CHAPTER 8

EX ANTE VERSUS EX POST DAMAGES CALCULATIONS

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8.1 INTRODUCTION

Economic damage awards in litigation serve a double purpose: they compensate entities that suffered harm from unlawful acts, and they deter future unlawful acts. The optimal compensation award should put an injured entity in the same economic position it would have been but for the act. The optimal deterrent award, putting aside punitive issues, should be equal to the ill-gotten gain derived from the unlawful act adjusted for the probability that someone will detect the act. In many cases these two amounts are the same. Consider an example whereby I steal $100 from you. If I were immediately apprehended and forced to return your money, then your economic loss would be eliminated and my ill-gotten $100 would have been disgorged. Under that circumstance, the compensation amount equals the deterrent amount. I would have no incentive to steal from you, and you would have no incentive to make it easy to be robbed.
In this example of immediate restitution, one can easily find an optimal award that satisfies both the compensation and deterrent purposes. Ideally, plaintiffs would receive instantaneous compensation for the damages they suffered without delay between the date of injury and the award of damages. If a delay occurs between the time of the unlawful act and the date of restitution, however, the victim’s harm and the wrongdoer’s ill-gotten gain often diverge.

In the real world, a delay always occurs between the date of injury and the date of compensation to the plaintiffs. During the time lag, in addition to the divergence between the damages and ill-gotten gain, information about the value of the unlawful act becomes available, which can change the parties’ perception of the damages.

For example, suppose that you buy a lottery ticket for $1. Then suppose I steal it from you before the lottery winner becomes publicly known. Assume that on the date of the injury all lottery tickets had an equal chance of winning and there was no shortage of tickets available for $1. Time passes and it turns out that the ticket I stole from you is the lottery winner and is now worth $32 million. How much should I pay you to make you whole? Do I owe you the expected value of the return from the ticket, about 12 cents, called the ex ante value before the event? Or do I owe you the fair market value of the ticket I stole, $1? Or, do I owe you the amount that you would have made had you owned the winning ticket, $32 million, its ex post value, or value after the event?

Surely one could argue that if you bought a ticket with an expected value of 12 cents, you were not planning to try to resell it before the winner was announced. If you weren’t keeping the ticket through the lottery, you would have been better off not buying it at all. Therefore, after the fact—ex post—it is a virtual certainty that you would have won the lottery. One could also argue that the $1 price of the ticket is the risk-adjusted value of that ticket and reflects the value of the low probability of a particular ticket winning.

Given these circumstances, and considering that at the time of the theft you could have bought another ticket with equal probability of winning for $1, few would disagree that on the date of the theft, damages did not exceed $1. However, after the lottery ends and your ticket becomes worth $32 million, few juries would think that me giving you back $1 of my $32 million in winnings presents a just resolution, even with the understanding that I had borne the risk of the ticket’s not winning. After all, the case would likely not have gone to trial if the ticket did not win, and therefore, I had borne a small risk of having to pay any restitution at all.

**8.2 EXPECTANCY VERSUS OUTCOME DAMAGES**

*Ex ante* is Latin for “from before.” A pure *ex ante* analysis would use only information available at the time of the unlawful act to calculate the damages incurred at the time of the act. Practitioners base the analysis, therefore, on the expectancy that they would have if they were to analyze the damage caused by the act contemporaneously with the occurrence of the act. Most business activities resemble lotteries: the firm invests time and money up front in an activity with an uncertain outcome. Thus, the damages expert faces the question of whether to compute damages at the time of the investment (or unlawful act) or after the outcome is known.

*Ex post* is Latin for “from after.” A pure *ex post* analysis uses all the information available up to the date of the analysis. Such an outcome-based analysis considers
an optimal award

Ideally, plaintiffs suffered without delay and the date of the unlawful act; ignore subsequent events.

If a delay occurs or if it is known that the unlawful act occurred, users of the unlawful act; ignore subsequent events.

Measurement Date

<table>
<thead>
<tr>
<th>Information</th>
<th>Use information known or knowable on the date of unlawful act; ignore subsequent events.</th>
<th>Use all available information.</th>
</tr>
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<tbody>
<tr>
<td>Discounting</td>
<td>Bring past cash flows (i.e., damages) to present value using an interest rate reflecting either the plaintiff’s cost of capital or the defendant’s debt rate. Discount future cash flows (i.e., damages) to the date of judgment.</td>
<td>Date of analysis.</td>
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| Exhibit 8-1. Differences between Ex Ante and Ex Post Calculations |

<table>
<thead>
<tr>
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<th>Ex Ante</th>
<th>Ex Post</th>
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<td>Date of analysis.</td>
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8.3 APPLICATION OF THE EX ANTE APPROACH IN LITIGATION

(a) The Mechanics of Ex Ante Analyses. To illustrate the mechanics of ex ante analyses, we use the following example. Suppose that on New Year’s Day 2000, the defendant stole the victim’s 1972 AMC Pacer. At that time, the defendant and others could have bought an identical replacement Pacer for $300. Also, suppose that in early 2005 BMW came out with a remake of the original Pacer and subsequently the fair value of a classic AMC Pacer increased to $10,000.
The car’s owner files a lawsuit and trial begins on December 31, 2006. An expert using a pure ex ante approach would calculate damages of $300 and then might calculate interest on the $300 from January 1, 2000 to December 31, 2006. Three hundred dollars is the expected value of the car as dictated by the then-current market price. If the plaintiff had a different expectation for the car’s future value, he could have mitigated any damages by buying another car for $300 after the theft. In fact, if he had thought the car was worth more than its market value of $300, he should have bought additional cars.

Advocates of ex ante analyses point out that using ex ante information properly allocates risk. In the example of the Pacer, the car’s market price on the date of the theft already incorporates the probability that the model will become a collector car. The market price also incorporates the then-higher probability that the car will ultimately be worth only the salvage value of the metal.

The victim, by having his $300 car stolen, was relieved of the risk that it would ultimately become nearly valueless and deprived of the low probability outcome that it would become a collector car. The market value of the car on the theft date reflects the present value of these two possible outcomes and all future costs and benefits associated with ownership of the car. In this way, using ex ante information avoids two significant potential pitfalls of ex post analyses: incorrectly accounting for avoided risk and neglecting avoided costs and benefits.

Proponents of the ex ante approach would argue that awarding $10,000 would improperly reward the plaintiff for the full current value of the car without taking into account that the plaintiff avoided the costs and risks of ownership. Implicitly, the costs and risks of ownership equal $9,700 ( = $10,000 - $300). In other words, an ex ante approach properly measures the value of an asset at the time it was taken, whereas an ex post approach converts a risky investment into a certain outcome.

Even though the ex ante approach solves some particularly sticky problems, it presents additional ones. For example, some firms have private information upon which they value particular assets more or less highly than the market does. In that case, do the firms’ expectations set the amount of damages? Likewise, the plaintiff may have had a once in a lifetime chance to succeed (i.e., there may have been no additional lottery tickets or Pacers available to replace the stolen one). Additionally, the assets can have unique value to a particular firm. Is this unique value the relevant measure of ex ante damages if the firm falls victim to an unlawful act? Proving that an asset has a value that differs from market value can be difficult.

