

Economic Controversy Personal Injury Cases

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Economic damages arise in many personal injury cases, and since economics is complex, evidence of such damages is often provided by an economics expert witness. But economists often disagree, and this can potentially impact damage awards. An understanding of such disagreements, and their consequences, is important to those litigating personal injury cases.

“If all economists were laid end to end, they would not reach a conclusion.”²

– George Bernard Shaw



Economists often disagree on “normative” issues, such as whether Americans *should* be required to purchase health insurance, but less so on “positive” issues, such as whether increased government spending *has* lessened the unemployment problem. As expert witnesses in cases of personal injury, economists opine on positive issues; hence, one might expect a general agreement among them. But economic damages in personal injury cases

typically involve losses in both the past and future, and views about the future are many.

A key element of personal injury cases is a future expected income stream that the plaintiff would have received if not for the injury. In the most common situation, where a lump sum of money serves as compensation for lost future income, the expert witness economist identifies this sum as the *present value* of lost future income. In doing so, economists take direction from court decisions and instructions. Most prominently, the U.S. Supreme Court’s decision in *Jones & Laughlin Steel Corp. v. Pfeifer*³ sets out general guidelines for damages calculation:

The two elements that determine the calculation of a damages award to a permanently injured employee in an inflation-free economy are the amount that the employee would have earned during each year that he could have been expected to work after the injury, and the appropriate discount rate, reflecting the safest available investment.⁴

As U.S. price levels generally change over time,⁵ an inflation-free economy is an essentially hypothetical construct that serves to illustrate how damage awards might be calculated in a simplified setting. With inflation, earnings generally drift upward with prices over time, and discount rates are higher than in the no-inflation scenario:

In an inflationary economy, inflation should ideally affect both stages of the calculation described above. This Court, however, will not at this time select one of the many rules proposed by the litigants and *amici* in this case and establish it for all time as the exclusive method in all federal courts for calculating an award for lost earnings in an inflationary economy. First, by its very nature the calculation of an award for lost earnings must be a rough approximation. Second, sustained price inflation can make the award substantially less precise. And third, the question of lost earnings can arise in many different contexts.⁶

At the time of the *Jones* decision, U.S. inflation rates had undergone recent large swings, making it difficult to forecast inflation with confidence. As a result, many different inflation forecasts were plausible, leading to many possible calculations for economic damages. Mindful of this development, and its possible impact on the courts, the U.S. Court of Appeals (5th Circuit) subsequently held that, “in the absence of a stipulation by the parties concerning the method to be used, fact-finders shall determine and apply an appropriate below-market discount rate as the sole method to adjust loss-of-future-earnings awards to present value to account for the effects of inflation.”⁷ With this approach, the impact of inflation on damage awards is

isolated to its impact on the real rate of interest – or “below-market” discount rate – potentially saving the courts time in examining damages evidence.⁸ However, the range of possible damage awards remains uncurbed since the court does not specify bounds on what an “appropriate” below-market rate might be.

As inflation is currently low relative to historical standards,⁹ it might seem that economists should reach a consensus on the calculation of damage awards. However, even if inflation was expected to remain low for the foreseeable future,¹⁰ economists might still disagree about the discount rate with which to bring future expected earnings to present value. In fact, economists do disagree about discount rates, particularly in situations – such as the present – when credit markets are turbulent.

Economic Disagreement

According to a recent survey of forensic economists,¹¹ when computing the present value of a long-term (30-year) future loss, 43 percent of them used as discount rate the average interest rate over some lengthy past period, and 32 percent of them used instead the current interest rate.¹² The distinction between past and current interest rates would be moot in a world in which credit markets were stable and unchanging. However, today’s interest rates are at historic lows, and this creates big differences among discount rates used by forensic economists. With interest rates defined as yields on U.S. Treasury bonds and bills, the average yield in year 2010 was lower than the 50-year historical average by at least three percentage points:¹³

Treasuries	Year 2010 Yield (in percent)	Historical Average Yield (in percent)
3 month	0.1	4.7
6 month	0.2	5.4
3 year	1.1	5.8
10 year	3.2	6.3
30 year	4.3	7.8

