

## **A Unified Approach to Calculating Economic Damages**

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This article proposes a unified approach for defining and quantifying economic damages suffered by operating entities. For purposes of this treatise, economic damages refer to any temporary and/or permanent impairment caused by one or more parties and sustained by an operating entity. The authors identified a need for this article after encountering numerous variations of economic damage calculations, in litigation settings, that were seemingly inconsistent with damage theory.

### **What is a Unified Approach?**

The authors' unified approach to calculating economic damages entails the analysis and synthesis of three distinct but interrelated components:

1. Historical lost profits
2. Future lost profits
3. Causation

When determining economic damages, it is imperative that experts understand the ultimate purpose of their calculations. The components identified above must all be considered and unified into a final value for economic damages. The damage calculation will be deficient if these components are not analyzed or integrated correctly.

The ultimate consideration when calculating economic damages is that the components identified above are not mutually exclusive. In fact, there is an integral relationship in every case between causation, historical lost profits, and future lost profits. Unfortunately, it has been the authors' experience that experts in many cases fail to fully consider the relationship between these components.

An effective application of the unified approach to calculating economic damages will rely upon the amalgamation of forensic accounting, economics, finance, and business valuation techniques.

### **Why should a Unified Approach be used?**

Apart from the fact that a uniform approach would eliminate many of the theoretical inconsistencies that are often apparent in these types of calculations, the application of a unified approach is also helpful because it specifically structures economic damages into components that are easier to substantiate and defend. As in most litigated situations, the clearer and better defined the calculations presented by the expert, the easier it will be for the expert to defend or at least explain the methodologies employed and the assumptions made.

If a unified approach is not used, opposing experts may be more successful in attacking economic damage calculations because of the greater likelihood that the methodologies employed will not be based on generally accepted damage theory.

A well-constructed case that appropriately applies a unified approach will inevitably focus arguments more towards specific disagreements between the parties regarding the underlying assumptions of the damage calculation and away from disagreements as to how the damage calculation was constructed.

### **Timelines in Economic Damage Calculations**

In order to ensure consistency between the facts of each case and the damage calculations being performed, it is imperative that experts fully understand the important chronological points that are used in economic damage calculations: the event date and the trial date.

The event date refers to the historical date on which the injurious event is alleged to have occurred. For example, in a matter involving the breach of a contract, the event date refers to the date on which the damaging party breached the contract.

The trial date refers to the anticipated date of trial, which is often the same as the valuation date, the date generally designated as that to which economic damages should be present valued.

### **Components of Damage Models**

Although circumstances differ between cases, a reliable calculation of economic damages consistently depends upon an accurate assessment of the following metrics: actual performance, but-for performance, and the present value of past and future losses.

#### ***Actual Performance***

Actual performance refers to the financial performance exhibited by the damaged party during the period from the event date through the trial date. When assessing the actual financial performance of the damaged party, particular attention must be directed towards the following:

- 1) Reconstructing accounting records
  - a) What financial records are available to calculate actual financial performance?
  - b) How reliable is this information?
- 2) Identifying normal operating costs versus extraordinary expenses
  - a) What was the normal level of expenses during the period of actual performance?
  - b) How do these expenses compare to the expenses in periods prior to the event date?
  - c) What assurances did the expert have that the operating costs listed in the accounting records do not include personal, inflated, or extraordinary expenses?
- 3) Analyzing mitigation issues and their impact on actual performance

- a) What might the damaged party have done to minimize the damage caused by the injurious event?
- b) To what extent, if any, did the damaged party undertake these mitigating actions?
- c) If the damaged party could have mitigated a portion of the economic damages, and if the damaged party, for whatever reason, did not undertake actions to mitigate damages, then it may be necessary to reduce the calculated losses.

