2 Estimation of Costs

Once the loss of sales volume has been established (estimated) with "reasonable certainty", the loss of profit thereon (sales minus related costs) must be determined, as the plaintiff's damages relate to lost *net profits.*

Needless to say, estimating costs is essential to any lost-profits quantification. However, costs are rarely known or ascertainable with precision. Even an examination of the plaintiff's books of account, which are used to develop the annual financial statements, may not provide an adequate picture of the cost pattern of the subject business. Accordingly, the business valuator or accountant must analyze the plaintiff's cost patterns or behaviour, carefully considering their "variable" and "fixed" components (see below).

For purposes of quantifying damages for lost profits in civil litigation, the expert must use the plaintiff's historical financial (including cost) data as a basis upon which to estimate the "but for" or incremental costs. The issues of the case often require the expert to estimate a complex set of costs for a specific situation which may be different from cost data normally gathered in the plaintiff's accounting system. The expert must, in such case, rely instead on whatever company data he or she can obtain as well as empirical data gleaned from industry and government sources.

The cost pattern relating to the operations of any business is typically divided among the following four categories:

- *Variable Expenses* — Those expenses that vary in direct proportion to gross revenues, apart from fixed expenses.
- *Semi-Variable Expenses* — Expenses which are part way between fixed and variable and may be conceived as comprising fixed and variable components (e.g., telephone charges have a fixed monthly component plus a variable component related to long-distance usage). These types of expenses often occur because the relationship between cost and volume is not regular but takes the form of a "step" function.
- *Fixed Expenses* — Those expenses that are fixed in amount regardless of gross revenue. Some may be fixed to the extent that they will not vary up to a certain gross revenue limit; if the revenues are increased above that limit, these expenses will increase, but may remain fixed at the higher amount up to the new gross revenue limit.
- *Semi-Fixed Expenses* – Expenses which are fixed over a wide range, but which can change at various levels (e.g., rent for extra space because of a new level of business activity for the firm).

As most variable costs can be directly traced to the product itself, cost allocation is concerned with fixed costs and only certain variable components of manufacturing overhead. Fixed costs are usually incurred for the benefit of the entire business entity as a co-ordinated unit. Therefore, most fixed costs are joint or common costs which require allocation to processes, departments, divisions, products or some other identifiable unit or profit centre of the enterprise.

7.2.1 Absorption Costing v. Direct Costing

Absorption costing, or conventional costing, treats *all* manufacturing costs as product costs; the fixed and variable cost elements are co-mingled within the individual accounts. Under absorption costing, therefore, fixed production costs are applied to the product and become part of Cost

of Goods Sold (see table below). In absorption costing, costs are seldom classified as fixed or variable.

Direct costing (also called variable costing, marginal costing or incremental costing) has a different impact on net profits because fixed manufacturing is considered a period cost rather than a product cost. More specifically, direct costing includes actual prime costs plus pre-determined *variable* manufacturing overhead; *fixed* manufacturing overhead is excluded.

In calculating lost profits, variable expenses are deducted in applying the direct cost method. Accordingly, under direct costing, increases or decreases in units sold will result in proportionate increases or decreases in incremental income because only variable costs are assigned to the cost of units produced. Under direct costing, the emphasis is placed on the number of units sold, and the income or loss will, accordingly, move in the same direction as the sales volume. In a marginal-income analysis, the question is therefore: "What does it cost to produce one more unit?", or, "How much is saved by producing one less unit?" Net income or net loss does not increase or decrease, however, in direct proportion to sales volume because unit fixed costs do not remain constant.[24]

In summary, the difference between the results obtained applying a *direct costing* method versus an *absorption costing* method arises from the amount of fixed manufacturing costs allocated to the work-in-process and finished goods inventories of a business.

Because loss-of-profits determinations in civil litigation require the calculation of *net profits*, the plaintiff's Cost of Goods Sold is only a starting point, in that variable (general and administrative, i.e., non-manufacturing) overhead expenses must be deducted also (from Gross Profit).

---

(24) Under absorption costing, emphasis is placed on both production and sales, and the net income and net loss do not, therefore, show the expected relationship to sales.

Table 1

COMPARISON OF ABSORPTION AND DIRECT COSTING

PLAINTIFF COMPANY

CALCULATION OF LOST PROFITS DURING THE DAMAGE PERIOD

Absorption Costing				***Direct Costing***		
Lost sales – 1,000 units @ $10			$10,000	Lost sales		$10,000
Cost of sales	Unit Cost			Variable manufacturing costs of goods produced	$6,600	
• Variable manufacturing costs – 1,100 units	$6	$6,600		Less ending inventory (100 units @ $6)	600	
• Fixed manufacturing costs	2	2,200		Variable manufacturing cost of goods sold	$6,000	
				Variable selling and administrative expenses	400	
Cost of goods available for sale	$8	$8,800				
Less ending inventory (100 units)	8	800	8,000	Total variable costs charged against sales		6,400
Gross margin			$ 2,000	**Contribution margin (LOST PROFIT)**		**$ 3,600**
Less total selling and administrative expenses, including $400 of variable expenses			900	Less fixed costs:		
				• Fixed manufacturing costs	$2,200	
				• Fixed selling and administrative expenses	500	2,700
Net income (LOST PROFIT)			**$ 1,100**	**Net income**		$ 900

Table 1 above provides a comparison of lost profits applying the absorption costing method and the direct costing method.

In direct, or incremental, costing, lost profits are generally calculated as the loss of "contribution margin" (i.e., loss of incremental profits) on the lost sales. As the table shows, the contribution margin is the excess of total gross revenues over total variable costs, such excess contributing towards the company's fixed costs.

The example demonstrates that the key area in determining loss of profits (i.e., loss of contribution margin) relates to the distinction between "fixed costs" and "variable costs", so that the variable costs associated with the lost sales may be properly deducted. In most lost-profits determinations, there are typically differences of opinion between opposing experts as to what costs are truly "variable" and therefore "deductible" in arriving at lost contribution margin. As noted above, some costs have both fixed and variable components (such as light, heat and power, where higher production volume requires more utility costs in the manufacturing process; or production labour may increase with increased production as a result of overtime; etc.). Fixed, or overhead, expenses are deductible provided (and to the extent) that there would have been an increase in such expenses in order to generate the "but for" revenues. For example, delivery expenses (delivery wages, vehicles, etc.), clerical salaries, electricity (if extra shifts are working), etc. — even though classified as fixed expenses for accounting purposes — are, to an extent, variable. Whether an expense is fixed or variable may differ from industry to industry and it is usually in examination-for-discovery that the expense characteristics can be better understood. In any event, the bottom line is that the higher the variable costs, the lower the contribution margin or lost profit. (It should be noted that interest on debt generally does not come into the calculation of lost profits; nor do extraordinary, unusual and non-recurring items.)[25]

(25) For example, unusual professional fees, bad debts and similar non-recurring items should be excluded from the calculation of lost profits.

7.2.2 Recovery of Overhead Costs

The more common types of damages claimed in respect of increased costs include interest, extra expenses incurred, general and administrative expenses, increased manufacturing overhead and so forth. Again, there must be proof that the particular expense or cost would have been lower "but for" the alleged acts of the defendant.

The analysis and concepts applied in the quantification of lost profits will often differ from case to case. In certain situations, a combination of methodologies may be used.

A plaintiff seeking recovery of costs will also include various overhead costs. Overhead includes such items as rent, factory salaries, light, heat, etc. In breach of contract cases, the plaintiff must prove that the overhead expense bears some relationship to the non-fulfilment of the contract by the defendant. This matter was dealt with some 70 years ago in *Hi-Speed Tools Ltd.* v. *Empire Tool Works*[26]. In extra-contractual matters, the recovery of overhead has been dealt with in a number of cases. In these cases, the court considered overhead "arising naturally from the act complained of."[27] The Ontario Court of Appeal held that whether the damages are claimed in contract or in tort, the same principles apply to the calculation of overhead.

In a Quebec case, *Bell Telephone Co.* v. *Montreal Dual Mixed Concrete Ltd.*[28], the Court of Appeal permitted Bell to recover various items of overhead as well as general expenses based on generally-accepted accounting practices. The types of overhead included direct labour, vehicle charges, material charges and other employee benefit charges directly related to wages. The Quebec Court of Appeal rejected the defendant's argument that such expenses would have been incurred in any event by Bell, irrespective of the repairs required.

---

(26) (1923) 25 OWN 1972 (HC).

(27) *Ontario Hydro-Electric Power Commission* v. *Mather*, (1954) OWN 382 CA.

(28) (1959) 23 DLR (2d) 346 (Quebec CA).

In other cases the courts have held that relevant items of overhead are recoverable as part of the costs of repairing a plaintiff's damaged property if the plaintiff can prove the connection as well as the basis upon which the overhead has been calculated.

Included in the income statement of a business, there may be extraordinary, non-recurring or unusual expenses. In the case of a closely-held, private company, there might be expenses which are not essential to, or effectively connected with, the ongoing operations of the business. Often these are income tax-motivated. For example, management bonuses, personal travel expenses, entertainment, salaries to non-productive family members and charitable donations are the most common.

Non-recurring and unusual expenses generally include:

- Losses on the sale of assets
- Extra (one-time) consulting or professional fees
- Moving or relocation expenses
- Unusual bad debts
- Foreign exchange losses.

8. DISCOUNT RATE

An essential step in quantifying lost future profits (and loss of opportunity) is to select the appropriate discount rate to be applied in "present-valuing" plaintiff's projected future profits back to the damage date. This discount rate will have two components:

- A component to recognize the time-value of money, i.e., that a dollar to be received at some point in the future is not worth $1 today; and
- A component which recognizes the risk of achieving the profit expectations.[29]

Therefore, to the extent that future lost profits are being quantified for damage purposes, those lost profits to be earned in the future must be present-valued.

There is yet another variable: Over what period of time should the lost profits be calculated for purposes of quantifying damage? If, for example, there is a five-year contract, then the damage period would generally span five years. It would be important for the accountant or valuator to establish whether there is a renewal option or, even if there is not, whether there may be some likelihood that the contract may possibly have been renegotiated or renewed at the end of the term. If there is that possibility, a residual value may be determined and discounted back to the damage date.

9. DESTRUCTION OF ENTIRE BUSINESS

If the damages relate to the loss of the entire business enterprise, a segment thereof, or a product line, it may be appropriate to "capitalize" the "but for" expected income or cash-flow stream. This, in effect, calculates the present value (as of the damage date) of the loss of a capital asset, i.e., the business or product line (as the case may be) rather than the present value of the expected future income lost because of the alleged acts of the defendant. This calculation yields the reduction in the value of the business due to the impaired segment.