The damages expert can rarely value the act’s consequences with accuracy as of the time of the act because of the difficulty of reconstructing the information known when the act occurred. Sometimes contemporaneous forecasts exist, but these can be imprecise information sources. Forecasts produced for different purposes or by different business units in the same organization can vary. Sometimes individuals associated with a project prepare more aggressive forecasts than those prepared by management, whose bonuses rely on performance compared against those forecasts. Banks and venture capitalists prefer conservative forecasts. Firms and industries often have multiple forecasts with widely divergent results. These problems sometimes drive experts to inappropriately rely on forecasts made at the time of the unlawful act that were not reliable for reasons other than the act.
8.3 APPLICATION OF THE EX ANTE APPROACH IN LITIGATION

An expert then might have to determine the date of theft, the market value of the goods, or the future costs and future risks of the injury. The date of theft is especially critical, because the market value of a good often changes over time. For example, if a company is injured by the theft of trade secrets, the value of the stolen information might decrease over time due to the company's investment in securing future business growth. Therefore, the date of theft is the critical date to consider when applying an ex ante analysis.

(i) Usable Information. An ex ante analysis relies on information known or knowable at the time of the unlawful act. However, one cannot easily identify all knowable information. Anything in the public domain is arguably knowable. Private information held by the opposing parties or third parties is also arguably knowable. For example, patent law accepts that the patent holder’s private information is knowable. Patent law regards all subsequent information as knowable at the time of the hypothetical negotiation that the courts assume to occur contemporaneously with the act. Section 8.6 of this chapter discusses this concept, also known as the book of wisdom.

One way to identify relevant information hypothesizes an analysis that the plaintiff could have performed at the time of injury. The current analysis could include any information that the injured party would have used in performing an analysis. As a practical matter, the expert uses other information from documents dated slightly after the date of the unlawful act on the basis that the information was known or knowable prior to the date that the document memorialized it.

Questions often arise regarding the treatment of subsequent mitigation and investment. If one uses an ex ante analysis, one should not consider the outcome of subsequent actual mitigation. Doing so converts the analysis into an ex post measure of damages. Similarly, in theft of trade secrets or patent infringement cases, the injured party often makes significant investments after the date of the theft. To ensure consistency, a pure ex ante analysis should not consider subsequent information about these actual investments.

(ii) Measurement Date. The measurement date is the date as of which the expert calculates damages. In the case of an unlawful act that occurs on a single date, say the breach of a contract, the measurement date would be the date of the breach. Some cases have multiple unlawful acts occurring on different dates. For example, one could argue that every time a patent infringer makes, uses, offers to sell, or sells an infringing product, the infringer commits a new unlawful act. In this example, an expert applying an ex ante analysis should measure the damages associated with each separate unlawful act on the date that each occurred.

(iii) Probability of Outcome. If no contemporaneous market price exists, or if for some reason the market price does not reflect the idiosyncratic value to the victim, then the expert can forecast future cash flows with contemporaneous information. Such forecasts lend themselves to assigning relative probabilities to different possible outcomes. Similarly, if contemporaneous analyses do exist, one may find multiple analyses, such as best case, worst case, and expected case analyses. A proper analysis should assign probabilities to the various scenarios and weight the resultant net present values of damages proportionately.

(iv) Ex Ante Discounting. In ex ante discounting, an expert applies a risk-adjusted rate of return appropriate for the company or project at issue when discounting the lost cash flows back to the date of damage (or breach). This results in a lump sum equal to the present value of the damages on the date of the injury. The analysis can weight this lump according to the probability of outcome as described in
Section 8.3(a)(iii) of this chapter. The expert subsequently applies prejudgment interest to the damages amount starting from the date of the act and continuing through the restitution date.

As with identifying measurement dates, discounting becomes complicated when the unlawful act is not a one-time event. For example, suppose that two unlawful acts occur on different dates. One could ascertain separate discount rates for each unlawful act and discount the lost cash flows back to the corresponding unlawful act dates. Or, as in the case of the patent infringement discussed in Section 8.3(a)(ii) of this chapter, one should not discount all the cash flows back to the date of first infringement; instead, an expert should discount the separate cash flows (at different discount rates, if necessary) to the date of each lost sale. In summarization, if the unlawful act does not occur on a single date, then the expert should calculate damages associated with each unlawful act and discount each back to the appropriate dates at the appropriate discount rate that depends on the date of each unlawful act.4

(v) Prejudgment Interest. Some courts allow the computation of prejudgment interest and grant that amount to plaintiffs. One should calculate prejudgment interest from the date of damages to the date of recovery. Because of uncertain recovery dates, the courts often use the date of trial as a proxy for the recovery date. Courts have used a variety of interest rates for prejudgment interest. State law and federal statutes often specify a statutory rate. If no statutory rate exists, it is common and logical to use the defendant’s unsecured borrowing rate.5 This makes sense because the defendant owes the damages to the plaintiff; thus, the analysis can regard the damages as funds that the plaintiff has, albeit involuntarily, lent to the defendant. The appropriate risk-adjusted rate for this loan reflects the defendant’s default risk, captured by the defendant’s unsecured borrowing rate for loans of similar duration initiated in the same time period. Even though courts sometimes use the plaintiff’s opportunity cost as a measure of prejudgment interest rates, this would not be an appropriate rate because this would presume that the plaintiff would have assumed risk that it had not indeed assumed in order to earn its opportunity cost.

(b) The Debate

(i) Advantages. The ex ante approach properly accounts for risk. The contemporaneous market price or contemporaneously conducted analyses capture the probability of the entire spectrum of outcomes. Awarding a plaintiff with all the benefits of a successful project without the plaintiff having to assume the project risk would overcompensate the plaintiff. In fact, it would give the plaintiff an incentive to seek harm. Better that I should induce you to deprive me of the right to drill for oil on a site that is likely a dry hole than that I should spend the, say, $1 million to drill for myself. If I can induce you to deprive me of the right to drill, then I can save the $1 million of drilling costs but still collect the value of the oil if, contrary to expectation, it turns out the well would have been a gusher. Additionally, the results of an ex ante analysis are independent of when the trial occurs. Therefore, there is no incentive for a plaintiff to attempt to game the court system by timing a potential lawsuit to maximize damage awards. Ex ante analyses also provide foreseeability of consequences to potential wrongdoers. Another advantage: it does not penalize the plaintiff for either pursuing or not pursuing mitigation.
8.3 APPLICATION OF THE EX ANTE APPROACH IN LITIGATION

(ii) Disadvantages. Ex ante approaches often require a complex reconstruction of the world at the time of the unlawful act, likely impaired by a shortage of contemporaneous information. The expert will often need to construct both an actual and a but-for world, neither of which in fact existed. The artificial actual world reflects the cash flow from the next best alternative given the unlawful act. The but-for world is composed of future cash flows that would have followed but for the act.

Another potential disadvantage of the ex ante approach lies in its use of contemporaneous markets for valuation at the time of the unlawful act. The notion that the market value at any given time reflects the present value of future cash flows assumes efficient markets and perfect information. However, some markets are not efficient, and perfect information rarely exists. In fact, proponents of the ex ante approach agree that private information related to the value at the date of the act provides the best information and therefore the market is not the ultimate arbiter of value.6 Also, even with complete information, market forecasts can be wrong. Even if one had a broad portfolio of stolen cars, the forecast future value of the cars at the time of the theft will not likely closely match the actual future value if the restitution were many years away.