## ***But-For Performance***

But-for performance refers to the financial performance that the damaged party would have exhibited had it not been for the injurious event. Depending on the applicable damage model, discussed later in this article, but-for performance should generally be characterized as pre-trial and post-trial. Pre-trial but-for performance refers to the financial performance that would have been achieved by the damaged party, during the period from the event date through the trial date, but-for the injurious event. Post-trial but-for performance refers to the financial performance that would have been achieved subsequent to the trial date, either into perpetuity or for a fixed period of time, but-for the injurious event. When assessing the but-for financial performance of the damaged party, particular attention must be directed towards the following:

- 1) Determining market size
  - a) Within what type of market or industry did the damaged party operate?
  - b) How large is/was the industry in which the damaged party operated?
  - c) How reasonable is this assessment and how was it determined?
- 2) Assessing market penetration
  - a) How much of the total market could the damaged party have captured?
  - b) How reasonable is this determination?
- 3) Projecting lost sales
  - a) What level and quality of sales could the damaged party have achieved?
  - b) What information is available to make this determination?
  - c) Did or could the damaged party have had the infrastructure to achieve the level of projected sales?
  - d) Is there sufficient working capital or did the damaged party have access to sufficient working capital, to fund the level of projected sales?
- 4) Identifying fixed versus variable versus capital costs
  - a) What costs would have been incurred to achieve projected but-for sales?
  - b) How reasonable is/was the expectation that these costs could be incurred and covered?
- 5) Projecting operating cash flows
  - a) How much cash could the damaged party have generated?
  - b) Absent the injurious event, would the damaged party have had sufficient cash flow to maintain and fund the projected but-for sales growth and service anticipated debt?
- 6) Analyzing the interplay between anticipated growth, fixed, variable, and capital costs, and working capital requirements
  - a) How reasonable are the individual projections of growth when considered in terms of overall growth?

- b) Do the individual projections appropriately interrelate?
- 7) Verifying that historical but-for performance is consistent with future but-for performance
  - a) The assumptions used to project pre-trial but-for performance should be similar if not the same as those assumptions used to project post-trial but-for performance.
  - b) This does not necessarily mean that pre-trial and post-trial performance should be linear but, rather, that the logical conclusions observed in post-trial projections should relate in some meaningful way to the pre-trial projections.

### ***Present Valuing Past and Future Losses***

The actual and but-for performance discussed above is measured in past or future dollars. For example, if the current year is Year 1 and the projected but-for profits extend through Year 10, then the projected profits through Year 10 must be adjusted to account for inflation and for the risk that the projected level of profits may not be achieved. Correspondingly, historical but-for profits must also be adjusted to account for inflation. This simple example illustrates the crux of financial analysis as it pertains to deriving a value as of the trial date: both the time value of money and the various aspects of risk must be carefully examined before any conclusion of economic damages can be considered supportable. When assessing the present value of past and future losses incurred by the damaged party, particular attention must be directed towards the following:

- 1) Appropriately applying business valuation methodology
  - a) There are various methods by which to appraise business interests. These methods are also applicable to the determination of lost business value, whether in terms of a claim for diminution of business value or to determine the value of an entire business for a claim of business destruction.
  - b) It is imperative that experts apply the appropriate business valuation method to the business entity or partial business interest being valued.
  - c) The value of most operating companies is generally appraised by considering two core factors: the future economic benefit that the operating entity is expected to achieve and the risks inherent in achieving that future economic benefit. It is important that experts fully evaluate both of these factors and that these factors be considered in concert, since they share a symbiotic relationship.
- 2) Determining the standard of value
  - a) The specific factors of the case must be evaluated in order to determine the standard of value that should be used when appraising any lost or destroyed business value.
  - b) There may be significant errors in economic damage assertions relating to diminished or destroyed business value if experts do not use the appropriate standard of value. The applicable law governing the case will usually dictate the appropriate standard of value.
- 3) Analyzing the risk factors used to derive discount rates
  - a) The riskier the investment or projected economic benefit, the higher the discount rate.
  - b) Does the discount rate adequately capture the risk inherent in achieving projected sales?
  - c) If there are multiple projected streams of income, is each stream of projected income adequately evaluated and discounted appropriately?

