Calculating lost profits; Practice aid 06-4

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American Institute of Certified Public Accountants. Business Valuation and Forensic and Litigation Services Section

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Business Valuation and Forensic & Litigation Services Section

Calculating Lost Profits
Notice to Readers

This Practice Aid is designed as educational and reference material for AICPA members and others who provide consulting services as defined in the Statement on Standards for Consulting Services (SSCS) issued by the AICPA. It does not establish standards or preferred practices. However, since the services described in this series of practice aids are consulting services, the standards in the SSCS should be applied as appropriate.

Members of the 2005–2006 AICPA Forensic & Litigation Services Committees provided information and guidance for this Practice Aid and advised the authors and staff.
Calculating Lost Profits

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CHAPTER 1: INTRODUCTION

LIMITATIONS OF THIS PRACTICE AID

1. The purpose of this Practice Aid is to provide nonauthoritative guidance to practitioners engaged to prepare an analysis of lost profits. Often, these services are in a litigated environment. Although this publication discusses legal concepts and requirements, it is not intended to provide legal advice. Practitioners are advised to discuss legal concepts and requirements with counsel.

SCOPE OF THIS PRACTICE AID

2. This Practice Aid discusses roles the practitioner may be asked to take in a lost profits damage analysis, the professional standards applicable to those services, and the basic principles and guidelines for preparing lost profit damages analyses. As each engagement is unique, these principles and guidelines must be evaluated and adapted to the facts and circumstances that affect the engagement.
CHAPTER 2: OVERVIEW OF THE LOST PROFITS ANALYSIS

3. Lost profits are typically claimed as an element of economic damages in a litigation setting. Damage analyses are prepared to provide an estimate of the detriment suffered by the plaintiff as a result of a wrongful act of the defendant. In order to prove damages the plaintiff must show that:

- The wrongful act of the defendant caused a loss; and
- The amount of the loss can be estimated with reasonable certainty.

In addition, for contract claims, the plaintiff must show that the loss incurred was foreseeable at the time the contract was entered into by the parties.

4. Only lost “net” profits are allowed as damages. Lost “net” profit is computed, in general, by estimating the gross revenue that would have been earned but for the wrongful act reduced by avoided costs. Avoided costs are defined as those incremental costs that were not incurred because of the loss of the revenue. After the net lost profits are determined, any actual profits earned are deducted to compute the damages.

5. Lost profits can only be claimed over the loss period. This period normally begins no earlier than the date of the wrongful act; however, the date the loss begins may be subsequent to that date. The end of the loss period can vary. In a contract breach, the loss will be computed through the earlier of the return of the business to customary levels or the end of the term of the contract (which, in some cases, may include renewal periods). In other situations, such as tort claims or franchise contracts, the term may extend to the return to customary levels or the end of a “foreseeable” period.
CHAPTER 3: OVERVIEW OF APPLICABLE PROFESSIONAL STANDARDS

6. Computing lost profits is a consulting engagement and the standards for consulting engagements are contained in Statement on Standards for Consulting Services (SSCS) No. 1, Consulting Services, Definitions and Standards (AICPA, Professional Standards, vol. 2, CS sec. 100), issued by the American Institute of Certified Public Accountants (AICPA). Additionally, the practitioner must also comply with the general standards of the accounting profession contained in the AICPA Code of Professional Conduct, as well as the relevant standards established by state boards of accountancy or other licensing agencies and other professional organizations to which the practitioner may belong.

7. The following sections provide an overview of the professional standards established by the AICPA. For a more detailed discussion of these requirements, the practitioner should refer to AICPA Consulting Services Special Report 03-1, Litigation Services and Applicable Professional Standards.

THE AICPA CODE OF PROFESSIONAL CONDUCT

8. The AICPA Code of Professional Conduct and Bylaws (the Code) apply to all services rendered by AICPA members. The following sections of the Code have particular applicability to the practice of litigation services:

- Rule 102, Integrity and Objectivity (AICPA, Professional Standards, vol. 2, ET sec. 102.01)
- Rule 201, General Standards (AICPA, Professional Standards, vol. 2, ET sec. 201.01)
- Rule 301, Confidential Client Information (AICPA, Professional Standards, vol. 2, ET sec. 301.01)
- Rule 302, Contingent Fees (AICPA, Professional Standards, vol. 2, ET sec. 302.01)

In some instances, the following also apply:

- Rule 101, Independence (AICPA, Professional Standards, vol. 2, ET sec. 101.01)
- Rule 203, Accounting Principles (AICPA, Professional Standards, vol. 2, ET sec. 203.01)
An understanding and appreciation of the importance of all rules contained in the Code will assist the practitioner in their efforts to provide opinions that are relevant and reliable, and will assist the trier of fact.

**Rule 101, Independence**

9. Independence, as set forth in the Code, is ordinarily not required when performing litigation services. However, the practitioner should be aware that the lack of independence may be used to question the practitioner’s credibility and objectivity when providing expert testimony. Additionally, the practitioner should be aware that the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley) may preclude the practitioner from providing expert services to attest clients.

**Rule 102, Integrity and Objectivity**

10. Integrity is adherence to an ethical code and freedom from corrupting influences and motives. In litigation, it is the attorney’s role to act as the advocate of the client. The role of the practitioner, however, is to apply their specialized knowledge, skills, training, and experience in order to present conclusions and judgments to the trier of fact on complex or unfamiliar concepts. To fulfill this role, the practitioner must be objective.

**Rule 201, General Standards**

11. The general standards apply to litigation services as well as all other services rendered by practitioners to their clients. The general standards cover professional competence, due professional care, and sufficient relevant data, as follows:

   a. *Professional Competence.* Practitioners should undertake only those engagements that they can reasonably expect to complete with professional competence. Professional competence includes factors such as being able to identify client needs, applying an analytical approach, and being knowledgeable about the technical areas involved in the engagement. To comply with this requirement, the practitioner may need to consider that the assistance of other individuals with the requisite experience and education may be required. The practitioner also should consider that, as a result of legal requirements noted later in this Practice Aid, the reliability and relevance of expected testimony is likely to be subjected to careful judicial scrutiny.

   b. *Due Professional Care.* The practitioner should exercise due professional care in the performance of any professional service. In complying with this requirement, the practitioner should be diligent and analyze critically all of the work performed and ensure that the work conforms to any other applicable professional standards.
Chapter 3: Overview of Applicable Professional Standards

c. **Planning and Supervision.** The practitioner should adequately plan and supervise the performance of the professional services performed. As the facts and circumstances of each litigation engagement are unique, planning is an essential part of the engagement. Due to the dynamic process of litigation, however, plans may often change and engagement plans are typically not in written form. As with any professional service, the supervision of work performed by others is necessary to ensure quality performance of the services. The extent of the supervision will vary depending on the nature of the engagement. The practitioner should remember that, ultimately, the work is his or her responsibility and, as the expert, is subject to scrutiny in the litigation process.

d. **Sufficient Relevant Data.** The practitioner needs to be able to support conclusions and opinions with sufficient relevant data. The practitioner is responsible for gathering enough sufficient relevant data to provide a reasonable basis for the opinions offered. It is up to the individual practitioner to decide the type, nature, and quantity of data that will satisfy this requirement. In litigation, the data can be in the form of legal evidence, assumptions, or other documentation.

**Rule 202, Compliance With Standards**

12. The practitioner is required to comply with standards promulgated by the AICPA Council. For practitioners performing litigation services, that body is the Consulting Services Executive Committee, which issued SSCS No. 1, *Consulting Services: Definitions and Standards.*

**Rule 203, Accounting Principles**

13. To the extent that generally accepted accounting principles (GAAP) may apply to the litigation services engagement, the practitioner shall apply the appropriate accounting principles.

**Rule 301, Confidential Client Information**

14. The practitioner may not disclose confidential client information without the client’s consent. Practitioners should be aware that, in a litigated environment, they may be confronted with the risk of breaching client confidentiality. Practitioners often gain knowledge and experience from other clients that are nonparties to the litigation, which may be considered in reaching conclusions or opinions. If the practitioner utilizes specific information obtained from other clients, the practitioner may be required to disclose the source of that information. The practitioner, in the absence of obtaining consent from the other client, may be precluded from utilizing this information.
THE CONSULTING STANDARDS

15. In addition to the general standards, the Consulting Standards, as noted above, apply to consulting engagements and require compliance under Rule 202, Compliance With Standards. These standards include serving the client’s interest, establishing an understanding with the client, and communicating with the client.

Rule 102, Client Interest

16. This rule of the Code states:

In the performance of any professional service, a member shall maintain objectivity and integrity, shall be free of conflicts of interest, and shall not knowingly misrepresent facts or subordinate his or her judgment to others.