Adopting this approach, the normalized incremental income would be capitalized (multiplied) by a factor which represents the required rate of return which a willing and informed purchaser

(29) For a detailed discussion as to choice of the discount rate, or capitalization rate, see R.M. Wise, J.E. Fishman and S.P. Pratt, *Guide to Canadian Business Valuations*, Carswell (loose-leaf service).

would require on his or her investment in the business (or segment thereof). Generally-accepted business valuation concepts, principles and practices would be applied.

When an entire business is destroyed because of the alleged acts of the defendant, the plaintiff may sue for the value of the destroyed business (less any proceeds that might have been realized on liquidation).[30] Should the plaintiff be entitled to the loss of the "fair market value" of the business or the loss of value measured by some other standard of value?

In a "fair market value" determination such valuations are technically referred to as *notional-market* valuations because they are usually performed in the absence of *open-market* negotiations. The definition of the value term "fair market value" which is accepted by the Canadian courts is:

> "The highest price available in an open and unrestricted market between informed and prudent parties acting at arm's length and under no compulsion to act, expressed in terms of cash."[31]

"Fair market value" is also the value term employed by the respective income tax statutes of Canada and the United States.

"Fair market value" in the *notional market* contemplates that, among other things:

---

(30) See, for example, *Mister Broadloom Corp. (1968) Ltd.* v. *Bank of Montreal et al* (1983) 44 O.R. (2d) 368 (CA).

(31) See, for example, *Minister of Finance* v. *Mann Estate* (1972), 5 WWR 23 at 27; aff'd (1973) CTC 561 (CA); aff'd (1974) CTC 222 (SCC) and *Re Domglas Inc.* (1980), 13 BLR 135; 1980 CS 925 (Que. S.C.), aff'd (1982) 138 DLR (3d) 521 (QCA).

- The market is open and unrestricted; no potential purchasers are to be excluded from participation in the market;
- Both parties are informed, prudent and exercise care when assessing their respective sale and purchase decisions;
- The parties are acting at arm's length, i.e., the negotiation is between parties with opposing economic interests;
- Neither party is under any compulsion to transact (which excludes distress sales); and
- The property is exposed for a reasonable length of time (considering the particular nature of the property).

In the "real world", businesses and business ownership interests are bought and sold at prices which often exceed the standard of value under the "fair market value" concept. While most often fair market value would establish a floor above which a purchaser or owner may perceive a higher value, there are also situations in which the price which a business or property will ultimately fetch in the open market is below the fair market value determined in the notional market.

Certain purchasers may be able to benefit from synergies, economies of scale, increased market share, assured source of supply or customers, or other strategic advantages from the ownership of a business (or interest therein), and would therefore be willing to pay a higher price than fair market value to obtain possession thereof. In acquiring a controlling interest in a business enterprise, significant control premiums are often paid over the prevailing stock market prices of public companies.[32] Premiums of 30% to 40% over the "unaffected" pre-announcement takeover price are common; these premiums often contain a control component and a premium for perceived post-acquisition synergies.

(32) In this connection, "fair market value" is contrasted with "transaction value", the latter including a premium for synergistic and strategic benefits. Such premium would be maximized were there to be competitive bidding between two or more special purchasers for the subject property.

The word "fair" in fair market value qualifies the market[33] in which the valuation is based, whereas in matters dealing the appraisal remedy for dissenting minority shareholders, the word "fair" in fair value[34] modifies the word "value", not market. "Fair" in this latter context means "just and equitable". "Fair", in fair market value, describes a *market* that is consistent.[35]

The standard (or definition) of value means the type of value being estimated. The alternative standards of value generally address "value to whom?" The selection of the appropriate standard of value will be directly influenced by the purpose or intended use of the valuation and will have a direct impact on the value estimate. Moreover, the selection of the appropriate valuation premise will be dictated by the highest and best use of the property being valued.[36]

As the standard of value generally specifies the parties to the actual or hypothetical transaction, addresses "value to whom?" and what valuation methods are appropriate, the term "value" also depends on the identity of the person making this assessment and on his or her interpretation of the risks and rewards related to the property being valued. For example, in real-estate terminology, the term "investment value" is defined as "value to a particular investor based on individual investment requirements, as distinguished from the concept of market value, which is impersonal and detached".[37] In business valuation, there is the same distinction. Reasons that the "investment value" to one particular owner (or prospective owner) of an asset may differ from the "fair market value" of the same asset include:

---

(33) See, for example, *Henderson* v. *MNR*, *Bank of New York* v. *MNR*, [1973] CTC 636, 73 DTC 5471, 5477 (FCTD).

(34) As such term is used, for example, in subsection 190(3) of the *Canada Business Corporations Act*.

(35) See, for example, *Re Domglas Inc.*, *supra*, 13 BLR 135 at 164-5. See also, R.M. Wise, "Determining 'Fair Value' Under the Appraisal and Oppression Remedies – A Valuator's Perspective", *Corporate Structure, Finance and Operations* (Ed. L. Sarna), Vol. 3, Carswell (Toronto: 1984), pp. 112, 113.

(36) S.P. Pratt, R. Reilly and R. Schweihs, *Valuing a Business ¾ The Analysis and Appraisal of Closely-Held Companies*, Third Edition, Irwin Professional Publishing (1996).

(37) *The Dictionary of Real Estate Appraisal*, Third Edition, Appraisal Institute (Chicago: 1993).

- Differences in estimates of future earning power;
- Differences in perception of degree of risk;
- Differences in income tax status;
- Purchaser-perceived synergies with other operations owned or controlled; etc.[38]

Where an entire business is destroyed, there is not a so-called "willing-buyer/willing-seller" situation. The "seller" is not willing. (This is similar to the situation where there is a compulsory acquisition of a minority shareholder's shares in a going-private transaction under Section 190 of the *Canada Business Corporations Act*, where the statute itself adopts an equitable value, being "fair value".)[39] Accordingly, a "value to owner" standard might be more appropriate.

"Value to owner" is defined as follows:

> "The price the owner would pay rather than be denied the uninterrupted ownership and use of his property. In economic terms, value to the owner equals the cost of substitute property plus the cost of finding and acquiring suitable substitute property and completing the exchange. The cost of transitional inconvenience and loss of income may also be involved. In emotional terms, value to the owner may be immeasurable."[40]

As the Supreme Court of Canada stated with respect to compensation for expropriation:

---

(38) See, for example, R.M. Wise, J.E. Fishman and S.P. Pratt, *Guide to Canadian Business Valuations,* Carswell (loose-leaf service), *supra*, footnote 2, *op. cit.*

(39) Subsection 190(3).

(40) G. Ovens and D.I. Beach, *Business and Securities Valuation*, Methune (Toronto: 1972), p. 10.

> "The owner at the moment of expropriation is deemed as without title, but all else remaining the same, and the question is what would he, as a prudent man at that moment, pay for the property rather than be ejected from it?"[41]

The Supreme Court (Rand J.) also, in *Irving Oil Co.* v. *The King*, stated that it would "represent the sum which as a prudent man he would be prepared to pay rather than to fail to obtain or retain his property".[42]

10. QUANTIFICATION OF LOST PROFITS

The role of the business valuation expert is to (a) prepare a damage quantification report on behalf of the plaintiff or (b) rebut a plaintiff's damage quantification report prepared for the defendant. The defendant's expert may not only be asked by counsel to prepare a critique of the damages report of the plaintiff's expert, but in some cases will also be asked to prepare his or her own "counter-damages" report. Some defence counsel believe that, as the onus of proof is on the plaintiff, why should this task be performed by the defendant's expert? Defence counsel who request that their expert not only provide a critique of the plaintiff's damage report but also prepare a separate report appear to believe that they may convince the court to accept their own expert's analysis and conclusions rather than those of the plaintiff's expert.

In civil litigation, the more common types of damage claims are in relation to the following:

- Lost revenues;
- Lost profits;
- Lost earnings-capacity;

(41) *Diggon-Hibben* v. *The King* [1949] SCR 712, [1949[4 DLR 785.

(42) [1946] SCR 551, [1946] 4 DLR 625.

- Loss of commercial goods;
- Loss of value of a business;
- Increased operating costs;
- Lost cash flow;
- Extra cost;
- Mitigation.

Whether the litigation relates to breach of contract or tort, the plaintiff's valuator must develop an economic model of what would have happened "but for" the defendant's alleged acts. In the process of developing such a model, the expert must gather and interpret documents and facts. If there are assumptions to be made, they must be reasonable and supportable in cross-examination and not susceptible to being replaced by contradictory evidence adduced at trial.

The critique report prepared by the defendant's expert will attempt to rebut or discredit the report prepared for the plaintiff and will test or challenge the accuracy of the underlying facts, and the analysis and judgment exercised by plaintiff's expert.

As the quantification of economic damages, or the valuation of a business enterprise, is necessarily subjective and is an art rather than an exact science, there are host of judgmental areas which the expert may have to address in cross-examination by opposing counsel.[43]

In summary, the expert retained for purposes of proving, or disproving, damages (as the case may be) will perform at least the following professional services on behalf of his or her client:

(43) For a discussion concerning the cross-examination of an expert accounting or valuation witness, see Richard M. Wise, *Financial Litigation ¾ Quantifying Business Damages and Values*, Canadian Institute of Chartered Accountants (loose-leaf service), pages 5-1 to 5-13 and 6-13 to 6-54.

- ***Expert Retained by Plaintiff***

  - Preparation of damages report, quantifying plaintiff's economic loss;
  - Providing *viva voce* testimony as an expert witness at trial;
  - Assisting in formulating questions for counsel in cross-examination of defendant's expert.

- ***Expert Retained by Defendant***

  - Preparation of critique report, identifying any errors or inconsistencies, and analyzing the weaknesses in report of plaintiff's expert;
  - Providing *viva voce* evidence at trial;
  - Assistance in formulating questions for counsel in cross-examination of plaintiff's expert.

10.1 Factors Considered in Quantifying Plaintiff's Damages

There must be identification of the specific (and often inter-related) events or transactions caused by defendant and resulting in damages, thus giving rise to plaintiff's claim for lost profits.