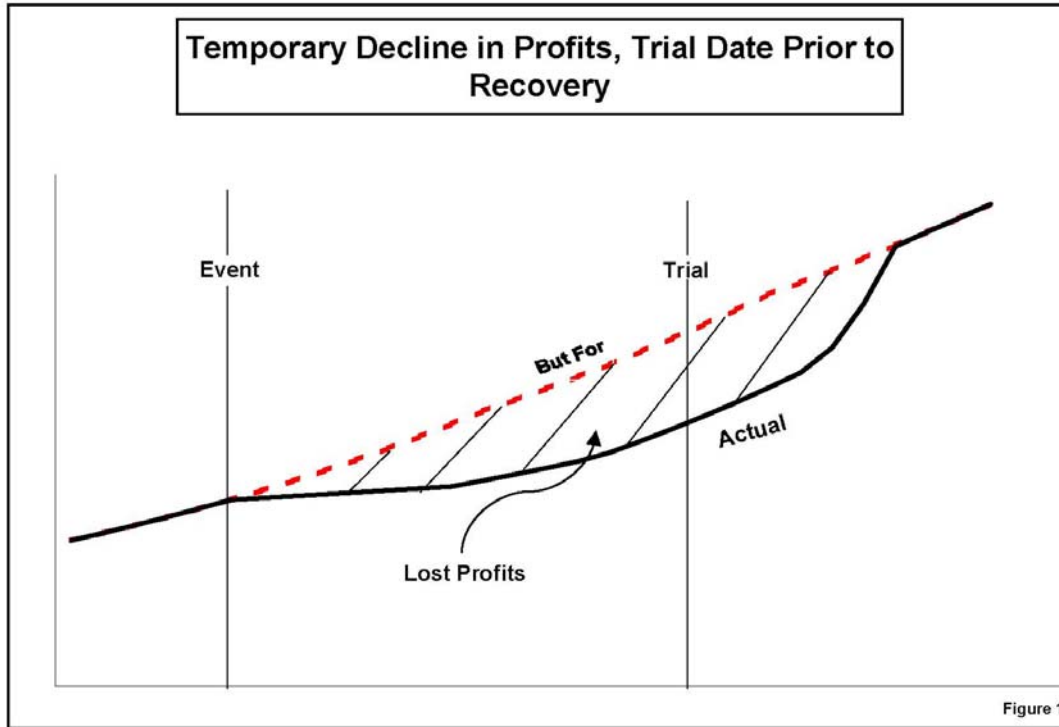
- 4) Applying business valuation discounts and premiums
  - a) In addition to the discount rate it may also be necessary to evaluate discounts and premiums that are specific to business valuation, such as premiums/discounts for control and discounts for lack of marketability.
  - b) Experts must be well versed in both the objective and subjective issues that provide guidance in determining the applicability and derivation of these discounts and premiums.

### **Damage Calculation Models**

Under a unified approach there are three variations on the economic damages sustained by an operating entity: a temporary decline in profits, a permanent decline in profits, and a permanent decline in profits followed by the destruction of the business. Each of these models is evaluated below.