Practitioners should be cognizant, however, that they do not act as advocates for the client. The practitioner should be an advocate for his or her opinions and conclusions, and must maintain objectivity in his or her analysis.

Understanding With the Client

17. The practitioner should establish an understanding with the client, who may be the attorney for one of the litigants, about the responsibilities of the parties and the nature of the services to be performed. This understanding may be either written or oral. Practitioners should refer to the AICPA Business Valuation and Forensic and Litigation Services Section Practice Aid 04-1, Engagement Letters for Litigation Services, for a more detailed discussion.

Communication With the Client

18. The practitioner is required to inform the client of (a) any conflicts of interest that may occur under Rule 102 and the Interpretations issued pursuant to Rule 102, (b) any significant reservations the practitioner has concerning the scope or benefits of the engagement, and (c) significant engagement findings or events. In litigation engagements, these communications are usually oral. Many practitioners’ engagement letters include language that states that the practitioner’s communications with counsel will satisfy the requirement to communicate with the client.

OTHER GUIDANCE

19. In addition to the professional standards, and the Practice Aids and Special Reports identified in other sections, the following nonauthoritative AICPA Practice Aids may be useful to the practitioner in preparing lost profits analyses:
• Practice Aid No. 06-1, Calculating Intellectual Property Infringement Damages
• Practice Aid No. 02-1, Business Valuation in Bankruptcy
• Practice Aid No. 98-2, Calculation of Damages from Personal Injury, Wrongful Death, and Employment Discrimination
• Practice Aid No. 98-1, Providing Bankruptcy and Reorganization Services
• Practice Aid No. 96-3, Communicating in Litigation Services: Reports, a Non-Authoritative Guide
• Practice Aid No. 93-4, Providing Litigation Services
CHAPTER 4: OVERVIEW OF CASE LAW AND EVIDENTIARY STANDARDS

20. In addition to professional standards, the practitioner must also be aware of and comply with applicable case law and evidentiary standards regarding the admissibility of expert testimony. The law and standards will be dependent upon the venue of the litigation; state law and standards may be different from federal standards and law, and state law and standards will vary from jurisdiction to jurisdiction. The practitioner should discuss the case law and evidentiary standards applicable to the engagement with counsel to ensure compliance with these requirements.

STATE LAW

21. Although laws and evidentiary standards vary from state to state, they generally provide for common requirements for expert testimony to be admitted as evidence. Generally, experts will be required to establish the following:

- They have the requisite training, skill, knowledge, and/or experience in their field.
- They must show the facts, data, assumptions, and other documentation that were relied upon in reaching their conclusions and opinions.
- They must show the basis upon which they reached their conclusions and opinions, including the methodology used.

FEDERAL LAW

22. The U.S. Supreme Court has ruled that the federal judge is to serve as gatekeeper for the admissibility of expert scientific testimony and may look to several factors to ensure that the testimony is reliable and relevant to the matter at issue. See Daubert v. Merrill Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). This ruling was extended to include testimony of nonscientific experts, including financial experts in Kumho Tire Company, Ltd. v. Carmichael, 526 U.S. 137 (1999).

23. The Federal Rules of Evidence provide the basis upon which a federal judge may (a) determine whether expert testimony meets the minimum standards, and (b) identify the bases of opinion testimony by experts. The rules relevant to practitioners providing litigation services include the following:
Rule 702, “Testimony by Experts” states:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Rule 703, “Bases of Opinion Testimony by Experts” states:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted. The proponent of the opinion or inference shall not disclose facts or data that are otherwise inadmissible to the jury unless the court determines that their probative value in assisting the jury to evaluate the expert’s opinion outweighs their prejudicial effect.

CHAPTER 5: ROLE OF THE PRACTITIONER IN LOST PROFITS ANALYSIS

24. The practitioner may be engaged to provide services as a consultant, an expert witness, or in some other capacity, including acting as a trier of fact, special master, court-appointed expert, referee, arbitrator, or mediator. The practitioner should establish a specific understanding of the services to be performed at the inception of the engagement. This understanding, whether expressed in writing or orally, should be documented. The services the practitioner may be asked to perform may be varied in scope and breadth. Refer to Appendix C, “Typical Litigation Services.”

PRACTITIONER AS EXPERT

25. The practitioner engaged as an expert is expected to provide testimony before a trier of fact regarding their conclusions and opinions. This testimony may be presented at a deposition, in court, or in arbitration. Generally, in these settings, all work of the expert is discoverable. The practitioner is normally required to provide all records relating to the engagement, including correspondence, notes of meetings, reports, analyses, research, and documents or data that were reviewed or relied upon in reaching their conclusions or opinions. The practitioner may also be required to provide any drafts of reports, analyses, and other documents prepared. The practitioner should seek the advice of counsel regarding the discoverability of such information at the inception of the engagement and should remain cognizant of the requirements during the course of the engagement.

26. The practitioner may also be asked to participate in and/or provide reports or analyses for mediations and other forms of settlement negotiations. Most states have rules regarding the later discoverability of the discussions, reports, and/or analyses provided in these forums. Practitioners should seek advice of counsel on how to maintain the confidentiality of this information.

PRACTITIONER AS CONSULTANT

27. Alternatively, the practitioner may be engaged as a consultant. As a consultant, the practitioner is usually not expected to provide expert testimony. The functions that may be performed include identification of issues, assisting in developing strategies, fact-finding, analysis, locating other experts, and assisting and managing discovery.
28. The practitioner should keep in mind, however, that should the role be subsequently expanded to include expert testimony, all work performed, even work performed as a consultant, may be discoverable.

**Practitioner in Other Roles**

29. When engaged to perform other services, the practitioner should establish a clear understanding of the expected services. In a number of instances, the services more closely resemble expert witness services, such as an engagement to serve as a court-appointed expert or special master. In other services, the role may be more like that of a consultant.
CHAPTER 6: QUALIFICATIONS AND SKILLS

30. Whether the practitioner is engaged as an expert or as a consultant, the practitioner needs to have the qualifications and skills necessary to comply with the requirement that only those engagements that can reasonably be expected to be completed are undertaken, as required by Rule 201 of the Code of Professional Conduct. Additionally, practitioners need to be cognizant of the fact that their qualifications may be challenged in litigation.

31. Practitioners often possess a variety of education, training, experience, and skills that are relevant to a lost-profits analysis. Although there is no formula for the proper mix of qualifications and skills, the practitioner should, however, consider a number of factors in deciding whether their qualifications are sufficient to perform lost-profits analyses.

TRAINING AND EXPERIENCE

32. As a CPA, the practitioner typically has an educational background in accounting and financial matters, and some experience in providing other kinds of accounting services to clients. The practitioner may need to consider whether he or she possesses or can acquire additional training and experience that may be applicable to the lost-profits analysis. The training and/or experience may include knowledge of the following:
   - Specialized industries or fields of study
   - Different clients and industries
   - Accounting and tax rules and regulations
   - Financial analysis and modeling
   - Application of statistical methods and concepts such as regression and trend analysis

OTHER SKILLS

33. The practitioner may also need to consider whether he or she possesses or can acquire other skills that may be relevant to the lost-profits analysis. Those skills could include the ability to:
   - Present complex information or concepts, either orally or in writing, in a clear and concise manner.
   - Reconstruct financial data.
   - Quantify the impact of events.
• Obtain, review, and appropriately apply industry or other statistical information.
• Understand and apply applicable legal and evidentiary standards.

**Use of Other Experts**

34. In a number of instances, the practitioner may need to consider whether the use of other individuals with applicable training and experience is necessary. The practitioner should, however, discuss the need for the use of other experts with counsel. Examples of other individuals who may be necessary to appropriately determine lost profits include those with specialized knowledge or experience in the following:

• Specific scientific fields such as engineering or other technological areas
• Specialized industries such as construction, oil and gas, or banking
• Market data such as market share or market demand
CHAPTER 7: LOST PROFITS CLAIMS

DAMAGES AND DAMAGE TYPES

In general, damages are “... the sum of money which a person wronged is entitled to receive from the wrongdoer as compensation for the wrong.”

35. Damages can be broken down into three main types: actual or compensatory, nominal, and punitive.

- **Actual or Compensatory Damages** are those damages awarded to a Plaintiff to compensate for a proven injury or loss. They are the compensation to repay actual losses incurred.

- **Nominal Damages** represent a sum awarded if a legal injury has been suffered but there is no substantial loss or injury to be compensated.

- **Punitive Damages** are those damages awarded in addition to actual damages if the defendant acted with recklessness, malice, or deceit. Punitive damages, which are intended to punish and thereby deter blameworthy conduct, are generally not recoverable in a breach of contract action.

36. The focus of this Practice Aid is on actual or compensatory damages related to a claim for lost profits. Lost profits cases usually involve either a breach of contract or a tort.