(c) Case Law and References Supporting Ex Ante Analyses. This section cites some cases that reflect court decisions supporting ex ante analyses. For each case we provide excerpts from the published opinions, without editorial comment or modification by the authors.

**INDU CRAFT, INC. v. BANK OF BARODA, 47 F.3D 490, 495-496 (1995)**

**Breach of Contract.** Indu Craft concedes that it proffered no evidence with respect to fixed costs. Decisional law analyzing the role of fixed costs in damages calculations is sparse since most breaches of contract in a business setting do not result in the termination of a business. Plaintiff relies on our decision in [Adams v.] Linblad Travel, 730 F. 2d 89, 93 (2nd cir. 1984), for its view that overhead costs need not be deducted from income to calculate damages. That reliance is misplaced. Linblad determined that fixed costs should not have been included in the damages calculation where plaintiff was an ongoing business whose fixed costs were not affected by the breach. Id.

In the present case, plaintiff’s cessation of business may very well have reduced or eliminated fixed overhead costs. Such savings, resulting from the Bank’s breach, are properly offset from lost profits. Hence, the failure to deduct fixed costs when utilizing lost profits to calculate damages renders such measurement too imprecise for judicial use. However, proof of lost profits is but one method of proving the amount necessary to restore plaintiff to the economic position he would have been in absent the breach. An alternative methodology, extrapolating the value of a business as an ongoing entity from the company’s past earnings, establishes a plaintiff’s damages without suffering the same defect. By resorting to past earnings, this methodology already incorporates the necessary deduction of fixed and variable costs, providing an accurate measurement of plaintiff’s loss as adjusted for savings resulting from the breach.

In fact, when the breach of contract results in the complete destruction of a business enterprise and the business is susceptible to valuation methods, such an
approach provides the best method of calculating damages. Cf. Sharma v. Skaarup Ship Management Corp., 916 F.2d 820, 825 (2d Cir.1990) ("where the breach involves the deprivation of an item with a determinable market value, the market value at the time of the breach is the measure of damages"), cert. denied, 499 U.S. 907, 111 S.Ct. 1109, 113 L.Ed.2d 218 (1991). The methodology of determining a business's earnings and applying an earnings multiplier to fix the value of a business that was completely terminated is one we have approved. See Lamborn v. Dittmer, 873 F.2d 522, 533-34 (2d Cir.1989).

SHARMA v. SKAARUP SHIP MANAGEMENT CORPORATION, 916 F.2d 820, 825-826 (1990)

Breach of Contract. It is a fundamental proposition of contract law, including that of New York, [FN3] that the loss caused by a breach is determined as of the time of breach. See Simon v. Electrospace Corp., 28 N.Y.2d 136, 145, 269 N.E.2d 21, 26, 320 N.Y.S.2d 225, 232 (1971). It is also fundamental that, where the breach involves the deprivation of an item with a determinable market value, the market value at the time of the breach is the measure of damages. See id at 145-46, 269 N.E.2d at 26, 320 N.Y.S.2d at 233.

Numerous cases illustrate these principles. For example, changes in currency exchange rates subsequent to a breach may not be taken into account in measuring damages. See Parker v. Hoppe, 257 N.Y. 333, 178 N.E. 550 (1931). The damage award resulting from a breach of an agreement to purchase securities is the difference between the contract price and the fair market value of the asset at the time of breach, not the difference between the contract price and the value of the shares sometime subsequent to the breach. See Aroneck v. Atkin, 90 A.D.2d 966, 967, 456 N.Y.S.2d 558, 559 (App.Div. 4th Dep't 1982) (rejecting claim that value of securities should be based on performance of business in 1979 and 1980 rather than at time of breach in 1978 when value was $0). Where a purchaser breaches a contract to buy real estate, the measure of damages is the difference between the contract price and the fair market value at the time of breach, even though the seller is able to sell the real estate only later and for less than the value on the date of breach. See Webster v. DiTrapano, 114 A.D.2d 698, 699, 494 N.Y.S.2d 550, 551 (App.Div. 3d Dep't 1985) (contract price $63,500, value at time of breach $57,500, sold eleven months later for $55,000, damage award should have been $6,000). The same measure applies when a seller of a home breaches and the buyer is forced to assume higher interest rates in purchasing another home as a result of the breach. See Lotito v. Mazzeo, 132 A.D.2d 650, 651, 518 N.Y.S.2d 22, 23 (App.Div. 2d Dep't 1987).

Appellants have not led us to any New York authority that even remotely undercut the numerous contrary precedents. They rely heavily upon Greasy Spoon, Inc. v. Jefferson Towers, Inc., 75 N.Y.2d 792, 551 N.E.2d 585, 552 N.Y.S.2d 92 (1990). However, that case involved a lessor's refusal to execute documents enabling the lessee to obtain municipal licenses and permits to operate a sidewalk cafe adjacent to the lessee's restaurant. The licenses and permits did not have a market value and were not replaceable. Lost profits were therefore the best measure of the loss. Other cases that have awarded lost profits, such as McLeod, Inc. v. R.B. Hamilton Moving and Storage, 89 A.D.2d 863, 453 N.Y.S.2d 251 (2d Dep't 1982), are similarly distinguishable. In McLeod, a lessee of a crane failed to return it in
good condition and thus caused it to be unusable for ten weeks. The court awarded the lessor the profits lost for the period in which it could not be leased. Had the crane been permanently rather than temporarily disabled, damages under New York law would have been the value of the crane on the date of breach. Damages for the temporary loss would be the leasing value for that period, which is the same as lost profits.


**Discussion.** In the decisions in which plaintiffs were allowed to recover direct profits they had lost, we have consistently stated that the measure of damages is the difference between the price specified in the contract and what it would have cost the plaintiff to do, or to complete, the work he had undertaken to perform.

**KELLY v. MARX, 428 MASS. 877, 878; 705 N.E. 2D 1114, 1115 (1999)**

**Breach of Contract.** In the decisions in which plaintiffs were allowed to recover direct profits they had lost, we have consistently stated that the measure of damages is the difference between the price specified in the contract and what it would have cost the plaintiff to do, or to complete, the work he had undertaken to perform.


**Breach of Contract.** The Appellate Division erred, however, in holding that damages are to be measured as of the date of trial. It has long been recognized that the theory underlying damages is to make good or replace the loss caused by the breach of contract (see, e.g., Reid v. Terwilliger, 116 N.Y. 530, 532, 22 N.E. 1091). Damages are intended to return the parties to the point at which the breach arose and to place the nonbreaching party in as good a position as it would have been had the contract been performed (see, e.g., Goodstein Corp. v. City of New York, 80 N.Y.2d 366, 373, 590 N.Y.S.2d 425, 604 N.E.2d 1356; Haig, Commercial Litigation in New York State Courts, § 51.3[c], at 31 [4 West's New York Practice Series, 1995]; Restatement [Second] of Contracts § 347, comment a; § 344). Thus, damages for breach of contract are ordinarily ascertained as of the date of the breach (Rodriguez v. Moore-McCormack Lines, 32 N.Y.2d 425, 429, 345 N.Y.S.2d 993, 299 N.E.2d 243; Simon v. Electrospace Corp., 28 N.Y.2d 136, 145, 320 N.Y.S.2d 225, 269 N.E.2d 21; Parker v. Hoppe, 257 N.Y. 333, 341, 178 N.E. 550).