The following example underscores this rule. It relates to the construction industry — an industry involving many variables. Factors which must be considered by the expert in quantifying damages for lost profits in construction-related claims include:

- *Delays*
  - Failure to provide the contractor site access as scheduled
  - Delayed or changed design drawings
  - Late delivery of owner-supplied equipment or materials
  - Untimely field inspections

- *Extra work*

- *Escalation* — These require proof that costs incurred in later periods had higher unit prices than the prices that would have existed had no delay occurred. Escalation claims frequently include labour costs. A delay claim on a large, complex project is often a series of many individual delays, and the labour costs generally comprises multiple crafts (electricians, labourers, pipe fitters, etc.) with multiple wage levels (apprentice, journeyman, foreman, etc.) within each craft.

- *Acceleration* — Acceleration results when a contractor revises the contract schedule to complete the remaining activities in less than time than planned. The contractor usually reduces the time span by adding manpower and shifts, increasing overtime and revising work sequences. If the owner ordered the acceleration or if the appropriate authority refused to allow the contractor a proper time extension, the contractor may receive compensation for the additional costs. Acceleration costs include:

    - Premium portion of overtime and inefficiencies associated with extended overtime
    - Higher wage rates of added shifts
    - Vendor's premiums for expedited delivery of materials
    - Equipment increases required to support added crews
    - Disruptive effects on the workforce causing lower productivity
    - Extra hours associated with revised work.

- *Disruption*

    - Uneven labour force levels, including overtime
    - Inefficient work force level
    - Inefficient sequence scheduling, "stacking of crafts" (e.g., forcing plumbers and electricians to work simultaneously in the same location)
    - Excessive drawing changes
    - Early, late or out-of-sequence material and equipment deliveries
    - Delayed or restricted site access
    - Performance beyond contract specifications or tolerances.

- *Contractor termination*

- *Cost of capital.*

If a contractor cannot complete a project because of a breach by the owner or the owner's agent, the contractor may recover the lost profits which would have been earned had the project been

completed. Lost profits are generally measured as the remaining contract price, less the contractor's incremental costs to complete the project.

10.2 Lost Future Profits of a Start-Up Business

An example of the quantification of damages for lost profits in a breach-of-contract case is provided below. The Court of Queen's Bench of Alberta[44] awarded the plaintiff over $1,000,000 in damages for breach of contract. The matter also related to a new, start-up joint-venture business of a plaintiff which had a good historical track record in the business (in the same industry as the proposed joint venture).

The background facts may be summarized as follows:

Rapatax was established in Montreal in 1969. It commenced processing income tax returns by computer timesharing. Timesharing being only moderately successful, in 1971 C.B.S. Computer Business Systems Ltd. was engaged to write the software for the computer batch processing of income tax returns. The shareholders of C.B.S. were Isadore Fine and John Kivenko, both graduate engineers. In 1972, Gerald Cooper, an accountant, joined Rapatax as manager and subsequently became a major shareholder of Rapatax. Cooper, having extensive contacts in the Montreal accounting community, used those contacts to successfully develop a market for the Rapatax product. Rapatax processed tax returns for accountants and other tax preparers in both the English and French languages in all provinces of Canada, although by far its main market was Quebec. During its peak years from 1980 to 1990, Rapatax processed between 50,000 to 60,000 returns annually. In 1985, C.B.S. signed a management contract with Rapatax, and in

(44) *Rapatax (1987) Inc.* v. *Cantax Corp.* (1995), 175 A.R. 366.

1987 it acquired an ownership interest in the latter, resulting in the formation of Rapatax (1987) Inc.

Until 1991, Rapatax was providing tax-return preparation services to accountants and specialized tax-preparation bureaus who would complete input forms prepared from data collected from their tax clients and send the forms to Rapatax for processing. The input forms were designed by Rapatax. They would be processed by the company with the use of mainframe computers at McGill University, and the actual income tax returns would be printed, assembled, collated and returned to the accounting firms and other tax preparers. Rapatax was a small, successful company which had exploited a small niche in the tax-return preparation field and was well-known in Quebec, mainly in the Montreal English-speaking community. Rapatax's system was efficient, well-run and the company had a very good following.

The principals of Rapatax/C.B.S. had an excellent understanding of the Federal and Quebec income tax laws and regulations for them to have been able to design the input forms and the computer program which eventually resulted in the finished product.

Prior to 1991, Cantax — a Calgary-based firm — had been marketing its computer software tax programs in all provinces and territories in Canada *except* Quebec. (Cantax's software programs for the Federal T1 tax return had not been translated from English into French, nor did the company have any programs designed for producing the Quebec income tax return in either English or French.)

Cantax was founded and operated by Henry Zimmer, who had gained a national reputation as a writer and educator in income tax, including tax planning. Cantax had developed software to prepare, not only personal income tax returns on microcomputers, but corporation tax returns as well.

In 1979 Zimmer had begun to conduct tax seminars for the general public and in the early 1980s, he engaged a computer programmer to write a software program whereby a user could input the

numbers into the tax program and the computer would perform the tax calculations and transcribe the number onto the income tax forms. By 1984, Zimmer and his associate, Cameron Peters, were able to successfully launch their program.

By 1989, Cantax was producing two types of personal income tax software: one for individual consumer use and the other, a more sophisticated version, which was purchased by accounting firms to prepare personal income tax returns for their own clients.

Recognizing the synergistic benefits to be realized, Cantax wished to expand into Quebec and to develop new software to service the Quebec market.

As the capacity of PCs increased each year up to 1991, the advanced technology with printing meant that computer users could print their own completed tax forms, as is currently the case in the accounting community.

The market for computer generated tax returns increased significantly, as did competition, with other computer software producers entering the field, e.g., Informatrix 2000 Ltd. was a leader and major competitor in the Quebec market. Informatrix had become a division of SoftKey Software Products Inc., a public company.

At trial, the principals of Rapatax (Fine and Kivenko) and Henry Zimmer had testified that they had each come to respect the other's expertise in their given areas in the Canadian tax return-preparation market. In fact, up to 1991, they were in sporadic touch with each other. As noted, Zimmer wished to expand Cantax into the Province of Quebec where there was a substantial market which Cantax had not yet penetrated. In mid-1991, Zimmer had been discussing with Rapatax E-mail filing of income tax returns, which was a relatively new development. During the course of their conversations, Zimmer asked Fine and Kivenko to consider the idea of a joint venture in Quebec. The synergies were obvious; it would be an ideal marriage! After both sides pondered the suggestion, they agreed that time would be of the essence if the program were to be introduced into the Quebec market so as to be ready for the 1991 tax year. The parties arranged

to meet in Toronto in July 1991 "to hammer out the details and physically shake hands". In fact, Gerald Cooper of Rapatax said that he was prepared to proceed on an "electronic handshake" in the telephone conference call, as Henry Zimmer's word was "good enough for him".

A memorandum was prepared setting forth the division of the profits, the pricing of the products, the split of the work to be performed for the Quebec version, the timing of the project, the translation of the Quebec programs from FORTRAN computer language to Turbo Pascal computer language used by Cantax and the possibility of a visit from a representative of Cantax to help integrate the respective Rapatax and Cantax programs. The memo also emphasized that the timing of the venture was extremely important and that Rapatax wished to get started prior to the July 1991 vacation period, advising Cantax that "to that end we have already purchased the latest version of Turbo Pascal and installed it in our machines".

The meeting took place, as arranged, in July 1991. The parties even discussed and agreed on the profit- and work-sharing components of the recent written communications between them.

Fine reduced the joint-venture agreement to writing with the assistance of a lawyer who suggested that a clause providing for a ten-year term be added specifying the duration of the joint venture.

Work proceeded on the preparation of the Quebec versions of the Cantax software with the first phase of the work, namely, translating FORTRAN into Turbo Pascal and compiling the program on their computers by late September 1991. Checking and debugging remained, depending on the success of their initial efforts. There was still work to be done, but much had already been completed, including most of the translation, the dot matrix forms, French screens to accommodate the French language, etc. The new tax forms would be available from the Federal and Quebec governments in October or November 1991 for the ensuing tax season, essentially February-March-April 1992.

The material prepared by Rapatax was sent to Calgary at the end of September for checking and integration into the Cantax software (being Cantax's responsibility under the joint venture). Rapatax waited to hear from Cantax, leaving a number of telephone messages. Nothing happened; Cantax no longer appeared to show any interest.

A few weeks later, Peters, President of Cantax, informed Fine at Rapatax that Cantax had been bought out by SoftKey and that SoftKey did not wish to have a competing product in Quebec (as it already owned Informatrix). They would not be proceeding with the joint venture.

A few days later, Rapatax received a letter from Cantax, stating the following:

> Re TP1 programming
>
> "As Cameron discussed with Izzy [*sic*.] on the phone, we have decided not to develop a Quebec product. Therefore, I am returning the TP1 printouts and disks you sent to me earlier this month.
>
> "This letter revokes all rights and privileges previously granted to Rapatax ... to develop TP1 software using the CANTAX interface. Please destroy all confidential CANTAX documentation and programming.
>
> "We wish you and everyone at [Rapatax] success in the future.
>
> Yours truly,
>
> CANTAX Corporation Limited"

The first indication that Rapatax had that Cantax denied there had been a subsisting Joint-Venture Agreement came in a letter from Cantax's lawyers.

Cantax's withdrawal from the joint venture came at the insistence of SoftKey. At the same time as Henry Zimmer was negotiating with Rapatax to expand Cantax into Quebec, Zimmer was also seeking to find a buyer for Cantax. Evidence was given to the effect that, Zimmer had met with

a representative of U.S.-based SoftKey to explore the possibility of such a sale. Cantax was ultimately sold for some $7 million. Zimmer's partner, Peters, received $1 million and a private placement of approximately 109,000 old shares of SoftKey with a one-year trading restriction. Peters also became Cantax's new president.

While meetings were continuing between Cantax and SoftKey, Zimmer felt that if SoftKey did not acquire Cantax, he would quickly formalize the agreement with Rapatax so that a professional package could be produced in time for filing 1991 tax returns in the 1992 income tax season.

When Zimmer told Informatrix that Cantax was having negotiations with Rapatax, Zimmer was told not to proceed, as Informatrix and Rapatax were competitors in Quebec. On cross-examination, Zimmer testified that he was told to delay Rapatax, "but if I went ahead [Informatrix] never said that it would be deal breaker". While Zimmer had testified that he had committed to proceed with the Rapatax joint venture, Zimmer did not want to antagonize SoftKey by actually formalizing the deal with Rapatax. No one at Cantax told Rapatax that the former were negotiating with SoftKey until Cantax's phone call to Mr. Fine later on in October, 1991.