CONTRACT DISPUTES

37. Contract disputes arise if one party does not fulfill the obligations of the contract (a breach). Lost profits may be recoverable if damages can be demonstrated to be caused by the breach.

TORT

38. Tort cases arise as a result of a civil wrong including personal injury, property damage, unfair competition, unlawful misappropriation, negligence, or fraud. If damages can be proven with reasonable certainty and shown to have been caused by the wrongful act, damages for lost profits may be recoverable.

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CHAPTER 8: LEGAL PRINCIPLES OF PROVING DAMAGES

CAUSATION

39. Damages for lost profits are recoverable only if the breach or wrongful act by the defendant was the proximate cause of the loss. Proximate cause is an act from which an injury results as a natural, direct, uninterrupted consequence and without which the injury would not have occurred. In other words, there must be a link between the wrongful act and the resulting damages.

Transaction Causation

40. Transaction causation relies on the concept that “but for” the breach or wrongful act, no damages would have been incurred. Transaction causation alone is inadequate to demonstrate proximate cause, however. In addition to transaction causation, the plaintiff must demonstrate “loss causation.”

Loss Causation

41. The plaintiff must prove that their loss is related to the breach or wrongful act. The fact that the defendant breached a contract or performed a wrongful act does not alone support damages.

42. For example, in Universal Commodities, Inc. v. Weed, 449 S.W. 2d 106 (Tex. Civ. App. 1969), plaintiff leased a seafood processing plant from defendant, who was obligated to supply the seafood to be processed. Defendant breached the contract, but the court denied lost profits damages because plaintiff had been unable to secure financing for the business and would not have had sufficient capital to operate and make a profit even if defendant had performed as required by the contract.

43. The practitioner should also be aware of the distinction between the legal requirement of causation and the proof of the amount of damages. In order to recover damages for lost profits, it is necessary to show that the damages were proximately caused by the wrongful conduct of the defendant.

44. The fact of damage is required to be proven with reasonable certainty. The fact of damage relates to whether the plaintiff can prove that the acts of the defendant caused damage to the plaintiff. Once the fact of damage has been established, the amount of damage can be calculated.

45. Although the defendant’s acts need not be the sole cause of the plaintiff’s lost profits, they must be a significant or material factor in the cause of that loss.
46. Although other factors may also be partially responsible for the plaintiff's lost profits, in some cases, it may not be practicable, or possible, to eliminate the effect of all other possible causes of loss. However, it is necessary to show that these other factors have been considered and, to the extent possible, have been taken into account.

47. Sufficient evidence must be presented to the trier of fact to allow a determination to be made as to what portion of the plaintiff's damages may be properly assigned to the defendant.

48. As discussed in a later section, the practitioner may want to present calculations in a manner that shows how the various factors causing the plaintiff's losses contributed to that loss.

**FORESEEABILITY (CONTRACT DAMAGES ONLY)**

49. Damages for lost profits are recoverable only if they are reasonably foreseeable by the breaching party at the time of contracting. The reasonably foreseeable rule dates back to the famous English decision *Hadley v. Baxendale* (156 Eng. Rep. 145, 151 (Ex. 1854)) and is still law today.

50. In *Hadley v. Baxendale*, the Court set out that damages are recoverable only if they were reasonably foreseeable by both parties at the time of the contract and that they arose naturally from the breach.

51. For example, in *Hampton v. Federal Express Corp.*, 917 F. 2d 1119, 1125-26 (8th Cir. 1990), the Court found that damages resulting from the failure to deliver blood samples of cancer patients in need of bone marrow transplants were not recoverable if the Defendant had no knowledge of the package’s contents and therefore could not reasonably foresee any injury to patients.

**CERTAINTY**

52. Damages for lost profits are recoverable only if the plaintiff can prove that the damages related to lost profits are reasonable and that they have been calculated using reliable factors without undue speculation. The practitioner should discuss with counsel the applicable federal or state laws regarding the required degree of certainty.

53. The calculation of lost profits does not require precision, and an estimate of damages can be made. However, the loss cannot be based on speculation. Lost profits that are speculative, such as those calculated using unreasonable growth rates, are not recoverable.

54. For example, in *DSC Communications v. Next Level Communications*, 107 F.3d 322, 329 (5th Cir. 1997), the Court upheld recovery of lost profits because plaintiff's damage expert presented a damage model that included an assumption of future market share based on data ob-
tained from respected sources in the telecommunications market and upon a showing that the plaintiff's history of strong performance in the field was indicative of likely success.

55. However, in *Holt Atherton Ind., Inc. v. Heine*, 835 S.W.2d 80 (Tex. 1992), defendants sold a bulldozer to plaintiffs that defendants subsequently refused to repair because they did not recognize the warranty. The court held lost profits were not recoverable because the plaintiffs failed to show they had enough work to fully utilize the bulldozer.
CHAPTER 9: LOSS PERIOD

56. The length of the loss period can vary depending on the underlying cause of action and upon the underlying facts of the case.

Breach of Contract

57. In a breach of contract action, the loss period will generally be projected over the remaining term of the contract. Although this may sound straightforward, the issue can become complicated if the length of the contract is one of the issues in dispute. In the case of long-term contracts, a number of courts have been reluctant to award damages for the full length of the loss period (i.e., the full term of the contract) because of uncertainty. Additionally, although a franchise is a contract, the contract is usually for an unspecified period of time, and the courts may therefore be reluctant to award damages for extended periods of time. The longer the term of the damage projection, typically, the greater the level of uncertainty, which decreases the likelihood that the certainty and foreseeability tests can be met.

58. Although damages typically do not extend beyond the term of the contract, an issue could conceivably arise if an extension of the contract term was being negotiated when the breach occurred. Arguably, had the breach not occurred, the contract would have been extended for an additional term. Conversely, if the parties have had a history of renewals and such an extension was provided for in the contract, a loss period which considers contract renewals may be warranted.

Torts

59. In the case of tort actions, the loss period is usually from the date of the wrongful act until the date operations return to “normal.” The date that operations return to “normal” is the period during which the business either restores itself to an equivalent position prior to the dispute or to a position that takes into consideration the changes that would have otherwise occurred during the damage period absent the tort. In a number of situations, as a result of the wrongful act, the plaintiff’s operations are permanently affected and may never return to “normal.”
CHAPTER 10: CALCULATING LOST REVENUES

60. The first element in the determination of lost profits is the calculation of lost revenues.

61. This section discusses the calculation of lost revenues in terms of the normal methods used in lost profit calculations. The normal methods of calculating lost revenues include:

- The “Before and After” method
- The “Yardstick” (or “Benchmark”) method
- An approach based on the terms of the underlying contract
- An accounting of the defendant’s profits
- Others

62. In certain specialized damages areas, different methods may be used that are based on applicable statutes or case law. Although this Practice Aid is not intended to address these other areas, a brief overview of some of the issues involved in those areas is contained in Chapter 17, “Alternative Damage Measures Other Than Lost Profits.”

63. Additionally, other factors may need to be considered when the subject of the lost profits calculation is a newly established business or a business lacking an historical track record of revenue generation. A brief discussion of the issues specific to such businesses is also included in Chapter 17.

THE “BEFORE AND AFTER” METHOD

64. This method compares the plaintiff’s performance before the event or action causing lost profits to the plaintiff’s performance after that event or action. The underlying theory is that, “but for” the defendant’s action, the plaintiff would have experienced the same level of revenues and profits after the event or action as the plaintiff did before that event or action.

65. The plaintiff’s prior experience, which can be determined from the plaintiff’s historical accounting records, is generally subject to dispute less than other components of the calculation. In addition, the plaintiff’s experience subsequent to the defendant’s acts can be determined, at least up through a date near to the date at which the calculation is made, from the plaintiff’s historical accounting records.

66. The practitioner, however, should consider other factors that could have affected the plaintiff’s level of revenues and demonstrate how those factors have been taken into consideration.
THE "YARDSTICK" (OR "BENCHMARK") METHOD

67. This method utilizes a "yardstick" that is used to estimate what the revenues and profits of the affected business would have been. Examples of possible yardsticks that might be employed in the calculation include the following:

- The performance of the plaintiff at a different location
- The plaintiff's actual experience versus past budgeted results
- The actual experience of a similar business unaffected by the defendant's actions
- Comparable experience and projections by nonparties
- Industry averages
- Pre-litigation projections

68. When using this method, the practitioner will need to demonstrate that the plaintiff’s operations are sufficiently comparable to the "yardstick" used. This could require that the yardstick company be in the same geographic area and/or operates under similar conditions.

69. In addition, as with the "before and after" method, the practitioner may need to consider other factors that could have caused the plaintiff's performance to differ from the yardstick selected and show how those factors have been taken into consideration.