To illustrate the impact of interest rate dynamics on economic loss assessment, suppose that a permanently injured employee would have earned \$40,000 in each of the next 30 years if not for the injury, but can no longer work. Using the three-year Treasury note as a basis for yields, if the discount rate is set equal to the year 2010 yield (which is 1.1 percent annually), the present value of lost income is about 1 million dollars, somewhat less than the 1.2 million dollar total dollars earned over the 30-year period. By contrast, if the discount rate is set equal to the average yield, present value is about \$560,000, a drastically lower number. Whether using Treasury bonds, notes, or bills, there is a substantial gap in present values when using a recent yield versus an average yield:

Treasuries	Present Value (2010 Yield)	Present Value (Average Yield)
3 month	\$1,174,344	\$634,826
6 month	\$1,163,581	\$590,738
3 year	\$1,015,905	\$560,944
10 year	\$762,184	\$534,076
30 year	\$671,161	\$460,917

Economists who compute present value using a recent yield do so because they want present value to reflect current market conditions, such that the present value faithfully approximates the lump sum of money needed today in order to finance the lost earnings stream via safe means (such as U.S. government securities). Economists who use instead an average yield do so because they do not want short-term yield changes to unduly influence their calculations. In today’s economy, this results in much smaller present values than if a current yield is used, but in times of high interest rates the reverse is true.

The systematic use of current yields versus average

yields is a key reason for economic disagreement in times when interest rates are far from their historical average values. Economists' opinions on economic damages can vary for many reasons other than the choice of discount rate, including the choice of security (Treasury bill, note, bond, etc.). Yields on short-term bills are typically much lower than those on long-term bonds, but disagreement based on such gaps is perhaps less common than it could be, as most forensic economists use yields on longer-term instruments.

With economic discord, and the adversarial process in litigating personal injury cases, a natural result would be that today's plaintiff attorney would tend to hire economists who compute present values using current yields, while the defense attorney would tend to hire economists using average yields. However, outside of court transcripts, it is hard to know which economist is which, as they are not generally inclined to advertise their methods.¹⁴ Economists will typically reveal their discount rate to a prospective client, so indirectly these two types of economists may end up on opposite sides of personal injury cases for the foreseeable future.

Value: Noun or Verb?

The ambiguity of present value in *Jones* can be interpreted as a matter of speech. The *Jones* decision primarily refers to value as a noun, an object of interest. As such, it is not explicitly connected with the verb *value* encountered in financial economics. To value a known income arriving at some point in the future, one computes the amount of money needed today to generate the income later, via investment in riskless bonds.¹⁵ If one stipulates that present value must be the result of *valuing* an expected future earnings stream — in the sense of financial economics — then the result is much less ambiguous.¹⁶

To illustrate, suppose — as earlier — that an injured worker had expected earnings of \$40,000 in each of the next 30 years. To value each year's expected earnings, in financial terms, one divides this number by an amount $(1+r)^m$, where r is the yield¹⁷ on riskless instrument whose maturity m matches the year in question. Adding together the values for each year, the result is a lump sum of money just sufficient to finance the expected income stream.¹⁸ In computing this value, the economist uses a collection or "ladder" of *current* yields, such as those on "strips" zero-coupon government securities.

If all forensic economists applied the principles of financial economics to determine the present value of lost income streams, their opinions on economic damages might generally agree. However, the economist expert witness need not have training or expertise in financial economics, as coursework in this subject is not typically required for a graduate degree in economics at U.S. colleges and universities. Those economists who use a long-term historical *average* yield — as a discount rate — are least aligned with financial economic principles. While some 43 percent of surveyed forensic economists are in this group as of the year 2009, this number is down from 58 percent in year 1990.¹⁹ If the trend continues, greater consensus may be realized in decades to come.

Conclusion

Economists frequently disagree about economic damages in personal injury cases, and these disagreements are exacerbated by the present economic environment. Some of this disagreement might be avoided if standards were imposed that required economic expert witnesses to possess and apply expertise in financial economics when opining on the present value of lost income. To some extent forensic economists are self-policing, as the National Association of Forensic Economics imposes a code

of ethics, but no specific training is required.