In mid-October, Cantax received a letter of intent from SoftKey that Cantax would be taken over and that Zimmer would no longer be involved. Knowing that he had a deal with SoftKey, Zimmer instructed Peters to write Rapatax to stop its work and any arrangements would be cancelled.

In the Court's view, it was apparent that Zimmer had committed Cantax to proceed with the Rapatax joint venture and that Rapatax had never been told to stop its efforts in working on the Quebec computer package.

The first issue for Mr. Justice Hutchinson to consider was whether a contract existed between Cantax and Rapatax to develop the Cantax computer software tax program for use in the

Province of Quebec. In other words, had all of the essential terms of the joint-venture arrangement between the parties been agreed upon? Justice Hutchinson found that "[t]he parties intended to create a contractual relationship between themselves and they did so. What is also important is that they both acted on the agreement and were aware that the other party was also acting on the agreement".

Having found that a contract did exist, and that there was liability on the part of Cantax, His Lordship had to address the damages issue, i.e., what was the quantum of economic damages suffered by Rapatax a result of Cantax's failure to honour its obligations under the Joint-Venture Agreement?

In this case, however, the contract was terminated before any profits could be earned and thereafter there would be no profits because of the cancellation of the Joint-Venture Agreement.

The business valuation expert retained by Rapatax calculated damages as the excess of (a) the loss of future profits or cash flow that would have reasonably been expected to be earned by Rapatax had Cantax honoured its contractual obligations under the Joint-Venture Agreement, (b) the loss of ongoing or residual value suffered by Rapatax as a consequence of its not having been able to participate with Cantax in the joint venture and (c) the out-of-pocket costs incurred by Rapatax in order to fulfil its obligations under the Joint-Venture Agreement, over the start-up costs. In arriving at the loss of profits, a five-year cash flow period was used adopting the Discounted Cash Flow (DCF) Method, where the projected cash inflows and outflows were discounted back to the damage date (October 21, 1991) to arrive at the present value of the lost income stream from the joint venture.

Sales projections were broken down between sales of the Consumer Version (sold either directly or through distributors) and sales of the Professional Version, with market penetration of both versions being a function of Cantax's sales in the rest of Canada, subject to geography-specific factors.

Rapatax's expert adopted the DCF Method using a five-year projection period, applying a risk factor of 5% for the first year of operation and increased the risk factor by 5% in each subsequent year up to the fifth year of projected operations, having a 25% risk factor. This was to recognize the degree of uncertainty inherent in projecting the annual cash flows during the cash flow period and to recognize that such uncertainty increases as projections are made further into the future. The risk factors considered, *inter alia*:

- the rapid change in software technology;
- no major expansion being planned for diversification of products;
- the existing competition in the marketplace (e.g., Informatrix, Dr. Tax and TaxPrep);
- management's ability to change the taxation software annually; and
- management's experience in the income tax-preparation field.

From the aggregate of (a) the loss of future profits, (b) loss of residual value and (c) out-of-pocket costs were deducted the start-up costs that would have been required under the terms of the Joint-Venture Agreement (programming and design of the preliminary software package, preparation of manuals which would have to be translated into French for the software, debugging, etc.)

Rapatax's expert calculated the damages at $1,265,000. Cantax's valuator calculated a net cash flow loss of $1,320,000 over the same five-year period using an "operating approach" and a loss of $470,000 using a "buyout approach". The operating approach considered what might have actually occurred had the joint venture actually proceeded under the agreement, with damages being calculated up to the date of his report (October 1994) with the full benefit of hindsight, except for the SoftKey acquisition of Cantax. The buyout approach, on the other hand, was premised on the assumption that SoftKey, as owner of Cantax, would likely not have wished to continue the joint venture with Rapatax. Damages under this approach was equal to the

price/amount as of the breach date (October 21, 1991) which SoftKey would have paid Rapatax to induce it to sell its interest in the joint venture — Cantax's business valuator estimated $60,000.

Typically, the two opposing experts used entirely different discount rates and different risk factors.

The Court noted that the explanation for the vastly different damage-quantification conclusions was the result of the adoption by the valuators of entirely different approaches to the way in which Rapatax was perceived to have been able to conduct its operations as a joint venture partner with Cantax. Cantax's valuator built into Rapatax's projected operating costs a whole array of staff and capital costs as if Rapatax would be starting the joint venture from scratch, without staff, equipment or office space, based upon information supplied, at least in part, from Informatrix, which was both a subsidiary of SoftKey and a potential competitor of Cantax. Cantax's expert ignored the fact that Rapatax was already in business, that it had surplus space and surplus capacity for extra work within its own organization, had a well-trained and competent staff fully able and equipped to take on its responsibilities as a joint venturer and would merely add a divisional operation which, in effect, would generate contribution margin to an already successful, established business in the exact same field. Rapatax was well-entrenched, well-known, had full ability to translate, interpret income tax legislation and handle computers and computer programs. In effect, instead of adopting an incremental or marginal approach, Cantax's business valuator (a) assumed essentially a total start-up and (b) viewed the joint-venture operation as if it were a major corporate operation with many employees having various functions.

On the other hand, Rapatax's business valuator applied an *incremental* analysis, viewing the business of the joint venture as an add-on to an already existing operation with staff, know-how, customers, physical facilities, etc. In the words of the Court, Rapatax's expert:

> " ... adopted a more practicable or pragmatic approach using the present staff and equipment actually employed by Rapatax to carry out its initial operations under the joint venture up to October 21, 1991. That approach also recognized that ... Rapatax already had surplus capacity in its service business operations and that as its batch tax return preparation service diminished owing to the changes in personal computer technology, Rapatax would have an even greater surplus capacity to accommodate an increasing workload as the joint venture work expanded."

Mr. Justice Hutchinson also noted that:

> " ... the past efforts of Cantax were very successful, its products were respected and competitively priced and that all of this had been accomplished from what had started out as a cottage industry in the basement of Zimmer's house and was still being carried on with a minimal staff no larger than that of Rapatax although Peters had separate office quarters in a suburban office building for his software programming operation."

The judge observed that the principals of both Rapatax and Cantax were all successful, conservative, astute businessmen: "I cannot see any one of them aspiring to the acquisition of staff and capital expenses assumed to be the case in the defendant's expert's calculations", stating:

> "Such did not match the past method of operations of either Cantax or Rapatax. Their similarities of operation and approach to business created the very synergies which drew them together and would have been one of the reasons why Zimmer chose Rapatax to introduce the Cantax programs into Quebec. I consider the operating costs in [Cantax's] expert's report to be highly inflated and based on unrealistic assumptions."

Justice Hutchinson also noted that "there was considerable potential value to Rapatax in the joint venture" and "was satisfied that there was a profit to be made and that Rapatax had the capacity to carry out its obligations and earn its share of the positive revenues to be earned as a partner in the joint venture".

His Lordship accepted the basic calculations and assumptions of Rapatax's valuation expert except for the risk factor or contingency allowance applied in discounting the annual operating cash flow for the first five years of operation "being the maximum practical period for which damages can be calculated in these circumstances". He also agreed with Rapatax's valuator that there should be a loss of residual value, i.e., opportunity, at the end of the five-year cash flow period in order to compensate for a possible renewal of the business arrangements between Rapatax and Cantax which had been lost (or, alternatively, a buyout of Rapatax's joint venture interest at that time):

> "I adopt the 25% factor selected by the plaintiff business valuation expert ... [and] the sum of $60,000 representing the amount of the plaintiff's out-of-pocket expenses which I accept to have been demonstrated up to October 21, 1991 [the breach date]."

The final award (which has been appealed by Cantax) was $1,065,000 in damages plus interest of $262,000.

10.3 Quantifying Business Interruption Loss

Business interruption insurance is intended to leave the insured party in very much the same financial position before the loss occurred. The quantification of a business interruption loss is often mandated to the professional accountant or business valuator.

Often the quantification process can be reasonably straight forward, particularly where the damages are suffered by the more usual commercial establishment, such as a manufacturer, distributor or retailer. However, the selection and application of an appropriate methodology may not be that simple where the business is not your typical operation (such as an airport, a duty-free shop, an amusement park, etc.).

10.3.1 Example

The following example outlines the types of considerations and factors to be addressed in the quantification process.

A decision was rendered by the Court of Queen's Bench of Alberta In 1994, [45] involving a claim for business interruption losses suffered as a result of a fatal catastrophe that struck the roller coaster of what was then the world's biggest shopping mall and amusement park, West Edmonton Mall (the "Mall").

As a consequence of this tragic accident, business in the Mall was severely disrupted, and other damages and losses ensued. One of the claims made by the Mall from its insurers was for business interruption loss.

As a brief background, the Mall was built in three phases over several years. Phase I was built in 1981 and comprised a regional shopping mall. Between the opening of Phase I and mid-1983, a second phase of the Mall was constructed. Phase II included an amusement park called "Fantasyland". (The name "Fantasyland" is no longer used as a result of an action by Walt Disney Productions preventing West Edmonton Mall from using the word "Fantasyland" in describing the amusement park attractions[46]. For purposes of convenience, it will be used in the following comments to describe the amusement park of Phase II of the Mall.) Phase III of the Mall opened in September 1985.

To increase the rate of return visitation, major theme parks around the world make continuing capital investments in their facilities, frequently in the form of new, larger, more exciting "thrill rides". These are very large, fast and exciting rides which exert strong and unexpected forces on

---

(45) *Triple Five Corporation Ltd. and West Edmonton Mall Limited* v. *Simcoe & Erie Group et al*, Action No. 8703-14820, October 17, 1994.

(46) *Walt Disney Productions* v. *Triple Five Corp*. (1994) CPR (3d) 129 (C.A.), affirming (1992), 44 CPR (3d) 321 (Q.B.).

the rider participants. Fantasyland was designed to hold several "thrill rides", including the roller coaster (called the "*Mindbender*"), which had officially opened on March 15, 1986. It was very popular and generated significant income shortly after it opened.

The *Mindbender* was built as the world's largest indoor, triple-loop roller coaster. During the three-month period immediately preceding the derailment, March 15, 1986 to June 14, 1986 (the "Base Period"), the *Mindbender* produced revenues of approximately $1 million. It was forced to close as a result of the derailment and underwent substantial design modifications before re-opening.

Fantasyland generated gross ride revenues for the three-month period immediately preceding the Accident Date of more than $2.3 million.

School holidays and summer vacations had a dramatic upward effect on amusement park revenues. The summer holiday months of July and August typically provided the highest revenues for Fantasyland.