CALCULATION BASED ON THE TERMS OF THE CONTRACT

70. In some instances, the lost profits calculation is made in relation to a specific contract. In that instance, many of the elements of the calculation may be set forth in the contract document, i.e., the number of units to be sold, unit prices, etc. In this situation, a model might be developed that calculates the revenues anticipated under the terms of the contract.

AN ACCOUNTING OF DEFENDANT'S PROFITS

71. In certain situations, such as cases involving unfair competition or the misappropriation of trade secrets, an accounting of the profits realized by the defendant may be used as the measure of the plaintiff's lost profits. In obtaining an accounting of the defendant's profits, the plaintiff is only entitled to receive value of the unjust enrichment of the defendant through disgorgement, i.e., the defendant is required to surrender profits attributable to the misappropriation or bad act to the plaintiff. To the extent that profits are attributable to other factors, the defendant would not have to disgorge those amounts. In some jurisdictions (and for some causes of action), the plaintiff only has the burden to identify the revenues associated with the misappropriation,
Chapter 10: Calculating Lost Revenues

whereas the defendant has the burden to prove both the costs incurred in generating the revenues as well as apportioning the profits between the misappropriation and other profit generators.

Other

72. Other approaches may also be appropriate depending on the particular facts and circumstances involved in the matter for which lost profits are being calculated. Although other models may be developed using information specific to the particular case, the general principles underlying the methods discussed above should be considered in the development of those models.

Past and Future Lost Revenues

73. In many cases, the plaintiff’s lost revenues may include both past and future lost revenues. If there are future losses, i.e., the loss period extends beyond the date of trial, the practitioner will need to estimate both those future revenues that will be realized by the plaintiff and those revenues that the plaintiff would have realized but for the wrongful act of the defendant. Only the incremental difference between the “but for” revenue and the projected actual revenue should be included as lost revenues.

74. Although the attestation standards for financial forecasts and projections do not apply to litigation services, practitioners may want to refer to the guidance codified in AT Section 301, Financial Forecasts and Projections (AICPA, Professional Standards, vol. 1, AT sec. 301).

Do the Calculated Lost Revenues Make Sense?

75. Whatever method is used to calculate the amount of lost revenues, once the practitioner has performed the initial calculations, it is important to consider the reasonableness of the computed lost revenues.

76. For instance, the practitioner should consider factors such as:

• Capacity considerations
• Market share
• Industry knowledge and working with industry experts
CHAPTER 11: COST ESTIMATION

77. After establishing the amount of lost revenues, the practitioner will need to calculate the costs associated with the generation of those revenues.

Concept of Avoided Costs

78. The costs that should be deducted from lost revenues in order to calculate lost profits are generally referred to as avoided costs. Avoided costs are those costs that would have been incurred in connection with the generation of the lost revenues but were not incurred.

79. To the extent that the plaintiff has incurred costs that would not have been incurred in the absence of the defendant’s misconduct, those costs should be offset against the avoided costs.

Analysis of the Plaintiff’s Cost Structure

80. In order to determine the amount of avoided costs, the practitioner needs to understand the plaintiff’s cost structure.

81. Depending on the nature and/or size of the plaintiff, the degree of detail contained in the plaintiff’s accounting records regarding the costs associated with particular products or services may vary considerably.

82. Also, depending on the nature of the dispute, different degrees of specificity may be required in estimating the extent of avoided costs.

83. The practitioner should analyze the plaintiff’s cost structure in order to determine the relationship between individual cost elements/categories and sales.

84. The performance of this analysis also will normally require the practitioner to understand the cost environment in which the plaintiff operates in order to identify the cost drivers or factors that affect particular costs.

Fixed Versus Variable Costs

85. The starting point for the cost structure analysis may be the determination of fixed versus variable costs. Unless the loss period at issue is very short, however, it is unlikely that all costs will be purely fixed or variable.
86. Some costs, such as cost of goods sold, may vary directly with sales. These costs, however, may not be entirely avoided. For instance, costs may have been incurred to produce product prior to the wrongful act in anticipation of sales that did not occur as a result of the wrongful act. In addition, some manufacturing costs may be fixed in nature rather than variable.

87. Other costs, such as rent, are normally considered to be fixed. The practitioner should, however, consider whether the fixed or variable nature of such costs might change dependent on factors such as the length of the loss period or the level of production and/or sales. The results of this analysis may be the identification of certain costs that are semivariable or fixed only within a limited period of time.

88. The nature of costs relevant to the analysis of avoided costs, and the terms used to refer to them, may include all, or some, of the following:

- **Cost of goods sold.** The costs generally captured under this heading would often be expected to vary directly with revenues, but there may be some distortion of that relationship depending on the inventory costing method used by the plaintiff.

- **Direct costs.** The costs specific to a particular product or activity, these costs are usually, but not always, variable.

- **Overhead costs.** The costs not specific to a particular product or activity; overhead costs may, however, be apportioned to specific products or activities as allocated or absorbed overhead. Some of these costs, such as marketing and advertising costs, may be avoided as a result of the lost revenue.

- **Indirect costs.** The costs that are not specific to a particular product or activity.

- **Short-term and long-term costs.** The costs that may be fixed or variable depending on the duration of the loss period.

89. As indicated above, the duration of the loss period can affect the extent to which costs are avoided. If the loss period is relatively short, it may not be possible to avoid certain costs. If the loss period is longer in duration, some costs that in the short-term would be fixed may be variable or semivariable.

**Nonstatistical Methods of Cost Estimation**

90. Various nonstatistical methods can be employed by the practitioner to estimate costs. Which methods or combination of methods is appropriate will depend on the particular situation with which the practitioner is dealing. These methods include the following:

- **Account analysis.** This method involves the review of the detailed general ledger or chart of accounts. The practitioner uses judgment to assess whether costs are fixed or variable. The
subjective nature of this process can have drawbacks as some costs are semivariable, in that they are neither entirely fixed nor entirely variable.

- **Direct assignment.** This method involves the identification by the practitioner of the direct costs of an activity. These costs would include direct labor and materials.

- **Accounting estimates.** This method estimates the cost of a product using the plaintiff's experience with similar or related products. Standard costs might also be available for some elements of the product cost.

- **Cost accounting allocations.** This method apportions costs that are not specific to a particular product or activity based on some objective measure, including revenue, labor hours, or units sold.

- **Ratio analysis.** This method is used to allocate the cost of a particular product or activity in proportion to some other measure such as labor hours or units of production.

- **Graphical approaches.** This method involves the plotting of the cost of a particular product or activity over time or against some other measure.

- **Industrial engineering.** This method may be used if an industrial engineering study may be available that addresses the costs associated with the various processes involved in the production of the product at issue.

91. The practitioner is typically attempting to quantify the amount of incremental costs associated with the lost revenues. Caution is required when using these methods, as many of them tend to understate incremental costs. Although not always possible, the practitioner may wish to consider using historical data as a means of validating the reasonableness of results achieved.

**Statistical Methods of Cost Estimation**

92. In addition to the nonstatistical methods discussed above, various statistical methods of estimating costs may be employed by the practitioner. These statistical methods include:

- **Regression analysis.** This is a technique for identifying relationships between a cost and one or more variables, such as sales or production levels.

- **Survey data.** In some situations, the practitioner may use a survey to measure a factor.

- **Attribute sampling.** This is used to estimate a characteristic of a population.

93. Although the scope of this Practice Aid is insufficient to include a full discussion of these statistical methods, the practitioner should be aware that specific rules and considerations apply
Calculating Lost Profits

to the use of these techniques. Familiarity with those rules is essential if the practitioner is to rely on the results of these techniques.

**DO THE CALCULATED AVOIDED COSTS MAKE SENSE?**

94. As with the calculation of the lost revenues, the practitioner will need to consider the results of the calculation of avoided costs to evaluate whether the results appear reasonable.
CHAPTER 12: PREJUDGMENT INTEREST ON PAST LOSSES

95. Generally, prejudgment interest is used to compensate the plaintiff for the interest not earned on lost profits from the date of the incident to the date of trial. Awarding prejudgment interest converts time-of-incident damages into time-of-judgment damages, allowing the plaintiff to be fully compensated for the loss of use of those funds.

96. Courts have considerable discretion in the calculation of prejudgment interest, including the interest rates to be applied and the manner of computing interest. If the law does not prescribe the rate or form of interest for past losses, practitioners will normally apply a reasonable interest rate to bring those losses forward. Rates that might be used for the calculation of prejudgment interest include but are not limited to the prime rate, the defendant’s after-tax borrowing rate, the plaintiff’s cost of capital, a Treasury bill or bond rate, a state statutory rate, or a stated rate pursuant to a contract between the parties.