Upon this amount, interest is awarded pursuant to statutory mandate. CPLR 5001(a) provides that interest shall be recovered upon a sum awarded for a breach of contract. The CPLR further mandates that "interest shall be computed from the best ascertainable date the cause of action existed" (CPLR 5001[b]). The award of interest reflects a recognition of the principle that damages are properly ascertained as of the date of the breach and a recognition that there may be a time lag between the accrual of a plaintiff's cause of action and the resulting damage.
sustained and actual payment by defendant (see, Love v. State of New York, 78 N.Y.2d 540, 544-545, 577 N.Y.S.2d 359, 583 N.E.2d 1296). If damages were to be computed as of a date other than the accrual of the cause of action the application of CPLR 5001(b) could lead to anomalous results and windfalls for some plaintiffs. In view of the clear statutory direction that interest must be computed from the date of accrual, we need not deviate from the general rule that damages should be computed as of that same date. To the extent that the Appellate Division relied on Kaiser v. Fishman, 138 A.D.2d 456, 525 N.Y.S.2d 870, supra, which was followed in Attardo v. Petosa, 240 A.D.2d 607, 659 N.Y.S.2d 294, those lower court precedents should not be followed and this action should not be treated differently from other breach of contract situations.

Measuring replacement costs as of the date of trial, moreover, might contradict the general principle that the injured party has a duty to mitigate damages (see, Wilmot v. State of New York, 32 N.Y.2d 164, 168-169, 344 N.Y.S.2d 350, 297 N.E.2d 90; Losei Realty Corp. v. City of New York, 254 N.Y. 41, 47-48, 171 N.E. 899; Haig, Commercial Litigation in New York State Courts, § 39.3(c), at 501 [3 West's New York Practice Series, 1995]; Restatement [Second] of Contracts, § 350). Notably, plaintiff has incurred no expense to repair and has had use of the building during the entire period, nor has it claimed any consequential damages. There would be no incentive to mitigate damages if plaintiff could wait until trial to recover damages measured as of the trial date and, in addition, receive interest from the earlier date of accrual.

8.4 APPLICATION OF THE Ex POST APPROACH IN LITIGATION

(a) The Mechanics of Ex Post Analyses. Ex post computations rely on actual outcomes. The expert looks backward from the time of trial and uses actual information. In an ex post analysis, experts believe that events that have happened after the date of the unlawful act provide information useful in understanding the economic effect of the act and, thus, affect the cost imposed by the act. Consider our example of the stolen AMC Pacer introduced in Section 8.3(a) of this chapter. The market value on the date of theft was $300 even though the current market value is $10,000. Using ex post information, damages would be $10,000 less the avoided costs of ownership between the theft date and today (e.g., costs of maintenance, insurance, and fuel), plus any lost benefits of ownership of the car between the theft date and today (e.g., monetary award in a car show and the cost of replacement transportation services).

The application of ex post information raises several questions:

- If subsequent information is available, how should the expert use it?
- If the analysis uses subsequent information, how does this affect the risk profile of the cash flows and, consequently, how does this affect the appropriate discount rate for discounting those cash flows?
- Does the use of subsequent information affect the selection of the present value date used for the calculation of damages?
- How should the analysis treat subsequent mitigation and investment?

(i) Usable Information. In a pure ex post analysis, all available information has relevance. Because the analysis aims to value the unlawful act as of the date of
8.4 APPLICATION OF THE EX POST APPROACH IN LITIGATION

Restitution, more recent information about the value becomes particularly important in assessing the current value. If only forecasts are available at the time of computation, the analysis uses recent forecasts, not earlier ones, and also adjusts those forecasts for known differences in assumptions.

Additionally, both the outcomes of mitigation efforts and the actual investments made by the victim provide relevant and important information in ex post analyses. For example, if the defendant wrongfully precluded the plaintiff from making a particular investment, an expert should consider what the plaintiff subsequently did or should have done with the funds it could not invest.

(ii) Measurement Date. Experts measure ex post damages as of the date of restitution. Such analyses use the trial date or the analysis date as proxies for the date of restitution. One could also use the expected date of final payment or even the expected date of the resolution of subsequent appeal, depending on the facts of the case and the available information.

(iii) Ex Post Discounting of Cash Flows. The ex post approach discounts future lost cash flows at the risk-adjusted rate of return appropriate for the company or project at issue. Ex post discounting uses past lost cash flows and brings them forward to the restitution date at a rate sufficient to compensate for the defendant’s default risk, but with no other risk considerations. As Section 8.4(a)(ii) of this chapter discussed, the analysis can use various dates as a proxy for the restitution date.

Proponents of the ex post approach argue that their method of discounting has merit because it gives the plaintiff the exact recovery that, if invested at the same risk-adjusted rate of return as that of the firm, will reproduce the future stream of lost cash flows. Proponents also argue that the ex post approach offers the only means of putting plaintiffs in the same position they would have been in but for the unlawful act. In fact, one could argue that this approach is conservative, because it regards the plaintiff’s restitution date as the date of trial when, in fact, restitution often does not occur until much later, particularly if a party appeals the case. In that situation, even though the plaintiff does not receive restitution until years after the initial trial date, the method discounts the amount generated from future cash flows further back than necessary, to the initial trial date.

Critics of the ex post approach argue that by discounting only future damages that occur after the restitution date, experts accept pretrial damages as though they were certain and neglect the risk associated with earning those cash flows. The counter arguments have a legal rather than economic basis. In fact, the defendant precluded the plaintiff from taking the risks associated with earning those particular cash flows. If the plaintiff wanted to and could take those risks, the defendant should not benefit from preventing the plaintiff from taking those risks. One could also argue that once the plaintiff proves liability, the benefit of any uncertainty should go to the plaintiff. Section 8.7 of this chapter discusses the case law supporting this concept, known as the wrongdoer’s rule. Moreover, critics argue, ex post damages reduce the incentive for mitigation—after all, victims could have bought another lottery ticket or another Pacer and restored their economic position as of the time of the unlawful act. If one knows they will collect ex post damages, then they have no incentive to mitigate.

(iv) Prejudgment Interest. Even though ex post analyses do not discount past lost cash flows, the cash flows should accrue prejudgment interest from the date the
plaintiff lost them to the date of recovery (or a proxy for such a date). As with ex ante analyses, courts have used various interest rates for prejudgment interest. State law or federal statutes often specify a statutory rate. If no statutory rate exists, one can use the defendant’s unsecured borrowing rate because the plaintiff is effectively lending the damages amount to the defendant.

(b) The Debate

(i) Advantages. The ex post approach appeals to an individual’s sense of justice. If someone steals your lottery ticket that becomes worth $32 million, then even an unskilled lawyer can persuade jurors to award you $32 million in damages, not $1. While proponents of the ex ante approach argue that an ex ante analysis makes the victim whole as of the date of the unlawful act, proponents of the ex post approach argue that the ex post approach makes the victim whole at any time.