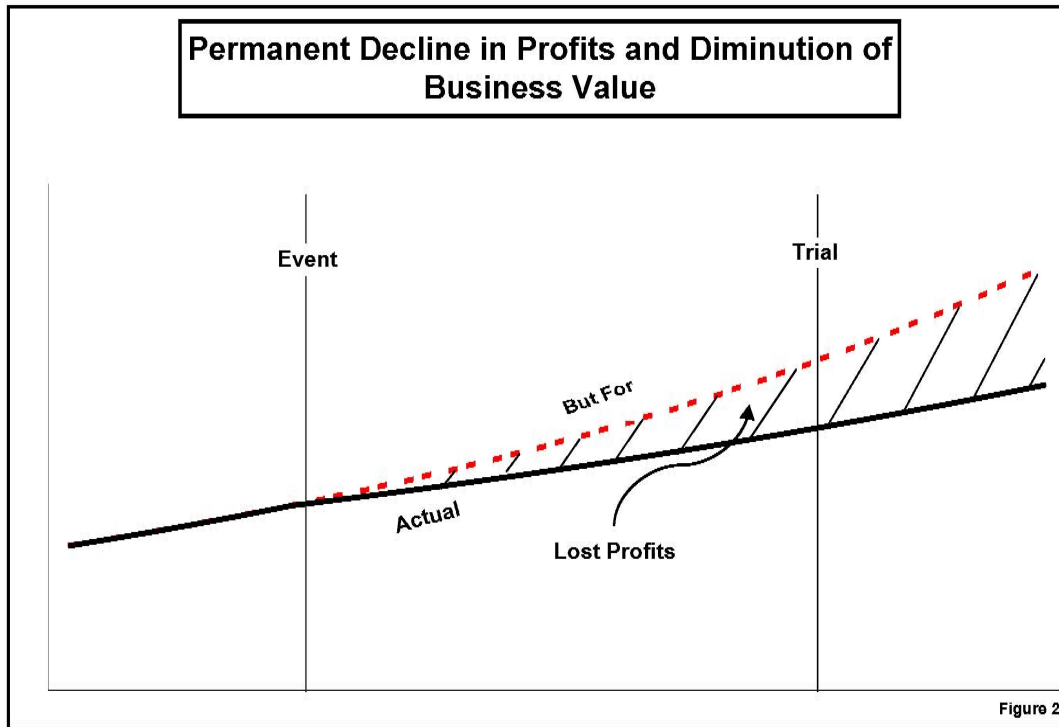
#### ***Temporary decline in profits***

In this model, the injurious event causes the damaged party to earn smaller profits than they would otherwise have earned but-for the injurious event. In the situation shown in Figure 1, the damaged party partially recovers from the effects of the injurious event prior to the trial date and is expected to fully recover at some point subsequent to the trial date. Since this scenario has part of the loss occurring before the trial date and part of the loss occurring subsequent to the trial date, the differential between but-for and actual that exists prior to the trial date is future valued forward to the trial date, while the differential between but-for and actual that is expected subsequent to the trial date is present valued back to the trial date.



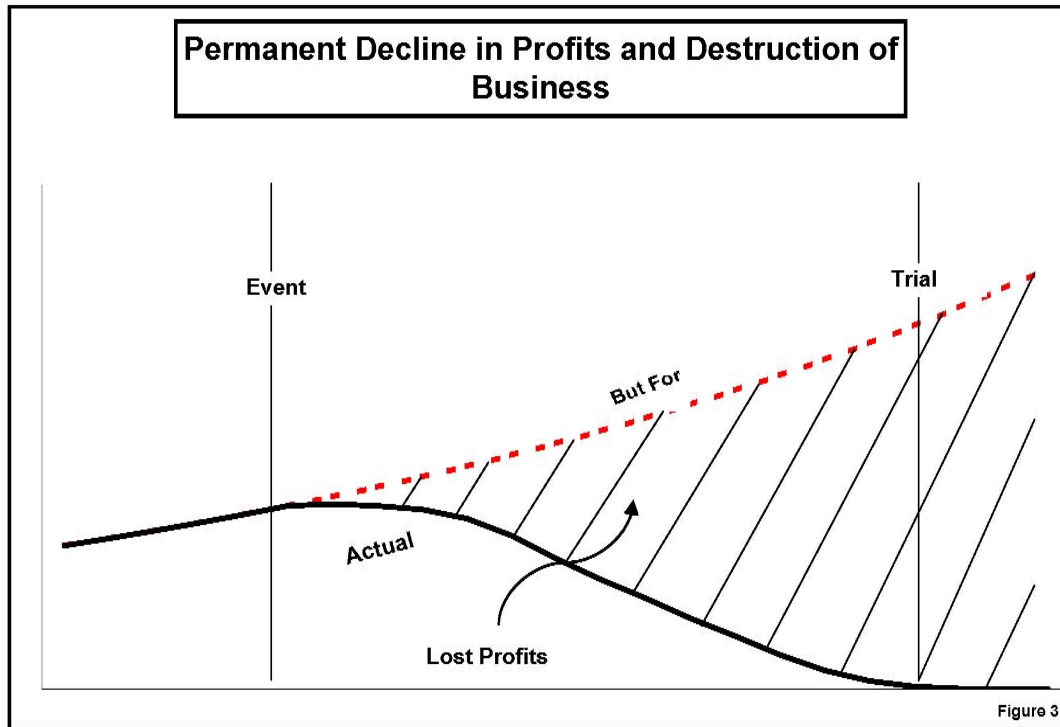
*Permanent decline in profits*

In the situation shown in Figure 2, the damaged party never fully recovers from the effects of the injurious event but is expected to continue operating into perpetuity. Since this scenario has part of the loss occurring before the trial date and part of the loss occurring subsequent to the trial date, the differential that exists prior to the trial date is future valued forward to the trial date while the permanent differential expected to exist subsequent to the trial date is reduced to a value representative of the permanent diminution in the value of the damaged party. In general, this should be done by calculating the differential between post-trial projected but-for profits and post-trial projected actual profits, and then discounting or present valuing that differential back to the trial date using a net discount rate, which in turn should be calculated based on the difference between the risk of achieving the projected but-for profits and the risk of achieving the projected actual profits. Since the calculation of post-trial economic damages seeks to value the permanent decline in business value, the expert must pay particular attention to factors such as the discount rates applicable to projected but-for and actual future profits and the appropriateness of business valuation discounts and premiums.