During the business interruption period, the Mall had generated sales per square foot of $296 and $294 for the years 1986 and 1987, respectively. (In 1986, the national average for retail stores was $249 per square foot.) The significance of this statistic was that the Mall was able to attract visitors, with the resulting positive synergistic effects among the various rides, activities, attractions and retail stores.

The Mall also played a significant role in Alberta's tourism industry. The Edmonton Convention and Tourism Authority had processed 1,374 inquiries concerning the Mall in 1986 and a further 1,852 similar enquiries in 1987. Of an estimated 13.2 million and 13.6 million person-trips to the Mall in calendar 1986 and 1987 respectively, tourist visitation constituted an estimated 19.0% for each year. Total tourist visitation to the Mall grew by 14.44% from 1985 to 1986 and by 3.51% for 1986 to 1987.

Fantasyland differed notably from most other amusement parks around the world by virtue of its being both fully enclosed and climate-controlled. The most obvious benefit of this structural design was that Fantasyland was able to operate on a year-round basis, without being affected by weather conditions.

As the Mall and its insurers were unable to agree as to either the coverage or the quantum of the business interruption loss, the former sued.

The Mall's insurance policy provided a "gross earnings" form of coverage. This form adopts an approach where the insured starts with revenues and deducts certain variable costs to arrive at a mid-point contribution margin called "gross earnings" as the basis for coverage. The main deductions are goods and supplies as well as services consumed directly in sales or production. Expenses that might not continue during the interruption period may also be deducted. The amount of coverage is based on a specific time-period, generally one year's operating results. (Standard policies are marketed as one-year packages and the indemnity period does not extend beyond that time, notwithstanding that the business' facilities have not yet been repaired.)

As regards the loss quantification, the objective of the policy is to totally indemnify the insured so that he or she would be in the same financial position had the loss not occurred. Hence, the calculation is intended to arrive at what the insured's results would have been had there been no loss and compare this with actual results, i.e., projected results less actual results.

The Mall's insurance policy, which covered the following business interruption loss, provided as follows:

> " ... the reduction in 'Gross Earnings' directly resulting from such interruption of business, less charges and expenses which do not necessarily continue during the interruption of business, not exceeding such length of time as would be required with the exercise of due diligence and dispatch to rebuild, repair or replace such part of the above described property as has been destroyed or damaged, commencing with the date of such destruction or damage and not limited by the date of expiration of this Policy but not exceeding the ACTUAL LOSS SUSTAINED by the Insured resulting

> from such interruption. Due consideration shall be given to the continuation of normal charges and expenses including payroll, to the extent necessary to resume operations of the Insured with the same quality of service which existed immediately preceding the destruction or damage by the perils insured against."

The term, "Gross Earnings", used above was defined in the policy as:

> "the sum of :
>
> (i) total net sales, and
>
> (ii) other earnings derived from operations of the business, less the cost of:
>
> merchandise sold, including packaging materials therefor,
>
> materials and supplies consumed directly in supplying the service(s) sold by the Insured, and
>
> service(s) purchased from outsiders (not employees of the Insured) for resale which does not continue under contract.
>
> No other costs shall be deducted in determining Gross Earnings.
>
> In determining Gross Earnings due consideration shall be given to the experience of the business before the date of damage or destruction and the probable experience thereafter had no loss occurred."

Fantasyland had the following operating hours during the business interruption period:

- Special holidays (Christmas Eve, Christmas Day, New Year's Eve) — Special hours with early closing times.
- Fridays, Saturdays and school holidays — 10:00 a.m. to 10:00 p.m.
- All remaining days — Noon to 8:00 p.m.

An all-inclusive Day Pass to Fantasyland was $12.50 (as of June 27, 1987); passes for children of 3 to 10 years were $10.50; infants under 2 were admitted free. Alternatively, individual ride tickets could be purchased for 60¢, with each specific ride requiring a particular number of tickets per ride. (For example, the *Mindbender* required six tickets per individual ride.)

The Mall's business valuator considered a number of possible methodologies that might be adopted in quantifying the business interruption loss, but concluded that the following approach was the most appropriate, as the Base Period (above) could be relied upon to project the results that would reasonably have been achieved by the Phase II attractions, had the derailment of the *Mindbender* not occurred.

To determine the quantum of the loss, he used the Base Period to project expected revenues from both (a) Fantasyland ride attractions and (b) Fantasyland division games and concessions during the business interruption period, based on amusement-park experts' reports. From an analysis of daily revenue patterns, he categorized the actual revenues during the Base Period into *high-*, *medium-* and *low-revenue days*, as follows:

- *High-revenue days*: all Saturdays, Sundays on long holiday weekends, and each day during spring and summer breaks and Christmas;
- *Medium-revenue days*: all other Sundays, all Fridays and Mondays of long holiday weekends; and
- *Low-revenue days*: all remaining days.

Certain exceptions were made to these categories in respect of Christmas Eve, Christmas Day, The Catholic School Board teacher conferences, etc.

To determine expected revenues, the Mall's valuation expert applied appropriate average daily revenues from the Base Period to the *high-*, *medium-* and *low-revenue days* during the business interruption period.

To arrive at the business interruption loss according to the policy, he deducted the following amounts from the expected Fantasyland division revenues determined above:

- the actual revenues realized during the business interruption period;
- expected revenues from rides that were discontinued during such period; and
- expenses saved from the resulting deficiency.

His calculation of the business interruption loss was based upon a number of assumptions, including:

- Attendance levels of Fantasyland were impaired on a long-term basis as a result of the accident;
- There would have been special promotions (i.e., coupons, etc.) used in the business interruption period to achieve the same results as those achieved during the Base Period; and
- The Mall attracted a sufficient number of tourists and Edmonton had a large enough population to sustain attendance levels enjoyed during the Base Period.

To quantify the business interruption loss for the business interruption period, the Mall's valuator segregated and calculated independently:

(a) the Fantasyland ride revenue deficiency;

(b) the game and concession revenue deficiency; and

(c) saved expenses.

Ride Revenue Deficiency

"Ride revenue deficiency" was considered as the excess of total expected ride revenue, had the accident not occurred, over actual revenue during the business interruption period.

During the Base Period, revenue from all Fantasyland rides (including *Mindbender*) was $2.3 million. The valuator classified actual daily ride revenues earned during the Base Period according to his definitions of *high-*, *medium-* and *low-revenue days*. Average daily revenue for *high-*, *medium-* and *low-revenue days* during the Base Period was accordingly determined as $50,500, $26,200 and $12,500 respectively.

Expected revenue during the business interruption period was calculated by applying the daily revenue averages in the Base Period to the corresponding *high-*, *medium-* and *low-revenue days* during the business interruption period. Accordingly, the valuator determined total expected revenue during the period to be $13.4 million.

From the expected revenue determined above, he deducted actual ride revenue for the business interruption period of $4.4 million. This yielded lost revenue of $9.0 million. From this the valuator deducted $123,000, representing the expected revenue pertaining to rides discontinued during the business interruption period.

This deduction was necessary to avoid overstating expected ride revenues during the business interruption period (by including revenues therein for the other rides (the *Saker* and *Bumper Boats* rides) subsequent to their respective discontinuations on June 18, 1986 and August 2, 1986). The percentage of total Base Period ride revenues of the *Saker* and *Bumper Boats* was applied to the amounts of expected ride revenue remaining during the business interruption period (after their discontinuation). In this manner, the Mall's valuator determined the deductions required for these other rides at $42,000 and $80,000, respectively.

In making the foregoing deductions, the valuator arrived at ride revenue deficiency of $8.9 million.

Games and Concessions Revenue Deficiency

During the relevant period, Fantasyland had a number of "pay-as-you-play" games and souvenir and other concessions. Games and concessions revenue deficiency was considered the excess of expected games and concessions revenues, had the derailment not occurred, over actual revenue during the business interruption period.

Games and concessions revenue deficiency was determined by the Mall's business valuation expert as follows:

(a) Actual daily revenues during the Base Period were classified according to *high-*, *medium-* or *low-revenue days*;

(b) Daily revenue averages for *high-*, *medium-* and *low-revenue days* were applied to the number of *high-*, *medium-* and *low-revenue days* during the business interruption period; and

(c) Actual revenue during the business interruption period was deducted from the expected revenues determined in (b) to arrive at games and concessions revenue deficiency of $400,000.

Saved Expenses

Saved expenses as a result of the shutdown of Mindbender comprised:

- Labour costs of *Mindbender* operators and maintenance staff;
- Oil, grease and tire costs related to *Mindbender*;

- Utility costs related to *Mindbender*; and
- Direct costs of sales associated with lost games and concessions revenues.

The labour and utility costs were determined by reference to hourly rates and planned hours of operation during the business interruption period based upon representations of the Plaintiffs' management. Direct games and concessions costs of sales were determined by applying the actual percentage of such costs of sales to revenue during the business interruption period to the revenue deficiency as determined by the Mall's valuator. Oil, grease and tires expenses were based on actual costs incurred in 1990 and 1991.

The valuator accordingly arrived at saved expenses during the business interruption period of $250,000.

In arriving at total saved expenses during the business interruption period, he considered the following items as potentially constituting types of expenses which would not be incurred as a result of the derailment. However, he ultimately omitted them from his calculation for the following reasons:

- *Advertising and promotion expenses* — while at first glance the cessation of operations of the *Mindbender* would seem to eliminate the need for advertising and promotion expenses, actual experience showed that Fantasyland's advertising and promotion expenditures roughly doubled during the business interruption period;
- *Maintenance materials* — detailed information was not available to quantify any saved expenses (other than those related to oil, grease and tires) that might have resulted from the roller coaster maintenance employees being rendered unnecessary. However, as it was noted that many of the maintenance supplies had been put to other uses within Fantasyland, the valuator considered it unlikely that any remaining material and supplies expenses would be significant; and
- *Depreciation expense* — the valuator did not deduct depreciation expense as it constitutes a non-cash item which is a subjective accounting and/or tax allocation of previously expended capital payments (i.e., sunk costs). In this light, it did not appear that

> there were any significant increases or decreases in the economic life of the roller coaster equipment resulting from the derailment which would impact depreciation expense. Finally, the particular depreciation base used for the roller coaster equipment would not lend itself to deducting depreciation as a saved expense.

Individual Ride Comparison

The second largest revenue-producing thrill ride during the Base Period, also targeting the adolescent and adult markets, was the "Daring Drop of Doom" ("*Freefall*") consisting of a 13-storey direct vertical drop.