The ex post approach also provides a social deterrent to violating the legal rights of others. Only cases with significant damages will go to trial. For example, no one will bring a case to trial for a stolen lottery ticket that lost. Ex ante damages, therefore, will fail to deter when the plaintiff has little incentive to bring the wrongdoer to justice either because the outcome was small (or negative) or because even when the outcome was large, its expected value was small and the defendants need pay only the expected value. In the real world of potential judicial error and high transaction costs to litigating, this suggests that ex ante damages analysis without compensation for both the chance of court error and transactions costs does not properly deter.

Additionally, the ex post approach ensures that those who commit unlawful acts do not receive windfalls from doing so. Even though the thief of a losing lottery ticket is not brought to justice, his benefit was small—the small probability of winning and keeping the benefits of winning. This poses a powerful argument for using ex post information to calculate unjust enrichment.

(ii) Disadvantages. The ex post approach to measuring damages has disadvantages, one being that damages amounts change over time as new data become available. Because the changing environment influences ex post damages, this approach provides incentive for gaming the courts to maximize or minimize damages. For example, a party can intentionally delay proceedings until the stock market improves, or, as in our example, until classic AMC Pacers are valued at $10,000. Second, as Section 8.4(a)(iii) of this chapter discussed, the ex post approach unquestionably gives plaintiffs the benefit of the proceeds from a risk that they did not bear. Also, this approach risks overcompensation of the plaintiff. In particular, if the plaintiff can choose between an ex post and an ex ante remedy, the plaintiff is overcompensated when the ex post damages exceed ex ante damages. A defendant will argue whichever approach gives the lower damages figure as the correct approach to use.

Frank Fisher puts forth an alternative argument that the ex post method can overly deter wrongdoers because the infringer runs the risk of the downside loss. For example, assume that the infringer has a 50 percent chance of a $200 gain and a 50 percent chance of a $100 loss; his expected gain then equals $50 [= (50% × $200) + (50% × −$100)]. The plaintiff will not choose to sue if the infringer incurs a loss but will sue if the infringer makes a gain. The plaintiff’s expected recovery
equals $100 \[= (50\% \times $200) + (50\% \times 0)\], and the defendant’s expected net loss after disgorgement is $-50 \[= (50\% \times ($200 - $200)) + (50\% \times (-$100 + $0))\].

Thus, the plaintiff may be compensated for risk he did not bear and also the infringer may be hit too hard by both bearing the downside risk and potentially being forced to disgorge the entire upside.

(c) Case Law and References Supporting Ex Post Analyses. Courts have often accepted ex post analyses. This section cites some cases that reflect ex post decisions by the courts. We list each case along with excerpts from the published opinions, without editorial comment or modification.

*FISHMAN v. ESTATE OF WIRTZ and ILLINOIS BASKETBALL, INC. v. ESTATE OF WIRTZ, 807 F.2d 520, 552 (1986)*

**Sherman Act and Illinois Law.** In this connection, defendants first object to the district court’s approach by arguing that damages must be computed as of the date of the injury—in this case, as of July 1972. While this rule may generally govern simple contract damages, it is not necessarily controlling in cases such as the one before us where the injury is continuing or where damages from the injury continue to accrue.... The Bulls did not go out of business but instead continued in business in the hands of CPSC, giving the court, as we have noted, an exceptionally helpful guide to IBI’s damages.

Defendants argue that the going-concern value of the Bulls in July 1972 represents a full recovery for IBI because that going-concern value—that is, what a willing buyer given all available information would have paid for the team in 1972—is by definition a future income stream discounted to present value. The district court’s valuation, on the other hand, is based on actual gain experienced by the Bulls over ten years. (The 1972 going-concern value was affected by a number of ex ante predictions, which were proved either true or false and were reflected in the 1982 value). We do not understand defendants’ objection to using this adjusted value (which is not speculative, cf. Farmington Dowel Products, 421 F.2d 61) because we know of no case that suggests that a value based on expectation of gain is more relevant and reliable than one derived from actual gain. “To correct uncertain prophecies...is not to charge the offender with elements of value nonexistent at the time of his offense. It is to bring out and expose to light the elements of value that were there from the beginning.” Sinclair Refining Co. v. Jenkins Petroleum Process Co., 289 U.S. 689, 698, 53 S.Ct. 736, 739, 77 L.Ed. 1449 (1933) (citations omitted); see also A.C. Becken Co. v. Gemex Corp., 314 F.2d 839, 840 (7th Cir.), cert. denied, 375 U.S. 816, 84 S.Ct. 49, 11 L.Ed.2d 51 (1963) (“a forecast of tomorrow’s weather is always subject to confirmation or modification by tomorrow’s observation”) (emphasis in original); Twentieth Century-Fox Film Corp. v. Brookside Theatre Corp., 194 F.2d 846, 856 (8th Cir.), cert. denied, 343 U.S. 942, 72 S.Ct. 1035, 96 L.Ed. 1348 (1952) (passage of time permits better proof of extent of harm).

Authors’ note: We know of no requirement that damages must always be computed as of the time of the injury or, if not, reduced by some appropriate discount rate to produce a value as of that date.
EX ANTE VERSUS EX POST DAMAGES CALCULATIONS

TWENTIETH CENTURY-FOX FILM CORP. v. BROOKSIDE THEATRE CORP., 194 F.2D 846, 856 (1952)

Clayton Act. Complaint is made that if the action had been tried at the time it first accrued, it would not then have been possible to make proof of the prospective profits that might reasonably have resulted from a conduct of the business during the period of the leasehold destroyed. That would doubtless have been a misfortune to the plaintiff but it does not change the rule as to the measure of damages nor the admissibility of evidence to prove damages. In Restatement of Torts, Volume 4, Chapter 47, section 910, the rule is stated as follows: Time when the requirement of certainty is satisfied. Although at the time of the commission of the tort or at the time of bringing suit there can be no recovery for a particular resulting harm because its extent was then not definitely ascertainable, if, before the time of trial, the situation is so changed that the extent of harm can be proved with the required degree of certainty, recovery is permitted. . . . Thus where there has been interference with a business, events antecedent to the trial may indicate that profits which at the time of the tort were apparently speculative would certainly have been made.

PARK v. EL PASO BOARD OF REALTORS, 764 F.2D 1053, 1068 (1985)

Sherman Act. FN23. In addition, since the exact number of residential resales in El Paso can now be determined for much of the damages period, the plaintiff should incorporate these figures into his model rather than rely on projections as he did previously. The plaintiff should also use actual figures rather than projections for the home resale inflation rate, when calculating the commissions he would have received for his lost sales.

A.C. BECKEN CO. v. GEMEX CORPORATION, 314 F.2D 839, 840 (1963)

Civil Antitrust. 1. In our 1959 opinion, supra at 5, we concluded that the court was led into error in finding as a fact and concluding as a matter of law that plaintiff was not damaged as a result of defendant’s refusal to sell watch bands to it after August 2, 1956. We said “Damage was proved.” We added, “While the evidence now in the record might be sufficient to justify a direction to the district court to compute there from plaintiff’s actual damages sustained and make an assessment accordingly, we feel that the ends of justice would be better served if this cause be remanded for the purpose of considering the evidence already in the record on the subject of plaintiff’s damages, as well as any proper evidence to be offered by defendant, and rebuttal evidence of plaintiff, on subject of plaintiff’s damages, and fixing the proper amount of said damages.” Such proceedings we now direct.