97. Many states calculate prejudgment interest utilizing a statutory rate that is set annually. State law may exclude prejudgment interest, limit prejudgment interest to a statutory rate, or exclude compounding. The practitioner should check the appropriate state’s annotated statutes, which contain legislative history and current case law. For federal cases, the prejudgment interest rate will depend on the statute under which the plaintiff brings suit. Generally, federal courts have the discretion to grant prejudgment interest and to choose a reasonable interest rate and method of computation.

98. In some jurisdictions, all past and future damages are discounted to their present value as of the date of the wrongful act, and then that amount may or may not be subject to prejudgment interest to the trial date. In other jurisdictions, damages projected to be incurred subsequent to the trial date are discounted to the trial date, and damages related to prior periods may or may not be subject to prejudgment interest.

99. Some states allow prejudgment interest to be compounded while other states only allow simple interest to be computed. As mentioned above, federal courts have the discretion to choose between simple interest and compound interest.

100. An Ex Ante (date of breach) or Ex Post (trial date) approach may be used to apply prejudgment interest. It is suggested that the decision be made as to which method is to be used after counsel has advised the practitioner regarding applicable statutory and case law. Damages may be computed under both approaches and presented as alternatives to be decided upon by the trier-of-fact. (See paragraphs 106 to 109 for a discussion of these approaches.)
101. Claims may be liquidated or unliquidated. A claim is liquidated if its specific dollar amount is known. A claim is unliquidated if the exact amount owed has not been determined. Unliquidated damages are identified only after a judgment is rendered by the court setting the amount of damages and, most often, occur in tort actions. In many states, prejudgment interest on otherwise unliquidated damages do not begin at the time of the incident, but can begin from the date of a settlement offer or a particular court filing.

102. Prejudgment interest accrues between the time of the incident and the time of trial or judgment, whereas post-judgment interest accrues only after judgment is entered.
CHAPTER 13: FINANCIAL DISCOUNTING OF FUTURE LOST PROFITS TO PRESENT VALUE

103. When calculating lost profits, there is often both an historical component and a future component. The historical component would include lost profits that have been incurred from the date of breach to the date of trial and the future component would include lost profits that will be incurred from the date of trial to some date in the future.

THE TIME VALUE OF MONEY

104. It is necessary to state the future component of lost profits in terms of their present value. The formula for present value is:

\[
\sum_{i=1}^{n} \frac{LFP_i}{(1 + DR)^i}
\]

LFP = Lost Future Profits calculated in each period
DR = Discount Rate
n = year or period

105. Because the damage award is intended to make the plaintiff whole, failing to discount future lost profits would result in an award that would produce a windfall to the plaintiff, as the award can be invested with a return earned on that investment. The challenge for the practitioner is to determine an appropriate discount rate that takes into consideration the following factors:

- **The time value of money.** Most individuals would prefer to have a dollar to spend today rather than having to wait until some point in the future. For those individuals, if money payable in the future is suddenly available today, there may be a willingness to accept a discount in order to eliminate the waiting period. Assuming an annual interest rate of 3 percent, $10,000 today would be worth $11,592.74 in five years. Conversely, five years from now, $10,000 would only be worth $8,626.09 today. As such, an investor would rather receive funds today instead of having to wait until some time in the future.

- **Risk.** For most investments, there is a tradeoff between risk and reward. The greater the level of risk inherent in a projected stream of cash flows, the greater the discount rate required to compensate an investor for accepting that risk. Conversely, the risk averse investor would generally be willing to accept a lesser return in exchange for a reduced level of risk.
Calculating Lost Profits

**EX POST METHODOLOGY VERSUS EX ANTE METHODOLOGY**

106. In discounting future lost profits to their present value, the expert must select between the ex ante methodology and the ex post methodology, or apply a hybrid of the two approaches. Appendix D, “Ex Ante Versus Ex Post,” contains a chart that illustrates the ex ante and the ex post methodologies.

107. The ex ante methodology assumes that all lost profits are future lost profits and must be discounted back to the date of the breach. There is no historical component. In an ex ante calculation, the practitioner relies only on information that was known or knowable as of the date of the breach. Once the present value of all future lost profits is determined, the resulting damage amount is brought forward to the date of the award by applying prejudgment interest (if permitted).

108. The ex post methodology, conversely, relies on all information that is known or knowable up to the date of trial in order to calculate lost profits. There is no discounting of the historical lost profits that were incurred between the date of the breach and the date of trial. If permitted, prejudgment interest would be applied to the historical lost profits based on the timing of the cash flows determined by the practitioner. Future lost profits consist of those profits that extend beyond the date of trial, and would be discounted back to the date of trial.

109. Some practitioners have chosen to apply a hybrid methodology, in which all lost profits are discounted back to the date of the breach, but the practitioner would rely on all information that was available up to the date of trial. To the extent that the discount rate is greater than the prejudgment interest rate, the ex ante methodology would result in a lower damage amount than the ex post methodology. In those instances in which the discount rate is equal to or less than the prejudgment interest rate, the ex ante methodology would typically produce an equivalent or higher damage amount, respectively.

**METHODS OF DETERMINING DISCOUNT RATE**

110. In business valuation engagements, discount rates are typically based on either the subject company’s weighted average cost of capital (WACC) or its cost of equity. It is not uncommon for a company’s cost of equity to exceed 20 percent, especially among smaller, less mature companies. Although some practitioners have argued the appropriateness of applying equity rates of return to lost profit calculations, the courts have generally been reluctant to accept discount rates based on a company’s cost of equity.

111. The courts have provided minimal guidance as to what constitutes an appropriate discount rate. Among those few jurisdictions that have published written opinions, some courts have ruled that the discount rate used to calculate lost profits should incorporate both an inflationary com-
ponent and a risk component while others have required the use of a risk-free rate. Additionally, there are conflicting opinions on this point within a jurisdiction. Further complicating this issue, for those courts accepting an adjustment to the discount rate for risk, there is considerable disagreement as to how the risk component should be addressed. The diversity of the rulings are reflected in the following opinions:

- **American List Corp v. U.S. News & World Report, Inc.,** 75 N.Y.2d 38, 550 N.Y.2d 590 (1989). In a contract dispute, defendant’s proposed discount rate of 18 percent was accepted by the trial court, reflecting risk of nonperformance. The plaintiff argued that a 10-percent discount rate was appropriate. On appeal, the 18-percent rate was rejected and remanded, with the court finding that it “does violence to the settled principles of the doctrine of anticipatory breach because it would require the nonrepudiating party to prove ability to perform in the future.”

- **Burger King Corp. v. Barnes,** 1 F. Supp.2d 1367 (S.D. Fla 1998). In a breach of franchise agreement case, plaintiff was entitled to lost royalty fees to be earned over a 210-month period. The projected lost royalties were discounted to present value using a discount rate of 9 percent. No basis for the 9-percent rate was provided in the opinion.

- **Diesel Machinery, Inc. v. B.R. Lee Industries, Inc.,** 418 F.3d 820 (Fed. 8th Cir., 2005). In a dealership dispute, defendant’s expert argued for a 17.5-percent discount rate, which accounted for risks inherent in plaintiff’s projected cash flow. The district court struck the portion of the expert’s testimony addressing the discount rate, indicating that South Dakota law required the use of a risk-free rate. Although the U.S. Court of Appeals acknowledged that the proposed discount rate employed a sound methodology, it nonetheless ruled that the district court did not abuse its discretion.

- **Energy Capital v. United States,** 302 F.3d 1314 (Fed. Cir. 2002). A risk-free rate of 5.9 percent was initially rejected and remanded as not reflecting the inherent risks in the cash flows. The court accepted plaintiff’s rate of 10.5 percent, based on an 8.5-percent benchmark yield for mortgage real estate investment trusts, plus an additional 2-percent adjustment for debt and profit. Defendant’s suggested discount rate of 25 percent was not accepted by the court.

- **Fairmont Supply Company v. Hooks Industrial, Inc.,** No. 01-03-01129-CV (Tex. App. 1 Dist [Houston] 2005). In a breach of contract case, the trial court awarded plaintiffs lost profit damages. The defendant’s expert testified that a discount rate of 33 percent was appropriate and plaintiff’s expert testified that a discount rate of 36 percent was appropriate. The court accepted this range in calculating damages.

- **Knox v. Taylor,** 992 S.W.2d 40, 50 (Tex. App.—Houston [14th Dist.] 1999). In a libel claim, lost profits were awarded in connection with the termination of the agent’s contracts. The court accepted a risk-free discount rate of 7 percent.
Calculating Lost Profits

• *Kool, Mann, Coffee & Co. v. Coffey*, 300 F.3d 340 (3d Cir. 2002). In a dispute over the sale of a marina and houseboat rental business, plaintiff claimed that the defendant failed to pay an agreed-upon purchase price, whereas the defendant argued misrepresentations on the part of the plaintiff. The court determined that the remaining balance of the purchase price would be calculated, in part, by growing adjusted cash flows by 7.5% per year for 15 years and discounting these cash flows to their present value using a discount rate of 18.5 percent. The 18.5-percent rate was offered by the plaintiff and was not disputed by the defendant.