A further observation concerning the valuator's comparative analysis between the *Mindbender* and the *Freefall* is that it had been achieved using actual revenues for the *Freefall* which themselves had been negatively impacted, as were all Fantasyland rides, attractions, games and concessions during the business interruption period because of the accident. Therefore, "but for" the accident, the level of "expected" *Freefall* revenues would be increased by moving the *Freefall* graph upwards (i.e., vertically). Hence, the physical gap between (a) the higher expected revenues and (b) the lower actual revenues for the *Freefall* (as well as the remainder of Fantasyland rides and games and concessions, less the saved expenses), constituted the business interruption loss.

However, for the foregoing loss quantification to be relevant, the court had to find that the insurer was liable.

The court concluded that the Mall had much less of a claim for business interruption losses under the insurance policy in the circumstances of the case, stating that the losses "are not covered under the insuring agreements because of the exceptions, which apply. They are not covered under resulting damage for the reasons stated earlier". However, as is often the case when a court finds that there *is* liability on the part of defendant, it will nonetheless proceed to determine the losses suffered (in the event that the appeal court overturns the judgment of the trial court):

> "I have disallowed the business interruption loss. In the event that I am wrong in some aspect which would have seen that claim allowed, the following comments will be appropriate.
>
> "Had it been necessary for me to assess this claim, certain finding of fact and commentaries upon expert evidence and opinion would be necessary ... .
>
> " ... But I am satisfied that for the purposes of a Gross Earnings calculations, the methods devised for determining the income for various kinds of days at the Park, and the analysis depending on high holiday days, high days and low days, ... is an acceptable method to be use d for determining likely income streams to be gained on a particular kind of day or month during the interruption period.
>
> "I preferred the evidence of the [Mall's] experts on the problem of the base period. Having regard to the wording of the policy, I am of the view that the [Mall's] experts ... were on the right track in choosing the period from opening day to the day of the accident as a comparable period for basis of projection of the Gross Earnings loss. In my view it was the best comparable for use in the circumstances. It may have been conservative. While the policy says that regard must be had to experience after the business interruption period, in my view it is wrong to give that experience the weight that the Defendants' experts would have given it, and the analysis they argued for amounted to hindsight.
>
> "I also reject the evidence of the [Defendants' expert] where he would discount the earlier results obtained by the roller coaster by a straight or concave line reduction method featured in his evidence. This evidence was supported by other experts offered by the Defence. Nor was I impressed by his analysis which changed the methodology of calculation depending upon the type of attraction he was assessing. I prefer the theory of the Plaintiffs' experts that the projection should take into account an increase in revenue in the first summer of operation of the machine if it had not been for the accident. Those figures should be projected for the next summer. In doing so I favour the approach of [Plaintiffs' experts], whose evidence I preferred over that offered by the Defence. [The Defendants' expert's] theory had an air of artificiality about them beyond even that which was necessary for the reconstruction of this defined loss. Nor do they reflect, in my opinion, the seasonality of the attraction being assessed.
>
> "The parties to this suit agreed in argument before me that the assessment of a loss such as this was not entirely scientific, and that it might be necessary for a Court to compromise on the figures suggested by either side."

The judge concluded that he would have favoured the analysis put forward by the Plaintiffs, but with the addition of a more quickly deteriorating level of use than their experts put forward and rejecting the theory of "declining straight line" of the Defendants' expert. While the analyses of the Mall's valuator most nearly followed that pattern, in order to modify them so as to allow for

the portions of the Defence theory which the Court *did* accept, the judge stated that he would have discounted the expert's projections "by at least 25%, and more likely by 30%, to allow for the demonstrated comparability of the known results of the ongoing Fantasyland performance in a difficult economic market, and allowing an extra reduction for the novelty effect in the second year".

As to the question of a proper length of business interruption period, the Plaintiffs claimed that it should run from the date of the accident to the day that the roller coaster resumed operations at the park. In this connection, the Court ruled in favour of the Defendants and concluded that the interruption period should not be more than one year, based on a number of reasons spelled out in the 174-page judgment.

11. INTELLECTUAL-PROPERTY INFRINGEMENT DAMAGES

11.1 General

As patents, copyrights, trade marks, trade names and similar intellectual property grant the owner a legal monopoly, potential value is created because the owner has the right to exclude competition and can often charge monopolistic prices. Such ability to earn an above-normal rate of return (super profits or premium profits) can add significant value to a business or enterprise owning these assets.

With valuable intellectual property, the owner must protect such asset when another party uses or exploits the property without permission. Hence, the owner will do so through the court system.

Because intellectual property has become such a strategic and critical asset of many businesses, providing significant competitive advantage, proper quantification of infringement damages requires detailed quantitative analysis supported by sound finance, investment and valuation

theory. The quantification of lost profits and reasonable royalties must be based on accepted principles and practices of investment analysis, as with other types of damages, it cannot be based on speculation.

11.2 Breach of Contract

Typically, licences and franchises create intangible property by virtue of a contract or an agreement. If failure by the defendant to honour the terms of a contract causes economic harm to the plaintiff, the latter may be able to recover damages reasonably attributed to the defendant's breach of contract. The quantification of economic loss, or loss in value to the plaintiff, is performed by a business valuation expert.

11.3 Patent Litigation

If a party attempts to make, use or sell a patented item, the patent owner may sue the infringer for injunctive relief and damages. The business valuator quantifies the patent-owner's damages under both a lost-profits approach and a reasonable-royalty approach, or a combination of both approaches. Damages generally constitute the difference between the plaintiff's pecuniary position after the infringement, and what his or her position would have been had the infringement not occurred.

The plaintiff can recover as damages (a) either loss of profits the plaintiff failed to enjoy due to the infringement or reasonable royalties or (b) an accounting of profits, at the plaintiff's

election[47]. Sometimes, a combination of both approaches is adopted. In addition, if monetary damages are awarded, the plaintiff may also be entitled to pre-judgment interest.

In order to prove lost profits, the patentee must satisfy the court that:

- There was a demand for the patented product;
- There were no acceptable non-infringing alternatives to the product; and
- The patent owner had the manufacturing and marketing capability to meet the demand for the product.

(In the U.S., there is the so-called "Panduit Requirement" or "Panduit Causation Test" which adds a few more factors — see below.)

Accordingly, from a lost-profits perspective, the focus of the patent infringement damages is on the plaintiff's profits and not on those of the infringer.[48]

Loss of profits can be based on lost sales, price erosion or accelerated market entry. Reasonable royalties are established by considering (a) an established royalty, (b) a hypothetically-negotiated royalty and (c) an analytical approach. These methods are outlined below.

11.3.1 Lost Profits Method

Where there is a loss of unit sales, there may also be a loss of accessory products49. A concept known as the "Entire Market Value Rule" has developed, where a plaintiff may be entitled to

(47) See, for example, *Allied Signal Inc*. v. *DuPont Canada*, (1995) 61 CPR (3d) 61 (FCA).

(48) In some cases, the profits of the infringer have been considered as a check of the indicated profits the plaintiff would have made.

(49) Also referred to as "convoyed sales".

recovery of damages based on the value of the entire apparatus, including convoyed or accessory or collateral goods and services which would have accompanied the patented product's sales (e.g., cameras and film, razors and razor blades, television sets and service contracts, etc.). From a quantification point of view, there must be reasonable anticipation that sales of the accessories would have been made.

When higher costs of production result from infringement, they often arise from loss of purchase discounts on large quantities and/or operating inefficiencies. For example, if the infringement results in a manufacturing operation working at less than full capacity, or ordering less raw material supplies than would otherwise earn the business a quantity discount, the product costs will be higher. Also, there might be more down-time and other inefficiencies in the manufacturing operations.

Lost profits resulting from lower selling prices may be due to loss of market share, in that the business may be forced to sell at lower prices to maintain its market position. Types of price erosion claims include (a) sales made at eroded prices and (b) sales not made at new, higher prices which would have prevailed had the infringement not occurred. Consideration must be given to the impact of the eroded prices on the volume demanded.

In the United States, damages for lost profits on patent infringement are often subject to a test developed by Chief Judge Markey of the U.S. Court of Appeals for the Federal Circuit, referred to as the "Panduit Requirement" ("Panduit Causation Test"). This requires the owner of a patent to prove that:

- there was demand for the infringed product;
- there were no acceptable non-infringing substitute products available to satisfy the demand;

- the owner of the patent possessed the manufacturing and marketing capability to exploit the demand; and
- lost profits are capable of being quantified.[50]

Under Panduit, all of the foregoing must be satisfied in order for a lost-profits calculation to be appropriate, failing which the reasonable-royalty calculation may be the only recourse available. In Panduit, the court also recognized that a reasonable royalty for purposes of damage calculations can possibly exceed what two parties might agree on in a hypothetical arm's length negotiation, and that such reasonable royalty should be established by determining the value of the intellectual property and the extent to which such value had been enjoyed by defendant. Meeting the Panduit Test, however, is not necessary for recovery and may no longer be sufficient.

Most of the litigation occurs in connection with acceptable non-infringing alternatives.

There has been modification of the Panduit Causation Test in those instances in which there are more than two suppliers in the marketplace.[51] In another case involving causation, *BIC Leisure* v. *Windsurfing*, the test was whether, but for the infringement, the plaintiff would be able to show that it would have made the infringer's sales. The court concluded that what is particularly important is an understanding of the market, i.e., if the plaintiff's products and defendant's products were not really in the same market, why should plaintiff be entitled to the defendant's sales in the "but-for" world?[52]

(50) *Panduit Corp.* v. *Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (Sixth Cir. 1978).

(51) In one U.S. case, the court held that the plaintiff may be entitled to a pro-rata share of infringing sales, with the pro-rata share to its historical market share.

(52) Satisfaction of the modified Panduit Test (*viz.*, the State Industries test) does not entitle a patent holder to lost profits unless it is able to demonstrate that its products and those of the infringer actually competed with each other in the very same market. Moreover, according to the *BIC Leisure* v. *Windsurfing* causation test, the patent holder must prove what would have transpired in the "but-for" world.

There is yet another component of lost profits. This is sometimes referred to as the "Accelerated Market Entry", which recognizes that if, by infringing, the defendant was able to get a head start in the marketplace and build up goodwill through such an advantage, the patent holder may be thereby prejudiced. The defendant will nonetheless have developed customer relationships. This is similar to a situation in an other-than-intellectual-property context where a restaurant must close its doors for, say, a month due to illegal interference and its patrons go to a competing restaurant located nearby. It may very well be that once the damaged restaurant re-opens its doors, many of its former customers may continue to patronize the competitor. In patent litigation, the patent holder must prove that it would still have made certain of the infringer's sales both before and after the expiration of the patent.