The record before us shows that the district court on remand proceeded along the lines suggested. It heard additional evidence that was devoted to actual occurrences during the time which elapsed while the case was being litigated upon appeal. The court thus put itself in a position where it had the benefit, not only of such projections as might have been reasonably based upon the facts appearing at
the first trial, which were at that time projected by plaintiff to prove further damages, but it also had the superior advantage of evidence of conditions which had in fact occurred while the case had been on appeal. We concur in the conclusion of the district court that, under these circumstances, evidence of actual occurrences and experiences between the first and last hearings may be considered in connection with the estimates of future damage introduced at the first hearing. Thus, a forecast of tomorrow’s weather is always subject to confirmation or modification by tomorrow’s observation. While the evidence at the first hearing was a reliable basis for prognostication and was legally admissible to prove damage, no one can deny that to the extent future events modified its correctness, the entire evidence must be considered together. This the court did in this case and we find no error in that respect.


By supplying the patented racks for displaying the eyeglasses, Nyman used “the patented [invention] in promoting sales of” the nonpatented eyeglasses. Trans-World may be able to prove that Nyman’s infringing use of the displays played an important part in the retail sales of Nyman’s eyeglasses. Furthermore, the extent of the profits from such sales could be relevant in determining the amount of a reasonable royalty. If, for example, sales were increased because of the infringing use of the displays, that fact could affect the amount of royalties a potential licensee would be willing to pay.

We therefore disagree with the district court’s exclusion of evidence of Nyman’s profits from the sale of displayed eyeglasses as not relevant to the determination of a reasonable royalty. In so stating, we express no opinion concerning the weight, if any, to be given such evidence or any conditions that might properly be imposed upon its admission; we indicate only that we do not think the district court should have excluded it.
EX ANTE VERSUS EX POST DAMAGES CALCULATIONS

LAM, INC. v. JOHNS-MANVILLE CORPORATION, 219 USPQ 670, 677 (1983)

Patent Infringement. Lam’s impaired growth was clearly shown in Exhibit PX-6. A high rate of growth is evident from 1974 to 1976. Following years of decreased growth due to J-M’s infringement, Lam has since enjoyed an even greater growth rate. Such post-infringement growth rate is certainly admissible evidence to form a basis for inferring that Lam would have grown at the pre-infringement rate had J-M not infringed. Cf. Sinclair Refining Co. v. Jenkins Petroleum Process Co., 289 U.S. 689, 697-99 (1933).

FROMSON v. WESTERN LITHO PLATE AND SUPPLY CO., 853 F.2d 1568, 1575 (1988)

Patent Infringement. Like all methodologies based on a hypothetical, there will be an element of uncertainty; yet, a court is not at liberty, in conducting the methodology, to abandon entirely the statutory standard of damages “adequate to compensate” for the infringement. The royalty arrived at must be “reasonable” under all the circumstances; i.e., it must be at least a close approximation of what would be “adequate to compensate” for the “use made of the invention by the infringer.” 35 U.S.C. § 284. Requires a court to imagine what warring parties would have agreed to as willing negotiators; flexibility because it speaks of negotiations as of the time infringement began, yet permits and often requires a court to look to events and facts that occurred thereafter and that could not have been known to or predicted by the hypothesized negotiators.

MICHIGAN STATE HIGHWAY COMMISSION v. DAVIS, 38 MICH. APP. 674, 679-680; 197 N.W.2D 71, 73-74 (1972)

Eminent Domain. Since we are dealing here not with the value of the property taken, but rather with the damage done to the residue as a result of the taking, we find no bar to the introduction of evidence bearing on those damages despite the fact that the evidence concerns facts occurring after the date of the taking. The trial court’s ruling excluding such evidence was, therefore, in error.

KILPATRICK v. WILEY, REIN & FIELDING, 37 P.3D 1130, 1145 (2001)

Legal Malpractice. ¶ 72 Defendants contend the trial court erred in allowing the jury to determine plaintiffs’ damages resulting from their loss of ownership in the station, i.e., lost ownership and lost cash distribution, as measured either from the date of defendants’ alleged breaches of fiduciary duty or from the date almost a decade later when the case was ready for trial. We disagree. Defendants rely heavily on Sharma v. Skaarup Ship Management Corp., 916 F.2d 820 (2d Cir.1990), a federal case interpreting New York contract law. The Sharma court stated as follows:

Measuring … damages by the value of the item at the time of the breach is eminently sensible and actually takes expected lost future profits into account.
The value of assets for which there is a market is the discounted value of the stream of future income that the assets are expected to produce. This stream of income, of course, includes expected future profits and/or capital appreciation.

916 F.2d at 826. While such an approach may be appropriate in some cases, "the general objective of tort law [is] to place an injured person in a position as nearly as possible to the position he would have occupied but for the defendant's tort." Acculog, Inc. v. Peterson, 692 F.2d 728, 731 (Utah 1984) (citing State v. Stanley, 506 F.2d 1284 (Alaska 1973)). We believe that the trial court is in the best position to determine what award of damages will make a plaintiff whole, and, thus, we are willing to permit the trial court to use its discretion in determining the date from which damages will be measured. See Anchorage Asphalt Paving Co. v. Lewis, 629 P.2d 65, 68 (Alaska 1981) ("Because the circumstances of individual cases differ drastically, it is impractical to adopt a definite point in time to value damages. It has been found preferable to leave the question to the trial court's discretion.").

In this case, we conclude the trial court's decision was within its permitted range of discretion. By measuring damages at the time of trial, the jury was presented with estimates of the MWT, Ltd., limited partners' lost profits from 1987 to the expected trial date, 1997, as well as the potential fair market value of Channel in 1997. We believe this evidence allowed the jury to come to a reasonable approximation of the damages the MWT, Ltd., limited partners actually incurred as a result of defendants' alleged breaches of fiduciary duty. Accordingly, the trial court's decision was within its permitted discretion.

8.5 HYBRID APPROACH

Experts frequently blend different aspects of both ex ante and ex post analyses in a hybrid approach. A common hybrid between a pure ex ante and a pure ex post analysis uses ex post information but an ex ante measurement date. Experts discount the lost cash flows back to the date of the unlawful act, using a risk-adjusted discount rate based on the actual volatility of the returns in the ex post period.

The hybrid approach reasons that if all parties know what the lost cash flows would have been, no rationale exists for ignoring this information. What actually happened was, after all, one of the plausible outcomes at the time of the breach. This hybrid approach also appeals to some individuals' sense of justice because it uses the real world as a basis for the calculation of damages as opposed to a hypothetical expectation of what was known and knowable at the time of the unlawful act. It eliminates some speculation as to what the cash flows would have been.

Advocates argue that we must discount the actual cash flows to reflect the business risk of earning those cash flows. If the analyses do not discount actual cash flows at a risk-adjusted rate, as occurs in a pure ex ante approach, plaintiffs enjoy a superior economic position relative to where they would have been but for the unlawful act because the analyses ignore business risk.