• *Olson v. Nieman’s*, 579 N.W.2d 299 (Iowa 1998). In a misappropriation of trade secrets case involving lost royalty income, the court accepted a discount rate of 19.4 percent, equal to an equity rate of return of 14.4 percent and a product specific risk premium of 5 percent.

• *Schonfeld v. Hilliard*, 62 F. Supp 2d 1062, 1074 n. 6 (S.D.N.Y. 1999). In a dispute over the funding of a closely held cable television station, included in lost asset value was an agreement to pay programming rights equal to $100,000 per year for 10 years. The court accepted a discount rate of 8 percent, approximately equal to the 10-year Treasury bond rate.

112. As can be seen above, many of these cases reflect an acceptance of a proposed discount rate by the court resulting from the lack of any challenge on the record. Given the disparate treatment reflected in these cases, the practitioner is advised to develop a supportable discount rate, based on sound methodology, and apply the specific facts and circumstances of the engagement to the analysis. It is further suggested that the practitioner consult with counsel to understand the relevant case law in his or her jurisdiction.

113. In that regard, the practitioner may wish to consider the approaches typically used to develop a discount rate. These include the cost of equity, the cost of debt, and the WACC approaches.

**Cost of Equity**

114. The company’s cost of equity is typically calculated using either a build-up approach or the capital asset pricing model (CAPM) approach.

**Build-Up Approach**

115. The *build-up approach* calculates a company’s cost of equity, considering various components that are added to the risk-free rate. This approach is expressed using the following formula:

\[
K_E = r_f + ERP + SP + IRP + CSP
\]
Chapter 13: Financial Discounting of Future Lost Profits to Present Value

• Risk-free rate \( (r_f) \)

• Systematic risk\(^3\)
  o Equity risk premium (ERP)
  o Size premium (SP)
  o Industry risk premium/discount (IRP)

• Unsystematic company specific risk premium/discount (CSP)

116. In addition to the size premium and industry risk premium, the practitioner may wish to consider other adjustments, such as international risk premia/discounts, where appropriate.

117. Although the first four factors can often be quantified using market data, the unsystematic company specific risk premium/discount is based on specific factors affecting the subject company. In evaluating the appropriateness of this premium/discount, the practitioner may wish to consider such factors as (a) the company’s financial condition; (b) its quality and depth of management; (c) the company’s products, customers and suppliers; (d) the competitive environment in which the company operates; and (e) other factors impacting the company’s projected cash flows. Given the lack of empirical market data available to quantify a company specific adjustment, the practitioner should develop support and be prepared to justify any such premium/discount.

**Capital Asset Pricing Model (CAPM) Approach**

118. Like the build-up approach, the CAPM approach estimates a company’s cost of equity by adding systematic and unsystematic elements of risk to the risk-free rate. This approach is reflected in the following formula:

\[
K_E = r_f + \beta(ERP) + SP + CSP
\]

• Risk-free rate \( (r_f) \)

• Systematic risk:
  o Beta (\( \beta \))
  o Equity risk premium (ERP)
  o Size premium (SP)

• Unsystematic company specific risk premium/discount (CSP)

\(^2\) U.S. Treasury rates are generally the most common measure of the risk-free rate, as these securities are considered free from default risk. Many experts use the Treasury bond rate equivalent to the future recovery period as the yardstick measure for purposes of discounting (i.e., 5-year Treasury Bond for a 5-year projection versus 10-year Treasury Bond for a 10-year projection).

\(^3\) Ibbotson Associates provides many systematic risk data sources in its *Stocks, Bonds, Bills, and Inflation (SBBI) Yearbook*, produced annually, and its *Cost of Capital Quarterly*. 

39
119. Unlike the build-up approach, CAPM captures much of the systematic risk inherent in the company through the use of beta (β). Beta is a measure of the volatility of a security relative to that of the broader equity markets.

Other Methods to Calculate the Cost of Equity

120. Although they are outside the scope of this practice aid, other methodologies have been developed to estimate a company’s cost of equity. These methods include the arbitrage pricing theory and the Fama-French three factor model.

Cost of Debt

121. Some practitioners have used a variation of the subject company’s borrowing rate as the basis for determining an appropriate discount rate to apply to projected lost profits. These include but are not limited to:

- Average cost of the subject company’s total interest-bearing debt
- Marginal cost of the subject company’s long-term debt
- Market bank yields for comparable companies

Weighted Average Cost of Capital

122. WACC is the cost of incremental capital to a firm considering its blended cost of debt, equity and other capital. WACC is calculated using the following formula:

\[
\text{WACC} = \left( K_d \times (1-t) \times \frac{D}{TIC} \right) + \left( K_e + \frac{E}{TIC} \right)
\]

\(K_d\) = Cost of Interest Bearing Debt
\(K_e\) = Cost of Equity
\(t\) = tax rate
\(D\) = Interest Bearing Debt
\(E\) = Common Equity
\(TIC\) = Total Invested Capital (Total Debt + Total Equity)

123. As reflected above, the WACC is calculated by multiplying a company’s after-tax cost of debt by its debt as a percentage of total invested capital and adding the resulting number to its cost of equity multiplied by its equity as a percentage of its total invested capital.

124. In order to determine the WACC, it is necessary to determine the capital structure of the entity (i.e., the level of debt, equity and other securities). The capital structure may include the following:
Chapter 13: Financial Discounting of Future Lost Profits to Present Value

- Actual capital structure of the entity
- Industry capital structure
- Hypothetical capital structure to support cash flows

125. If the WACC is calculated using a fixed amount of debt, the practitioner may need to estimate the appropriate weightings. An increase in the weighting of the company's equity will increase the WACC and reduce the value of the company's equity. Conversely, a reduction in the weighting of a company's equity will reduce the WACC and increase the value of the company's equity. The weightings will need to be adjusted using an iterative process until assumed debt and equity weightings are equal to the calculated debt and equity weightings.

**Mid-Year Versus End-of-Year Discounting**

126. When discounting lost future profits (LFP), the practitioner may wish to consider modifying the calculation to apply a mid-year convention. The mid-year convention for LFP is reflected in the following formula:

\[
\frac{\text{LFP}_1}{(1 + DR)^{0.5}} + \frac{\text{LFP}_2}{(1 + DR)^{1.5}} + \frac{\text{LFP}_3}{(1 + DR)^{2.5}} + \frac{\text{LFP}_4}{(1 + DR)^{3.5}} + \ldots + \frac{\text{LFP}_n}{(1 + DR)^{n-0.5}}
\]

127. The discounted future profits formula reflected in paragraph 104 presumes that all profits are earned and/or distributed on the last day of the year. For many businesses, this may not be a reasonable assumption. The application of mid-year assumption instead presumes that lost profits will be earned and/or distributed evenly throughout the year. The above formula can be further modified to more specifically reflect the seasonality or timing of profits in the subject company.

**Adjusting for Risk in Projected Profits Versus Accounting for Risk in the Discount Rate**

128. Many practitioners have addressed the concept of risk through the application of discount rates that reflect the level of risk inherent in the projected profits. Other practitioners, alternatively, have suggested that the profit projections themselves be modified downward to adjust for risk, allowing the expert to incorporate a risk-reduced, relatively low discount rate.4

129. The use of the latter approach does not eliminate the need to substantiate the reasonableness of the selected discount rate and the projected, risk-adjusted, profits. Its proponents, however, do believe that this approach is easier for judges and juries to understand. Although either

methodology must ultimately be left to the discretion of the expert, such alternative approaches do highlight the challenges that present themselves to the practitioner who is often forced to balance accepted financial theory against legal reality when preparing a defensible lost profits calculation.
CHAPTER 14: TAXES AND DAMAGES

130. In general, lost profits damages are taxable as ordinary income to the party to which damages are paid. Also, generally, whether received as a result of legal judgment or settlement, tax treatment is the same for lost profits damages. As such, lost profit calculations are typically prepared on a pretax basis. To the extent that the plaintiff received tax benefits as a result of losses caused by the purported bad act, such benefits are generally not considered.

131. Typically, the appropriate discount rate is the after-tax rate as any lost profits in the past could have been invested at the assumed pretax rate, and income taxes would have been paid on the interest earned. Thus, by applying an after-tax rate, the plaintiff’s accumulated value net of taxes is reflected. The reason an after-tax rate rather than a pretax rate is used goes back to the goal of making the plaintiff whole. This can be demonstrated in the following example.