In summary, the damages for lost profits are based on an analysis of what the patent owner would have earned but for the infringement. If the owner can demonstrate that he or she would have made the infringing sales, there should be a recovery, as lost profits, of the profits that would have been realized on such sales. If the patent owner cannot prove lost profits, he or she can receive, as a minimum, a reasonable royalty with respect to sales of the infringing product made by the defendant.

11.3.2 Reasonable Royalties Method

If lost profits are not appropriate or cannot properly be determined in patent, trade mark and copyright actions, damages can be established through a reasonable royalty.

This approach is based on the estimated future royalty stream, generally expressed as a percentage of revenue, which could be generated by licensing the right to use the trade mark or brand name. Alternatively, this may be construed in terms of the royalties one would be required to pay if he or she did not own the trade mark or brand, but merely manufactured under licence from the plaintiff.

More specifically, royalty and licensing terms entered into in exchange for the ability of another party (licensee) to exploit the intellectual property are established to provide the owner of the asset with a fair rate of return on investment. The rate of return must also be acceptable to the potential licensee and should consider the rates of return available on alternative forms of investment which compare, in terms of risk, (a) the value of the intellectual property, (b) required complementary assets used to commercialize such property and (c) the relative investment risk, such as potential obsolescence, competing technology, industry changes, government regulations and other factors.

Royalties must relate directly to profits. As noted above, a reasonable royalty may be established applying one of the following three methods:

- An established royalty.
- A notionally (hypothetically) negotiated royalty.
- Adopting an analytical approach (which determines the reasonable royalty as the excess of the anticipated profits from infringing sales over a normalized level of industry profit margin).

With respect to the notionally (hypothetically) negotiated royalty, there is a "rule" in the U.S. known as the "willing licensor-willing licensee rule":

> "In fixing damages on a royalty basis against an infringer, the sum allowed should be reasonable and that which would be accepted by a prudent licensee who wishes to obtain a license but was not so compelled and prudent patentee, who wished to grant a license but was not so compelled. In other words, the sum allowed should be that

> amount which a personal desiring to use a patented machine and sell its product at a reasonable profit would be willing to pay."[53]

There are a host of factors to consider for purposes of determining what is a reasonable royalty in a specific case. In the United States, the leading case which provides guidance is *Georgia-Pacific Corp.* v. *United States Plywood Corp.*[54]. This decision sets out 15 factors to be considered in attempting to estimate a reasonable royalty, i.e., a notional royalty rate that would have been negotiated in the open market between a willing patentee and a willing infringer at the commencement of the infringement:

1. Royalties received by the patentee for the licensing of the infringed patent, proving (or tending to prove) an established royalty.
2. Rates paid by the licensee for the use of comparable patents.
3. The nature and scope of the licence, as exclusive or non-exclusive, or as restricted or non-restricted territorially or with respect to whom the manufactured product may be sold.
4. The licensor's established policy and marketing program to maintain its patent monopoly by not licensing others to use the invention or by granting licences under special conditions designed to preserve the monopoly.
5. The commercial relationship between the licensor and licensee, such as whether they are competitors or whether they are inventor and promoter.
6. The effect of selling the patented specialty in promoting sales of other products of the licensee, the existing value of the invention to the licensor as a generator of sales its non-patented items and the extent of such tag-along/accessory/convoyed sales.
7. The duration of the patent and the term of the licence.

---

(53) *Horvath* v. *McCord Radiator & Manufacturing Co.*, 100 F.2d 326, 335; 40 USPQ. 394, 402-03 (6th Cir. 1938).

(54) 318 F. Supp. 116 (SDNY 1970), modified and aff'd., 496 F.2d 295 (2d Cir. 1971).

8. The established profitability of the patented product, its commercial success and its current popularity.[55]

9. The utility and advantages of the patented property over the old modes or devices, if any, which had been used for working out similar results.

10. The nature of the patented invention, the character of the commercial embodiment of it as owned and produced by the licensor and the benefits to those who use the invention.[56]

11. The extent to which the infringer has used the invention and any evidence probative of the value of such use.[57]

12. The portion of the profit or selling price customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.

13. The portion of the realizable profit that should be credited to the invention as distinguished from other factors (non-patented elements, the manufacturing process, business risks or significant features or improvements added by the infringer).[58]

14. The opinion testimony of qualified experts.

15. The amount which a prudent licensor (such as the patentee) and a prudent licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and willingly trying to reach an agreement; i.e., the amount which a prudent licensee — who desired, as a business proposition, to obtain a licence to manufacture and sell a particular article embodying the patented invention — would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee.

---

(55) What matters is the profitability of the patentee and not the infringer.

(56) U.S. courts may invoke the Entire Market Value Rule (*supra*).

(57) *Id*.

(58) Footnote 56, *supra*.

In effect, and subject to a few modifications, the calculated royalty rate is a notional rate which might reasonably have been negotiated between the patent owner and another party immediately prior to the infringement.[59]

The Court of Appeals (First Circuit) in *Panduit* has modified the foregoing analysis by stating:

- A reasonable royalty determined after infringement is not analogous to a negotiation between willing parties.
- It is simply a damage calculation which must produce a result sufficient to compensate the patent holder for the infringement determined after a patent has been found valid and infringed.
- The infringer would lose nothing and have everything to gain if it could count on paying only the normal, routine royalty which a non-infringer might have paid.
- "Reasonable royalty" is a convenient shorthand for "damages".
- Reliance is often placed on data and events subsequent to the commencement of the infringement and an adjudicated infringer must often pay more than the industry-licensing norm.

The following artificial suppositions are now imposed on the hypothetical-negotiation construct:

- The patent is irrefutably known to be valid at the time infringement commences.
- Infringement is irrefutably known.
- The patent owner is willing to issue a licence.

(59) It should be noted that although the court likened the process to a "willing buyer-willing seller" (or notional) negotiation, it realized that such approach is really a fiction of law, noting that the "rule is more a statement of approach than a tool of analysis".

- The licensee is willing to accept a licence.
- All relevant business facts, including those subsequent to the point of negotiation, are deemed to be known to both parties.[60]

While the Second District Court committed "basic error" by failing to allow the licensee "a reasonable profit after paying the suppositious royalty".[61] *Honeywell* v. *Minolta* added three new factors to the Georgia-Pacific rules:

1. The relative bargaining positions of the parties.
2. The extent to which the infringement prevented the patentee from using or selling its invention.
3. The market to be commercially exploited.

Also, consideration of subsequent events and facts was explicitly permitted.

Apart from the foregoing infringement-litigation "rules", guidance is also provided by the Regulations under the U.S. *Internal Revenue Code* which list 12 factors which must be considered in establishing an arm's length royalty for income tax purposes.[62]

11.3.2.1 The Analytical Approach

Adopting the analytical approach, a reasonable royalty is determined by calculating the excess of the anticipated profits from infringing sales over a "normal profit" level for the industry, such

(60) In *Honeywell*, consideration of subsequent events and facts was explicitly permitted.

(61) The Second Circuit's reasoning has been used by the courts in subsequent cases in developing the "analytical approach" (discussed in the following section).

(62) Reg. 1.482.2(d)(2)(iii).

excess yielding the royalty rate on infringing sales. Emphasis is placed on the anticipated profit from exploiting the property at the time of infringement. Because there are two principal variables in this calculation, a high degree of judgment and analytical support is required to satisfy the court.

In some cases, a plaintiff may have regard to the operations of a comparable firm by which to measure the damages had it not been for defendant's infringing behaviour. This typically involves finding a business having substantially similar investment characteristics to that of plaintiff.[63]

Applying the analytical approach to establish a reasonable royalty in the calculation of infringement damages requires the application of finance, investment analysis and business valuation theory. Typically, a business enterprise is financed by a combination of debt and equity. The investor must receive a reasonable rate of return on his or her investment in the company on the weighted average cost of capital ("WACC"). The WACC considers the cost of debt weighed by the percentage amount of debt in the company's capital structure as well as the cost of equity and its percentage of total capital. The cost of equity is used to discount earnings or cash flow accruing to the equity investment.[64] It should be noted, however, that in the calculation of damages for lost profits and reasonable royalties, financial expenses are excluded.

---

(63) In a U.S. decision, *TWM Mfg. Co. Inc*. v. *Dura Corp*., 789 F.2d 895 (Fed. Cir. 1986), the royalty was based on an analysis of the infringer's internal business plan prepared immediately prior to the infringement.

(64) Free cash flow (also referred to as "discretionary cash flow") is cash flow from operations minus sustaining capital reinvestment minus changes in non-cash working capital. It represents the cash available to be paid as dividends to shareholders after the retention of capital expenditures necessary to sustain operations at existing levels and is used to discount the cash flow before interest charges, as it considers both the cost and magnitude of debt and equity. If there are anticipated changes to the company's capital structure in the future, a blended WACC will consider how the cost of each component (debt and equity) will vary over time. Accordingly, a blended WACC takes such changes into consideration and calculates one discount rate which, when applied to the cash flows from each time period, yields a present value equal to the present value determined by discounting each discretionary cash flow by its own specific discount rate and then aggregating the present values so calculated.

As outlined earlier, the business enterprise typically has the following asset categories, or components:

- Working Capital: Current assets less current liabilities.[65]
- Other Tangible Assets: Machinery and equipment, plant, land and buildings, office furniture and equipment, vehicles, leasehold improvements, etc.
- Intangible Assets: Goodwill and intellectual property.

The required rate of return is different for each of the foregoing categories of assets. The required rate of return on, say, land and buildings, may well be different from that relating to intangibles. In business valuation theory, there is an approach called the "Dual Capitalization Method", where a normal commercial return is calculated on the fair market value of the average net tangible operating capital employed and compared with the total earning power of the enterprise. The excess of such total earning power over the normal commercial return on the tangibles equals "super profits" or "excess earnings" attributable to the intangibles, most notably goodwill and intellectual property.

In "formula" terms, the "economic value added" by intangible assets is, for a specific time period, calculated as follows:

$$EVA_t = earnings_t - r\,(capital_{t-1})$$

Where:

- EVA = Economic value added.
- r = Cost of capital employed
- $capital_{t-1}$ = Net capital employed at the commencement of period t.
- $earnings_t$ = Actual earnings on the capital during period t.