Consider the situation in which a person has a choice between earning cash flows associated with some uncertainty and holding a free call option on his future cash flows. This individual would invariably choose the call option, because with a call he avoids down-side risk. Likewise, pursuing a pure ex post result in court is like giving the plaintiff a free call on his future lost cash flows, because to obtain those cash flows, but for the unlawful act, the plaintiff would
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have had to suffer through some level of uncertainty; he avoided such uncertainty when the act occurred.\(^8\)

Discounting the ex post cash flows back to the date of the unlawful act at the appropriate risk-adjusted discount rate moves the pure ex post result closer to a position that is at risk parity with what would have happened but for the unlawful act. The appropriate discount rate for the hybrid approach should incorporate information from proxy companies in the market. The risk premium would be the market risk premium multiplied by the beta of the proxy companies for a period that parallels the damages period as closely as feasible. This hybrid analysis should calculate prejudgment interest as in the ex ante analyses—from the date of the unlawful act to the date of restitution. Therefore, an expert would first discount future lost cash flows to the date of the unlawful act and then apply prejudgment interest to both future and past lost cash flows from the date of the illegal act. When statute does not specify a prejudgment interest rate, a reasonable rate would be the defendant’s borrowing rate.

8.6 THE BOOK OF WISDOM

Some hybrid analyses use the concept of the book of wisdom. This concept allows damages experts to apply facts established after the date of damage to their calculations. The Supreme Court first set forth the concept of the book of wisdom in 1933 in the landmark case Sinclair Ref. Co. v. Jenkins Petroleum Co., 289 U.S. 689, 698-99, 53 S. Ct. 736, 77 L. Ed. 1449 (1933). In its decision, the Court stated that

at times the only evidence available may be that supplied by testimony of experts as to the state of the art, the character of the improvement, and the probable increase of efficiency or savings of expense. . . . This will generally be the case if the trial follows quickly after the issue of the patent. But a different situation is presented if years have gone by before the evidence is offered. Experience is then available to correct uncertain prophecy. Here is a book of wisdom that courts may not neglect. We find no rule of law that sets a clasp upon its pages, and forbids us to look within.

Further, the Court opined that facts established after the date of damage do not necessarily change past facts, but rather, they “bring out and expose to Light the elements of value that were there from the beginning.”

Use of the book of wisdom often persuades courts because one could perceive it as a call for less speculation. In Transit RR. Comm’rs., 197 N.Y. 81, 108, 90 N.E. 456, 465 (1909), the courts ruled that “[c]ertainty is better than conjecture, and injuries actually inflicted a better guide than opinion of experts as to the market values just before and after.” Likewise, in Fishman, et al. v. Estate of Arthur M. Wirtz, et al., 807 F.2d 520 (7th Cir. 1986), the Seventh Circuit allowed a damages calculation that applied the book of wisdom, stating that “we know of no case that suggests that a value based on expectation of gain is more relevant and reliable than one derived from actual gain.”

In cases involving a measurement of value, the courts have used the book of wisdom to allow an analysis or grant an award based on a lost outcome (i.e., ex post) approach, as opposed to a lost expectancy (i.e., ex ante) approach. For example, the Seventh Circuit sided with a book of wisdom approach in Fishman. The Fifth Circuit also supported a valuation analysis based on the book of wisdom.
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in Park v. El Paso Board of Realtors, 764 F.2d 1053 (1985), where it opined that, even
though a hypothetical sale at the date of the unlawful act can present a useful
alogy for purposes of valuation, a lost going concern value offers a more appro-
measure of loss when the plaintiff has been driven out of business. The
court based its support of a lost going concern calculation because nothing in prin-
ciple prevents a plaintiff with a destroyed business from recovering future profits.

In addition to cases of valuation, courts often apply the book of wisdom in
patent infringement cases when deciding the details of the hypothetical negotia-
tion that would have occurred between two parties. In Fromson v. Western Litho
Plate & Supply Co., 853 F.2d 1586, 1575-76 (Fed. Cir. 1988), the Federal Circuit,
citing Sinclair, indicated that one could look at postinfringement events in calcu-
lating reasonable royalty damages. In this case, the plaintiff wanted to use the
infringer’s actual profits as evidence of the value of the patent. The court found
that excluding the evidence was erroneous and explained that

the methodology [of simulating a hypothetical negotiation] encompasses fantasy and
flexibility; fantasy because it requires a court to imagine what warring parties would
have agreed to as willing negotiators; flexibility because it speaks of negotiations
as of the time infringement began, yet permits and often requires a court to look to
events and facts that occurred thereafter and that could not have been known to or
predicted by the hypothesized negotiators.

Likewise, in Jamesbury Corporation v. United States, 207 USPQ 131 (US ClCt
1980), the opining judge found that because he was “aided by the benefit of
hindsight, it [seemed] unnecessary to create such a fictional [analysis]” as a
hypothetical negotiation might have used.

Courts have, however, on occasion limited the applicability of the book of wis-
1986), the defendant argued that the plaintiff erred in its damages calculation
because it based damages on a gross profit value that the defendant’s management
had projected in an internal memorandum prior to the defendant’s infringement
of the patent. The defendant believed that the plaintiff should have considered
actual gross profit values, not projected values. The Federal Circuit rejected the
defendant’s argument and considered its preinfringement memorandum as pro-
bative on the reasonable royalty issue. Thus, the court focused on the time the
infringement began. Specifically, the court ruled that the book of wisdom did not
apply in this case, and evidence of what happened after that time did not mitigate
damages. Additionally, in Odetics Inc. v. Storage Technology Corp. (CA FC) 51
USPQ2d 1225 (1999), the U.S. Court of Appeals for the Federal Circuit found that
the federal district court had not abused its discretion by disallowing a book of
wisdom approach and thus excluding evidence of two licenses granted by a patent
infringement plaintiff from consideration in calculating a reasonable royalty rate
for award of damages. They reasoned that, because the hypothetical negotiation
required in reasonable royalty analysis obliges courts to envision the terms of a
licensing agreement reached between patentee and infringer when infringement
began, the court could not in this case consider the license agreements in question,
which were negotiated four and five years after the date of infringement.

Robert Goldscheider reconciles the contrary positions of the courts by saying
that “one may employ the book of wisdom only by looking prospectively from the
date of the hypothetical negotiation, not retrospectively.” He illustrates this concept with the example of an invention that had no noninfringing alternative at the date of the hypothetical negotiation but had one—a design-around—five years later. In this case, the expert cannot use the book of wisdom to say that this alternative technology was potentially available at the time of the hypothetical negotiation just because it was achieved five years later. However, this example shows that it took five years to design around the infringed patent. The expert should use this information in calculating damages. Additionally, Goldscheider writes that “reference should be made by expert witnesses to the book of wisdom whether or not such actual subsequent events were non-foreseeable aberrations. Anything that can contribute to the realism of the exercise should be given serious consideration.”

In summation, substantial case law indicates that experts can, and indeed should, incorporate all information, even information relating to events that occurred after the date of damage or after the date of hypothetical negotiation in the damages analysis. One could argue that, if the goal is to ascertain the amount of damages that would return the plaintiff to the same position it would have been in but for the unlawful act, the expert should use all available information in reconstructing the but-for world so that the resulting award reflects all the events that have contributed to or limited the damages suffered by the plaintiff.