132. Assume that defendant in a suit for lost profits is liable to plaintiff for the loss of $1,000 in pretax cash flow. Further assume that plaintiff’s after-tax discount rate is 12 percent and tax rate is 35 percent. The first method uses three steps to calculate plaintiff’s damage award:

• Adjust the pretax cash flow to an after-tax cash flow.
• Discount the after-tax cash flow at plaintiff’s after-tax discount rate.
• Gross-up the after-tax amount for the amount of taxes plaintiff will pay on the award to get the taxable damage award.

Assuming stable tax rates over the projection period, the second method arrives at the same taxable damage award by discounting the pretax cash flow amount using plaintiff’s after-tax discount rate. This is illustrated in the following table.

<table>
<thead>
<tr>
<th>Pretax Cash Flow</th>
<th>$ 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>x (1−Tax Rate)</td>
<td>(1−35%) = $ 650.00</td>
</tr>
<tr>
<td>/ (1+After-Tax Discount Rate)</td>
<td>(1+12%) = $ 580.36</td>
</tr>
<tr>
<td>/ (1−Tax Rate)</td>
<td>(1−35%) = $ 892.86 Taxable Damage Award</td>
</tr>
</tbody>
</table>

133. The practitioner may be asked to assist counsel in evaluating the tax impact of potential damage awards to the plaintiff and/or the defendant under alternative damage theories or settlement scenarios.
CHAPTER 15: MITIGATION OF DAMAGES

134. The plaintiff has an obligation to mitigate its damages. The duty of mitigation requires that the plaintiff take appropriate actions to overcome the damage purportedly caused by the defendant. This principle of mitigation of damages is summarized in the Restatement (Second) of Contracts, Section 350 comment (1981) quoted below:

Avoidability as a Limitation on Damages. (1) Except as stated in Subsection (2), damages are not recoverable for loss that the injured party could have avoided without undue risk, burden or humiliation. (2) The injured party is not precluded from recovery by the rule stated in Subsection (1) to the extent that he has made reasonable but unsuccessful efforts to avoid loss.5

135. Plaintiff’s failure to mitigate damages is an affirmative defense that can be utilized by the defendant. The defendant, as the party breaching the contract, has the burden to prove that plaintiff’s losses could have been avoided through mitigation of damages.

136. The plaintiff is generally not permitted to recover damages that were foreseeable and could have been avoided by the reasonable efforts of the plaintiff without causing undue expense or risk. In other words, the amount of earnings lost as a result of the plaintiff’s failure to mitigate its own damages would likely not be recoverable. The plaintiff also cannot recover lost profits that an income-producing asset would have produced beyond the reasonable period of time it should have taken the plaintiff to replace the asset.

137. Reasonable expenses incurred in an effort to mitigate damages, even if plaintiff’s efforts are unsuccessful, are typically recoverable as damages. The period of recovery for lost profits must be reasonable and may be influenced by the plaintiff’s actions to mitigate.

138. It is important that the practitioner understand what steps, if any, were taken by the plaintiff to mitigate its losses so the financial impact of such mitigation can be measured and a determination can be made by the practitioner as to what steps could or should have been taken by plaintiff.

139. The plaintiff’s ability to mitigate is dependent upon several factors, which may include but are not limited to the following:

- Plaintiff’s financial ability to mitigate. Mitigation of damages may not be possible if the plaintiff is financially unable to accomplish it.

- The cost to mitigate as compared to the economic damages suffered by the plaintiff. If the cost to mitigate is greater than the economic damage suffered as a result of the defendant’s breach, it may not be possible for the plaintiff to mitigate the damages.

• **Technical barriers to mitigation.** The plaintiff’s ability to mitigate may be affected by technology constraints or opportunities.

• **Market barriers to mitigation.** The plaintiff’s marketing capabilities, taking into account its reputation, product quality, and product features, may have been affected by defendant’s breach and affect its ability to mitigate damages.

• **Supply-oriented barriers to mitigation.** The defendant’s breach may also have affected the plaintiff’s ability to obtain goods and services from its suppliers necessary for production in order to mitigate its losses.

• **Timing issues impacting the mitigation of damages.** The plaintiff’s knowledge of the event causing economic harm and the time required to implement a mitigation strategy may also affect mitigation.

140. The practitioner should consider whether revenues and/or profits earned subsequent to the breach are a mitigation of the economic damages caused by the defendant, thereby reducing damages, or are profits that would have been earned regardless of the breach and, therefore, would not offset damages claimed by plaintiff.⁶

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⁶ Ibid., § 6.35, page 574.
CHAPTER 16: OTHER ISSUES AFFECTING LOST PROFITS ANALYSES

141. The practitioner will need to consider other issues when performing a lost profits analysis. Among the issues that need to be considered are:

- Distinguishing between violative and nonviolative acts
- Distinguishing various violative acts
- The impact of subsequent unexpected events
- Changes in the economic environment

**Distinguishing Between Violative and Nonviolative Acts**

142. The practitioner should be aware that not all acts may be violative (i.e., result in damages). The practitioner should consider only those acts which would have an impact upon the damage analysis. Nonviolative acts typically lack the requisite causal link between the act and damages.

**Distinguishing Various Violative Acts**

143. In some instances, there may be multiple violative acts that result in damage. In the damage analysis, the practitioner should attempt to separately quantify the damage resulting from each act. If the acts are not “disaggregated,” findings may be challenged or the rejection of a claim for one act may result in refutation of the entire analysis. Practitioners should also ensure that damages computed for separate acts do not have an additive effect. In other words, damages may be common to both acts and cannot simply be added together to compute the total damages.

**Impact of Subsequent Events**

144. The practitioner should also consider the impact of events subsequent to the act causing damage. Such events may suspend the loss period, either temporarily or permanently, or may cause additional damage. Such intervening events may or may not be caused by the defendant, and the impact of those intervening events must be determined separately. See the discussion of ex ante and ex post methodologies in paragraphs 106 to 109.
Changes in the Economic Environment

145. The practitioner should also consider the impact of changes in the economic environment. Those changes may be general changes in the economy, such as inflation, general price erosion, or changes in demand, or they may be the result of actions taken by the defendant, such as price cutting or changing distribution methods. The impact of these events upon the analysis should be separately quantified, if possible.
CHAPTER 17: ALTERNATIVE DAMAGE MEASURES OTHER THAN LOST PROFITS

146. The practitioner should be aware that there are alternative measures of damages other than lost profits. Throughout this discussion, it is assumed that the plaintiff has been harmed and is entitled to damages resulting from the defendant’s wrongful actions.

147. Alternative measures of damages other than lost profits will depend upon the facts and circumstances of the case. Consultation with legal counsel regarding the established legal framework and the applicable law may be necessary to determine the alternative damage measures.

OUT-OF-POCKET COSTS

148. A relatively straightforward method of calculating damages is based upon the out-of-pocket costs or investment the plaintiff has incurred in the project. Under this method, the out-of-pocket costs incurred related to the project are aggregated and become the measure of damages.

149. The practitioner needs to be diligent in obtaining appropriate back-up documentation pertaining to the costs involved including verifying that the costs incurred actually pertain to the project.

DECREASE IN VALUE CAUSED BY THE DEFENDANT’S MISCONDUCT

150. Damages under this approach are based upon the decrease in value caused by the defendant’s misconduct. This approach to calculating damages is measured by the decrease in value as measured by the value prior to and subsequent to the defendant’s misconduct. A business valuation or an appraisal of the underlying asset may be necessary in order to calculate this measure of damages. Additionally, some states may limit this measure of damages to only tort actions.
CHAPTER 18: SPECIALIZED DAMAGES AREAS

NEWLY ESTABLISHED BUSINESSES

151. For many years, court decisions adhered to the *new business rule*, which is that claims for lost profits of a newly established business are inherently speculative and, therefore, cannot be recovered. More recently, courts have been moving away from this general rule and have looked instead to the quality of the evidence submitted to determine whether or not the plaintiff has provided an adequate basis for a reasonable estimate of its damages. At least in part, this has been the result of the courts concluding that the former rule was unduly harsh and that a plaintiff should not be precluded from recovering its lost profits where the defendant’s action has prevented the plaintiff from establishing a track record.

152. A plaintiff still has to show with reasonable certainty that, but for the actions of the defendant, it would have made a profit. Some of the factors that the practitioner should consider in assessing the likelihood of the plaintiff’s success are as follows:

- The plaintiff’s business plan
- The availability of the required capital for the business
- The plaintiff’s prior experience in the area
- The plaintiff’s level of expertise
- The plaintiff’s subsequent experience
- Barriers to entry in the industry
- The quality of the available records
- The economy in which the business operates
- The experience of other similarly situated businesses

153. If it is possible to meet the legal requirements with respect to the fact of loss, the practitioner will also need to consider these factors, along with whatever other information is available, in preparing an estimate of the amount of the lost profits.