In the *Jones* decision, the Supreme Court allowed considerable variety in economists' opinions on damages. There are some exceptions, depending on jurisdiction, as in the 5th Circuit, wherein the U.S. Court of Appeals (*Culver*, 5th Circuit) narrowed the variety somewhat by standardizing the method by which inflation forecasts are factored into present values. But the choice of discount rates, and the method by which they are chosen, is still largely unrestricted by the courts.

If interest rates drift up in coming years toward long-term historical levels, then there may be more agreement among economists about present value and damages in personal injury cases. Until then, training and style may remain big influences on economic opinion, and attorneys will benefit from knowing whether a given economist has expertise in financial economics, and whether they use current yields or instead historical average yields as discount rates.

Endnotes

1 Scott Gilbert is an associate professor of economics at Southern Illinois University-Carbondale. He is also a principal of the economic consulting company Gilbert Economics. He received his Ph.D. in economics from the University of California at San Diego, and his research has appeared in leading economics and statistics journals.

2 Available at http://quotationspage.com/quote/George_Bernard_Shaw.

3 462 U.S. 523 (1983).

4 *Id.* at 524.

5 During the period 1939-2010, the annual U.S. inflation rate was positive in all but four years. See the *Economic Report of the President* (2011), available at <http://www.gpoaccess.gov/eop/tables11.html>. Table B-64, second column.

6 *Jones*, 462 U.S. at 524.

7 *Culver v. Slater Boat Co.*, 722 F.2d 114, 117 (5th Cir. 1984).

8 In case law, the trier of fact may receive evidence on the present value of future damages from the plaintiff and/or defense, but in lieu of such evidence may determine present value independently, with or without special instruction. As technical issues surrounding

present value calculation can be burdensome, some recent higher court rulings have acted to protect the trier of fact from a need to explicitly consider them when determining economic damages. For example, the Supreme Court of Missouri, in *Anglim v. Mo. Pac. R.R. Co.*, 832 S.W. 2d 298, 209 (Mo. banc 1992), states that “either plaintiff or defendant may offer present value evidence, but whether or not such evidence is offered, the subject is open to jury instruction if requested and to jury argument.” In a case before the 8th Circuit Court of Appeals (*Crane v. Crest Tankers, Inc.*, 47 F.3d 292 (8th Cir. 1995)), at trial there was no expert testimony on economic damages but a “present value” table was offered into evidence and provided to the jury. The circuit court ruled that this evidence was admitted in error, and remanded the case for a new trial out of concern that the jury’s damage award was biased due to possible use of the present value table.

9 The December-to-December inflation rate

for the year 2010 was 1.6 percent, whereas the average inflation rate for the period 1939-2010 was 4.1 percent, which I calculate from the published rates. See Economic Report of the President 2011, *available at* <http://www.gpoaccess.gov/eop/tables11.html>.

10 Official U.S. Administration forecasts predict relatively low inflation rates for the next decade, 1 percent to 2.1 percent. See Economic Report of the President 2011, *available at* <http://www.gpoaccess.gov/eop/tables11.html>. Table 2-1.

11 Michael L. Brookshire, Michael R. Luthy & Frank L. Slesnick, *A 2009 Survey of Forensic Economists: Their Methods, Estimates, and Perspectives*, 21 J. FORENSIC ECON. 18 (2009).

12 The remaining respondents used various other methods to obtain discount rates.

13 See the *Economic Report of the President* (2011) Table B-73 for yields by year. From these yields, I calculate the averages reported in the paper. *Available at* <http://www.gpoaccess.gov/>

[eop/tables11.html](http://www.gpoaccess.gov/eop/tables11.html).

14 Many forensic economists belong to the National Association of Forensic Economists (NAFE). Of the 600+ current NAFE members, in the online member listing some have e-mails linked to websites that identify their work as economists, but I have found none (aside from my own) that describes their discount rate method in terms of current versus average yield.

15 No bonds are entirely riskless, as evidenced by the recent federal debt downgrade.

16 In *Jones*, discounting is the act by which future earnings are reduced to present value.

17 In decimal form, such as $r = 0.05$ for a five percent yield.

18 This is closely related to the concept of fair market value in the context of pensions. For relevant discussion, see Scott Dale Gilbert, *The Value of Future Earnings in Perfect Foresight Equilibrium*, 22 J. FORENSIC ECON. 21, 27-29 (2011).

19 See Brookshire at 18.

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