(65) Cash, accounts receivable, inventories, marketable securities and pre-paid expenses minus current liabilities (trade accounts payable, income taxes and withholding taxes payable, accrued liabilities, current portion of long-term debt, etc.).

Considering the firm's basic categories of assets, WACC (which itself is apportioned between the debt and equity in the firm's capital structure) can be allocated among the asset categories within the business, having regard to the respective degree of risk which each category represents.

In addition to attempting to establish a normal commercial return or normal industry profit margin, the analytical approach does not always consider appropriately the relationship between relative profit margins and the investment which is required in other, complementary assets. The standard "industry profit margin" calculation must also take into account the complementary assets required to commercially exploit the property. The more unique the intellectual property, the higher investment might be required in tangible capital assets (such as manufacturing facilities) than the industry average, or vice versa.

It is important to note the distinction that, in infringement cases, a reasonable royalty permits the licensee to retain a certain amount of profits whereas in the lost profits route, all profits accrue to the owner. This is because in arm's length negotiations, the royalty agreed upon would, of course, provide the licensee with a profit.

An analysis must also be performed comparing a "commodity product" with an "enhanced product", the latter generating super profits from the intellectual property and the former providing a benchmark which can help provide the standard or normal industry product for purposes of measuring the contribution of the enhanced product.[66] In effect, the royalty rate is derived by calculating the excess of the profit margin on the enhanced product over the profit margin on the commodity product (where the commodity product is in the same industry and requires a similar level of investment in complementary assets).

(66) These benchmark profits should ideally consider similar investments in complementary assets required in the commercial exploitation of the intellectual property.

11.4 Copyright Litigation

The calculation of damages involves determining what the owner of the copyright would have earned had the copyright not been infringed. Moreover, if the profits earned by the infringer exceed those lost by the copyright owner, the latter may also be able to include such excess as damages. In effect, the owner of the copyright may recover the lost profits or the unjust profits earned by the infringer (accounting of profits), whichever is greater.

In copyright-infringement litigation as well as trade-mark actions, the owner is entitled to recover the defendant's profits plus additional actual damages suffered as a result of the infringement.

11.4.1 Accounting of Defendant's Profits

A plaintiff in a copyright action (as well as in a trade-mark action) may be awarded the profits arned on the defendant's infringement. This award may be driven by defendant's intent and conduct, whether innocent, deliberate, wilful or fraudulent. An accounting of defendant's profits also enables plaintiff to satisfy the damage requirement that plaintiff prove the amount of its damages with reasonable certainty in such cases where plaintiff's own lost profits or other damages may be too remote or speculative to estimate or project. On the other hand, when profits cannot be reasonably established, a reasonable royalty can be used to quantify the damages.

The three justifications for an accounting of defendant's profits are:

- An accounting represents compensation to plaintiff for sales diverted to defendant as a result of the latter's improper conduct. A defendant's profits are deemed to constitute a fair measure of plaintiff's loss on sales wrongfully diverted to defendant.

- It may be justified on the basis of unjust enrichment or restitution. This theory is premised on the view that defendant has taken plaintiff's property as represented by plaintiff's trade mark and has misused plaintiff's property in making a profit.
- An accounting may be ordered to deter a wilful infringer in the future.[67]

If the damages attributable to the infringement exceed the gain enjoyed by the defendant, the plaintiff might seek additional compensation over and above defendant's actual profits. In such a situation, it may be useful to present a "before-and-after" analysis[68], showing the decline in plaintiff's sales. As the plaintiff may recover lost profits from infringed sales, the sales that defendant made to purchasers who would otherwise have purchased plaintiff's products, but received defendant's products, must be quantified. Expert evidence may have to be adduced with respect to such diversion of sales, perhaps along with consumer- or market-surveys[69]. On the other hand, in defending against an accounting of profits, defendant might allocate its profits between those resulting from the alleged use of plaintiff's trade mark and those realized as a result of advertising and having a better product.

The plaintiff need only prove defendant's sales; however, the defendant must prove (a) the portion of profits attributable to the infringement and (b) the various elements of cost or deduction claimed which offset the gross profits derived from the sales. Accordingly, the defendant must demonstrate that the profits are the result of its own contributions, which critically impacted the customers' buying decisions. Whether the infringer actually generated profits from the product sales tends to be irrelevant.

---

(67) For example, see the decision in the United States, *Maier Brewing Co.* v. *Fleischmann Distilling Corp*., 390 F.2d 117 (9th Cir. 1968), cert denied, 391 US 966 (1968).

(68) Comparison might be made between the profits in the "base period" (i.e., before the infringing acts of defendant) and profits earned afterwards.

(69) While survey evidence are used with increasing frequency in trade-mark litigation in connection with reputation, or distinctiveness, and confusion, many surveys have failed in court (for substantive reasons). See, for example, *Mothercare U.K. Ltd*. v. *Penguin Books Ltd*., [1988] FSR 113 (CA) and *Sun Life Assurance Co.* v. *Sunlife Juice Ltd*. (1988), 22 CPR (3d) 244 (Ont. H.C.J.).

One of the two accounting methods outlined above in Section 7.2.1 may be considered in determining the expenses, or expense components, to be deducted from the gross profits generated by the infringer's sales:

1. The "absorption" or "full cost" method; and
2. The "differential cost" or "incremental cost" method.[70]

As outlined earlier, the absorption cost method applies the infringer's fixed costs against the sales of the infringing product in order to arrive at net profit. Under the differential cost method, only direct expenses actually attributable to the infringing product are deducted, plus any increment in indirect expenses (such as overhead) resulting from the manufacture of the infringing product, in order to arrive at net profit from the infringing product. Expenditures which would have occurred in any event, notwithstanding the infringement, are not deductible.

Often the Canadian courts accept the differential cost method as the appropriate methodology.[71]

As with the quantification of damages for lost profits of the plaintiff outlined above, an accounting of defendant's profits requires the same analytical procedure, segregating variable expenses from fixed expenses and properly quantifying the profits made by defendant on the infringing sales.

---

(70) See, for example, *Teledyne* v. *Lido* (1982) 68 CPR (2d) 204 (FCTD), upholding (1982) 68 CPR (2d) 56 (FCTD).

(71) See, for example, *Diversified Products* v. *Tye-Sil* (1990), 32 CPR (3d) FCTD. In *Reading & Bates* v. *Baker Energy*, (1994), 58 CPR (3d) 359 (FCA), the Court of Appeal effectively upheld the "differential cost method" as opposed to the "absorption cost method".

11.5 Trade-mark Litigation

A trade-mark owner may recover (a) damages suffered either as a result of the violation of the trade-mark rights or (b) the defendant's profits.

In the case of a registered trade mark, there is an additional statutory cause of action relating to the infringement, *viz*., with respect to the depreciation of goodwill[72]. In this respect, the registered owned is permitted to prevent others from using a trade mark in any manner which would depreciate the goodwill attached to the registered mark.[73]

In certain cases, rights to unregistered marks or trade names may be enforced. In such cases, the plaintiff must prove that he or she has established goodwill or reputation in the area in which the alleged infringing party is carrying on business. The goodwill can be limited to a particular local territory or can extend across the country or throughout the world.

For a trade mark to have value, it should be recognizable, profitable and be identified in a positive manner.

In order to obtain damages, a plaintiff must show that it suffered actual injury. Compensable items include plaintiff's lost profits, increased costs or damage to goodwill. Costs of reparative advertising to offset the harmful effects of defendant's unfair competition are a common item of damages in this area.

It is interesting to note that, in the United States, there are five different measures of damages for trade-mark infringement or unfair competition:

---

(72) Section 22 of the *Trade-marks Act*.

(73) See, for example, *Clairol International Corp. et al* v. *Thomas Supply & Equipment Co*. (1968), 55 CPR 176 (Ex.Ct.)

- An award to plaintiff measured by its actual losses, such as increased costs, damage to business reputation and the like.
- An award to plaintiff based on plaintiff's loss of net profits.
- An award to plaintiff measured by defendant's net profits (an accounting of profits), either as a means of measuring plaintiff's actual loss or based on a theory of unjust enrichment.
- An award to plaintiff of punitive damages sanctioned by applicable state law.
- An award to plaintiff and, in certain circumstances to defendant, of reasonable attorney's fees.

12. INCOME TAXES

Because recovery of lost profits is generally taxable income to a plaintiff[74], it would be inappropriate to deduct federal and provincial income taxes from an indicated stream of future profits before awarding the plaintiff with a recovery. As the plaintiff is required to pay tax on what is received from the defendant pursuant to a judgment, tax-effecting the award would result in double taxation. Moreover, the defendant would, in effect, be able to deduct the tax liability.

The characterization of damage receipts as income or capital has been established over the years by the various courts. In *Donald Hart Ltd.* v. *MNR*[75], Cameron J. commented:

> " … in income tax matters the receipt of compensation by way of 'damages' is neutral, without further evidence as to the nature and quality of the award. It is trite law to say that the receipt of an award of 'damages' may or may not result in the receipt being taxable."

(74) Footnote 7, *supra*. For a discussion and analysis relating to the taxation of damage receipts, see Robert McMechan, "The Tax Treatment of Damages", *Tax Aspects of Litigation* (Ed. S. Slutsky), DeBoo (loose-leaf service).

(75) 59 DTC 1134; [1959] CTC 268, (Ex. Ct.).

His Lordship then stated:

> "Interpreting the judgment [for damages] as best I can to ascertain the true nature and quality of the award for the purposes of income tax, I have reached the conclusion that it was made for the purpose of filling the hole in the appellant's profit which it could normally have expected to make, but which had been lost to it by reason of the tortious acts of the defendant therein. Such acts constitute an injury to the appellant's trading."

Referring to the comments of Lord President Clyde of the First Division of the Court of Sessions in *Burmah Steam Co. Ltd.* v. *CIR*[76], his conclusion was that the damages award in the subject case must be treated as a payment in place of loss of trading profits and not a payment for any loss in value of any capital assets."[77]

13. CONCLUSION

The foregoing comments can only highlight the many issues and variables which come into play in quantifying economic damages. The process is, admittedly, highly judgmental on the part of the valuator. As Viscount Simon stated: "Valuation is an art, not an exact science. Mathematical certainty is not demanded, nor indeed is it possible.[78]

(76) 16 TC 67 (a case arising out of a breach of contract).

(77) At DTC p. 1137.

(78) *Gold Coast Selection Trust Ltd.* v. *Humphrey*, [1948] 2 All ER 379 (HL) at 384.