154. Although the general approach to the calculation of damages is the same as that discussed earlier with respect to an established business, less data are likely to be available. The practitioner may, therefore, need to make more assumptions. As in other areas, the practitioner needs to ensure that there is an adequate basis for the assumptions made.
Calculating Lost Profits

INTELLECTUAL PROPERTY INFRINGEMENT DAMAGES

155. Intellectual property is a broad term encompassing a number of different types of property, including patents, copyrights, trademarks, and trade secrets. The scope of this practice aid does not include a detailed discussion of these types of damages. For a more in-depth discussion of this area, the practitioner should refer to AICPA Practice Aid 06-01, Calculating Intellectual Property Infringement Damages.

156. The measurement of damages in intellectual property cases can vary according to the particular type of intellectual property at issue.

157. In some instances, a plaintiff may elect to base its damage claims on the lost profits resulting from the infringement or misappropriation of intellectual property.

158. In patent infringement actions, the amount of damages awarded to the plaintiff should be sufficient to compensate for the infringement, but not less than the amount of a reasonable royalty. Lost profits are an alternative measure of damages to the reasonable royalty calculation. In the case of design patents, the award can include damages for unjust enrichment.

159. In copyright infringement cases, the measurement of damages may be based on various approaches, including lost profits. Other possible measurement approaches include royalty rates used for other transactions, the terms of other contracts for use of the copyrighted material, or a calculation of the decline in the market value of the copyrighted material as a result of the infringement.

160. In trademark cases, the alternative measurements of damages include lost profits, a reasonable royalty, and statutory damages. In addition, the Lanham Act explicitly authorizes a trademark owner to recover both the infringer’s profits and its own damages sustained to the extent they are not duplicative.7

161. In trade secrets cases, the plaintiff’s damages may also be measured in various ways, including lost profits, a reasonable royalty, and the unjust enrichment of the infringer. The Uniform Trade Secrets Act expressly provides that, in addition to recovering its actual loss, a trade secret owner may recover the “unjust enrichment” caused by the misappropriation to the extent the enrichment is not taken into account in calculating the owner’s actual loss.8

7 AICPA Practice Aid 06-01, Calculating Intellectual Property Infringement Damages, page 22.
8 Ibid.
**Antitrust Violation Damages**

162. Antitrust law generally prohibits various forms of conduct that are considered to be anti-competitive. The Federal Trade Commission (FTC) is the government agency charged with enforcement of federal antitrust laws.

163. The statutes governing this area of law address such issues as monopolies, price discrimination, mergers, and unfair competition.

164. Plaintiffs in antitrust actions have to prove that the defendant’s actions caused lost profits and that this resulted from the anticompetitive effect of an antitrust violation. The general standard for proving damages is a “just and reasonable estimate of the damage based on relevant data.” (See *Bigelow v. RKO Radio*, 327 U.S. 251 [1946].) An antitrust plaintiff, however, must also prove antitrust injury in addition to the other common elements in a damages case, requiring the plaintiff to not only show that its injury is proximately caused by the defendant’s wrongful conduct, but that the injury is “of the type the antitrust laws were intended to prevent.” (See *Brunswick Corp. v. Pueblo Bowl-O-Mat*, 429 U.S. 477 [1977].) Because the focus of antitrust law is on the consumer, the plaintiff must be able to prove that competition was injured as a result of the defendant’s conduct.

165. In claims involving the monopolization of, or attempts to monopolize, a market, it is necessary to address concepts such as the definition of the market, both in geographic and product terms, the substitutability of other products, and the level of potential competition.

166. In a case involving price-fixing, damages are normally computed based on an analysis of the higher prices paid by purchasers of the products or services in question. This may involve a comparison of pricing or profit levels before or after the time period during which the price-fixing occurred.

**Securities Fraud Damages**

167. Claims by investors for damages resulting from the failure to disclose information that adversely affects the price at which a company’s securities trade generally seek to recover the difference between the price at which the investors purchased the securities and the price which they would have paid had the information been disclosed.

168. Although this difference may be measured by the decline in the price of the securities when the adverse information was disclosed, it is necessary to consider the impact of other factors on the price of the securities.
E-BUSINESS IMPACT ON DAMAGES

169. Practitioners should also consider the impact of the new business models that may be associated with the expansion of e-business on traditional measures of lost profits. These include the availability and nature of data relating to those business models and the impact on the definition of markets and the impact on competition and market barriers, among others. The models developed by the practitioner to measure lost profits will need to account for these factors.
## APPENDIX A: COMPARISON OF AICPA PROFESSIONAL STANDARDS AND FEDERAL RULE OF EVIDENCE 702

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<td>• Product of reliable principles and methods</td>
</tr>
<tr>
<td>• Rule 201, General Standards (AICPA, Professional Standards, vol. 2, ET sec. 201.01)</td>
<td>• Applied the principles and methods reliably to facts of the case</td>
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<td>• Sufficient facts or data</td>
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Consistent with AICPA *Professional Standards*, Rule 702 of the Federal Rules of Evidence requires expert testimony be based upon sufficient facts or data, be the product of reliable principles and methods, and that the principles and methods be reliably applied to the facts of the case. Graphically presented, the testimony pyramid might be as follows:
APPENDIX C: TYPICAL LITIGATION SERVICES

Practitioners may provide various types of services or functions in litigation engagements. Some of the more common include:

- Computation of economic damages:
  - Lost profits
  - Lost value
  - Extra costs
  - Lost cash flow
  - Mitigation
  - Restitution
  - Punitive damage studies

- Professional standards analysis

- Valuation of the following:
  - Business
  - Pensions
  - Intangibles

- Fraud prevention, detection, and investigation

- Bankruptcy consultant, trustee, and examiner

- Tax analysis, including the following:
  - Tax basis
  - Cost allocation
  - Treatment of specific transactions

- Marital dissolution assessment and analysis

- Contract cost and claims analysis

- Historical results analysis

- Special accountings, tracing, reconstructions, and cash-flow analyses

- Antitrust analysis, including the following:
  - Price fixing
  - Market share
  - Market definition
Calculating Lost Profits

- Predatory conduct
- Dumping
- Price discrimination

- Business interruption and other insurance claims and assessments
- Attest services, if specifically engaged to perform them in connection with litigation services

Any of the following functions may be performed:

- Issue identification
- Locating other experts

- Fact finding, including the following:
  - Asset searches
  - Market studies
  - Systems reviews
  - Interviewing of witnesses
  - Due diligence
  - Research

- Analysis
  - Investigative accounting
  - Computer modeling
  - Statistical
  - Actuarial

- Discovery assistance
- Document management
- Settlement assistance
- Expert testimony
- Trial and deposition assistance
- Posttrial support (such as bookkeeping services and funds administration)
- Negotiations
- Arbitration
- Mediation
- Training
- Case evaluation
APPENDIX E: LIST OF CASES CITED

Cases Cited

Bigelow v. RKO Radio, 327 U.S. 251 (1946)
Brunswick Corp. v. Pueblo Bowl-O-Mat, 429 U.S. 477 (1977)
Burger King Corp. v. Barnes, 1 F. Supp. 2d 1367 (S.D. Fla 1998)
Diesel Machinery, Inc. v. B.R. Lee Industries, Inc., 418 F.3d 820 (Fed. 8th Cir., 2005)
DSC Communications v. Next Level Communications, 107 F.3d 322, 329 (5th Cir. 1997)
Energy Capital v. United States, 302 F.3d 1314 (Fed. Cir. 2002)
Hampton v. Federal Express Corp., 917 F. 2d 1119, 1125-26 (8th Cir. 1990)
Holt Atherton Ind., Inc. v. Heine, 835 S.W.2d 80 (Tex. 1992)
Knox v. Taylor, 992 S.W.2d 40 (Texas 1999)
Kool, Mann, Coffee & Co. v. Coffey, 300 F.3d 340 (3d Cir. 2002)
Olson v. Nieman's Inc., 579 N.W.2d 299 (Iowa 1998)
Schonfeld v. Hilliard, 62 F. Supp 2d 1062, 1074 n. 6 (S.D.N.Y. 1999)
APPENDIX F: LOST PROFITS RESOURCES
(NONEXHAUSTIVE LIST)

APPLICABLE SPECIAL REPORT AND PRACTICE AID

Consulting Services Special Report 03-1, *Litigation Services and Applicable Professional Standards*

Practice Aid 04-1, *Engagement Letters for Litigation Services*

Practice Aid 93-4, *Providing Litigation Services*

Practice Aid 96-3, *Communicating in Litigation Services: Reports*

Books


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Other Publications  
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