*Permanent decline in profits and destruction of business*

In the situation shown in Figure 3, the damaged party never fully recovers but rather goes out of business prior to the trial date. Since this scenario has part of the loss occurring before the trial date and part of the loss occurring subsequent to the trial date, the differential that exists prior to the trial date is future valued forward to the trial date while the differential that exists subsequent to the trial date (which is essentially but-for profits since actual profits are effectively zero) should be converted into a value for the destroyed business as of the trial date. In general, this should be done by calculating the post-trial projected but-for profits and then discounting or present valuing that stream of income back to the trial date using a discount rate that reflects the risks inherent in achieving the projected but-for profits. Since the calculation of post-trial economic damages seeks to value the destroyed business, the expert must pay particular attention to factors such as the discount rates applicable to projected but-for future profits and the appropriateness of business valuation discounts and premiums.



### Core Skills Required

The ability to identify the components of a well-constructed unified approach to economic damages will only be helpful if the expert also has the requisite skills, training, and expertise to quantify and put those components together. Since a number of organizations purport to offer certification and training in the skill sets listed below, and because this article is not an evaluation of said organizations<sup>1</sup>, the authors have elected to bypass the issue of credentials. However, specific skills that should be considered requisite to a thorough evaluation of economic damages would include investigative accounting economic and finance, and business valuation.

### Causation

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<sup>1</sup> For a lengthy discussion of the factors that should be considered when selecting an expert witness, including an evaluation of useful certifications, please refer to [Expert Witness Qualifications and Selection](#), an article published by the authors in the Journal of Financial Crime (December 2004)

The connection between the injurious event and the economic damages incurred by the damaged party is commonly referred to as the causal link. Proving that the damaging party and the injurious event were the proximate cause of the economic damages to the damaged party is known as proving causation.

Causation should be considered a determination based on degrees of responsibility, which the damaged party is responsible for establishing. The damaged party must prove that the injurious event was caused by the damaging party but must do so while minimizing the amount of contributory negligence for which the damaged party might be responsible. For example, if the damaged party contributed in some part to either causing the injurious event or exacerbating the detrimental effects caused by the injurious event, whether directly or indirectly, the amount of economic damages that the damaged party may be entitled to could be subject to downward adjustment.

In proving causation, the damaged party must also prove that the economic damages they suffered were not caused, in whole or in part, by intervening factors either wholly or partially separate from the injurious event. For example, if a damaged party claims that the predatory practices of a competitor drove the damaged party out of business, they must prove in the process of establishing causation that they did not go out of business for reasons unrelated to any predatory behavior ascribed to that competitor.

Causation can be established either directly or indirectly. Establishing a direct causal link means that the damaged party is able to prove that they were damaged as a direct result of the injurious event. Establishing an indirect causal link typically involves eliminating all of the intervening factors or alternative rationalizations as to why the damaged party suffered economic losses. Although a direct causal link provides the most definitive evidence that the injurious event precipitated the economic damages to the damaged party, such a causal link is often difficult to prove, particularly in complex cases where there are a myriad of intervening factors that provide alternative reasons, completely unrelated to the injurious event, for the damages suffered by the damaged party. These intervening factors often include claims such as poor cash flows, mismanagement, increased competition, and industry trends. For this reason, the damaging party typically attempts to force the damaged party to prove a direct causal link.

While an indirect causal link does not directly tie the injurious event to the damages suffered by the damaged party, such a causal link can be used to show that the damaged party was impacted by the injurious event despite the lack of a direct connection to that event. Such an example might include instances where a manufacturing company with a single large customer is economically damaged when its single largest customer is put out of business as a direct result of an injurious event.

Damage calculations and causation issues must be addressed simultaneously. They should not be developed independently, since doing so may lead to a theoretical disconnect in associating the appropriate level of economic damages to the injurious event. In all cases, economic damages must flow from the injurious event, which inevitably points to the fact that causation should be the starting point for all of the economic damages models under the unified approach.

Summary and Conclusion

While there may not be any one particular way to estimate the economic damages suffered by an operating entity, the authors' experiences have led them to observe that there are quite a large number of wrong ways to perform such calculations. If experts take the time to learn, understand, and comprehend the unified approach proposed in this article, we believe that the issues contested at trial can be significantly reduced to testimony regarding the variables and assumptions used by the individual experts, which in our opinion is much more productive than arguing the merits of two disparate economic damage calculations, particularly when both may be inadequate.