8.7 THE WRONGDOER’S RULE

Because precedent has accepted both ex post and ex ante analyses, how do the courts decide which approach to use? Both experts and courts often overlook the concept of the wrongdoer’s rule.

When the court has found liability, the wrongdoer’s rule gives the benefit of the doubt to plaintiffs, leaving defendants with the burden of dispelling any uncertainty. In Story Parchment Co. v. Paterson Parchment Paper Co. et al., 282 U.S. 555, 51 S.Ct. 248 (1931), the Supreme Court ruled that “whatever ... uncertainty there may be in [a] mode of estimating damages, it is an uncertainty caused by the defendant’s own wrong act; and justice and sound public policy alike require that he should bear the risk of the uncertainty thus produced.” The courts can apply this ruling to find in favor of a plaintiff’s damages calculation.

Although its application is certainly not limited to ex post and ex ante cases, the wrongdoer’s rule can provide a guideline for courts dealing with these two alternative analyses when deciding which damages calculation to award. Unless proved otherwise by the wrongdoer, courts will not withhold a reasonable damages estimate from the plaintiff. In Fishman, et al. v. Estate of Arthur M. Wirtz, et al., 807 F. 2d 520 (7th Cir. 1986), the Seventh Circuit granted a damages award based on an ex post analysis, opining that defendants’ objections of speculation were not sufficient as the “defendants ... should not benefit because their wrongdoing made it difficult to establish the exact amount of injury.” Additionally, the court held that an ex post analysis was a reasonable estimate of damages as “we know of no case that suggests that a value based on expectation of gain is more relevant and reliable than one derived from actual gain.” It also cited Sinclair Refining Co. v. Jenkins Petroleum Process Co., 289 U.S. 689, 53 S.Ct. 736 (1933) in saying that “[t]o correct uncertain prophecies ... is not to charge the offender with elements of value non-existent at the time of his offense. It is to bring out and expose to light
The elements of value that were there from the beginning.” As applied by the Court of Appeals of Maryland in *M & R Contractors & Builders, Inc. v. Michael et al.*, 215 Md. 340, 138 A.2d 350 (1958), the court can use the wrongdoer’s rule in awarding ex ante damages calculation. In this case, the court found nothing wrong in a damages calculation based on a profit expectation that was measured as of the signing of the subsequently broken contract. The court advised the district court, “[W]here a defendant’s wrong has caused the difficulty of proving damage, he cannot complain of the resulting uncertainty.” Citing from *Corbin on Contracts* (1951), the court further expresses “doubts [as to whether the amount of lost profits] will generally be resolved in favor of the party who has certainly been injured and against the party committing the breach.”

Courts have not frequently applied the wrongdoer’s rule to cases in which ex ante and ex post have been points of contention, but courts have tested and upheld its applicability on many occasions. In each of these occasions, the defendants complained that the plaintiffs’ measures of damages were speculative, but the courts allowed these calculations because, as stated in *Story Parchment*, the uncertainty involved was “caused by the defendant’s own wrong act.” Following *Story Parchment*, the Supreme Court again applied the wrongdoer’s rule in granting damages based on historical performance to the plaintiff in *Bigelow, et al. v. RKO Radio Pictures, Inc.*, et al., 327 U.S. 251; 66 S. Ct. 574 (1946). The wrongdoer’s rule as established by *Story Parchment* allowed for the granting of damages “which are definitely attributable to the wrong and only uncertain in respect of their amount.” However, in *Bigelow*, the Supreme Court went one step further than it had in *Story Parchment* by saying that even though a jury cannot “render a verdict based on speculation or guesswork … the wrongdoer may not object to the plaintiff’s reasonable estimate of the cause of injury and of its amount, supported by the evidence, because [it is] not based on more accurate data which the wrongdoer’s misconduct has rendered unavailable” (emphasis added). Few courts, however, have applied the wrongdoer’s rule as recognized in *Bigelow* to establish a causal relation between the harmful act and economic damages.

The Second Circuit has also used the wrongdoer’s rule to award plaintiff damages when damage has resulted from the defendant’s harmful act. See *Contemporary Mission, Inc. v. Famous Music Corp.*, 557 F.2d 918 (1977) and *Indu Craft, Inc. v. Bank of Baroda*, 47 F.3d 490 (1995). As the Second Circuit stated in its *Contemporary Mission* decision, “[U]nder the long-standing New York rule, when the existence of damage is certain, and the only uncertainty is as to its amount, the plaintiff will not be denied a recovery of substantial damages.” State courts have also supported the wrongdoer’s rule. The Supreme Court of Michigan has ruled that the risk of uncertainty should be thrown upon the wrongdoer instead of upon the injured party. (*Allison v. Chandler*, 11 Mich. 542, 550-556 (1863)) Similarly, in *Tull v. Gundersons, Inc.*, 709 F.2d 940, 945 (1985), the Supreme Court of Colorado granted damages to the plaintiff “although the amounts were not mathematically certain, [because] had we disallowed recovery … for injuries that had been proven in fact, we would have rewarded the injured party.”

In cases of ex ante and ex post, the courts can use the wrongdoer’s rule in siding with the plaintiff’s measure of damages. Because both approaches yield arguably reasonable results, defendants carry the burden of showing why the plaintiff’s analysis is not appropriate for a specific case. This is especially applicable when
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the defendant's own acts have precluded an accurate understanding of the but-for world (e.g., cases of antitrust and breach of contract).

8.8 CONCLUSION

The time lag between the date of the unlawful act and the date of restitution will always foster debate as to the merits of using ex ante and ex post analyses in calculating damages. No single approach will be appropriate for all situations; the decision to apply any particular approach will depend on case specifics. For any method described in this chapter, one can concoct a situation in which the result of applying that method would not satisfy a common perception of fairness.

NOTES

1. Here we ignore the state's vigorish in selling tickets. Because of the state's take from the proceeds before disbursing to the winners, the expected value of all legal lotteries of which we are aware is negative.


3. In the case of continuing breach, such as patent infringement, the limiting case occurs when each period approaches zero length. (Recall the limit theorems and analysis of first-year calculus.) In that case, under suitable assumptions of continuity of damages paths, the *ex ante* analysis and the *ex post* analysis will give the same result. The periods are so short that the before-the-fact analysis of each period becomes identical with the after-the-fact analysis of the preceding period.

4. Obviously, this approach merits a measure of common sense. At some point, this exercise becomes so complex that it becomes unfeasible.

5. The first showing of this result appears to be in Patell et al. (see n. 2). See also Chapter 9 in this book.


8. As stated earlier in the chapter, we assume that courts do not error. If the courts will assume that there is some chance of error, then they should divide the result by the probability of being found guilty.


LIST OF CASES

A.C. Becken Co. v. Gemex Corporation, 314 F.2d 839, 840 (1963)
Bigelow v. RKO Radio Pictures, Inc., 327 U.S. 251; 66 S. Ct. 574 (1946)
Contemporary Mission, Inc. v. Famous Music Corporation, 557 F.2d 918 (1977)
Fromson v. Western Litho Plate and Supply Co., 853 F.2d 1568, 1575 (1988)
1. The state’s take from all legal lotteries is the result of restitution ex post analyses in all situations; the specifics. For any specific limit-case occurs.


3. If the courts will divide the result by the rise in the Arena of Technology (1996).


