

**The Timing of Present Value of Damages: Implications of Footnote 22  
in the Pfeifer Decision**

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**Introduction**

Most forensic economists calculate the present value of damages as of the expected date of trial. In general, past damages are presented without adjustment for interest, while future damages are reduced to present value by discounting for future interest from the date of the trial. This makes a damages assessment a hybrid of past actual damages and future discounted damages. In wrongful termination cases, this is mandated in the form of "back pay" and "front pay" calculations, but it is not mandated in cases involving personal injury and wrongful death. In fact, in federal cases, if there is any mandate at all, the mandate is in opposition to the method most forensic economists use. While it is not technically controlling for cases other than FELA and Jones Act personal injuries, *Jones & Laughlin Steel Corp. v. Pfeifer* (1983) is the de facto ruling case on methods to be used in federal personal injury cases. Footnote 22 of the *Pfeifer* decision lays out a different, but very specific method to be followed when calculating the present value of damages in personal injury actions. This paper discusses the implications of that method, both in terms of accuracy and in terms of the legal resolution of issues of controversy among forensic economists.

**Footnote 22 of the *Pfeifer* Decision**

The entire text of footnote 22 of the *Pfeifer* decision is as follows:

At one time it was thought appropriate to distinguish between compensating a plaintiff "for the loss of time from his work which has occurred up to the time of trial" and compensating him "for the time which he will lose in [the] future." C. McCormick, *Damages* § 86 (1935). This suggested that estimated future earning capacity should be discounted to the date of trial, and a separate calculation should be performed for the estimated loss of earnings between injury and trial. *Id.* §§ 86, 87. It is both easier and more precise to discount the entire lost stream of earnings back to the date of injury--the moment from

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which earning capacity was impaired. The plaintiff may then be awarded interest on that discounted sum for the period between the injury and judgment, in order to ensure that the award when invested will still be able to replicate the lost stream. See *In re Air Crash Disaster Near Chicago, Illinois, on May 25, 1979*, 644 F.2d 633, 641-646 (CA7 1989); 1 Speiser § 8:6, p. 723.

### The Ease and Precision of the Footnote 22 Method

As the text of this footnote suggests, it is both easier and more precise to calculate the present value of damages as of the time of the injury than to use the hybrid methods currently used by most forensic economists. However, the precision and accuracy of this method depends on whether the trial court judge awards pre-trial interest and how reasonable the award is for the period between the injury and the judgment that awards damages.

If the calculation of damages is back to the point of injury, the entire loss is treated as a future loss from that point in time. While such a calculation results in a smaller present value because of a longer discounting period, the addition of pre-trial interest at an interest rate equal to the rate used for discounting results in a larger damages award than methods currently in use by forensic economists. This is illustrated in Tables 1 and 2 below.

In Table 1, it is assumed that a worker is totally disabled as of the end of 1994. The earnings base for 1995 is \$25,000 and losses are calculated as of the end of the year 2000 in the fashion used by most forensic economists. The discount rate is assumed to be 5.46 percent and the wage growth factor is assumed to be 3.34 percent for a projected worklife of 16 years of earnings losses. As is shown, the injured worker has six years of past damages with no addition of pre-trial interest and ten years of future earnings reduced to present value as of the end of the year 2000, for a total damage amount of \$428,636. In Table 2, the present value of damages estimate is reduced to \$336,231 as of the end of 1994. However, with the addition of six years of interest at 5.46 percent per year, the present value increases to \$476,314, a gain of \$47,678.

Note that if pre-trial interest were added in the correct amounts based on 5.46 percent for each of the six years of past losses in Table 1, the resulting figure would be the same as the figure with interest in Table 2. However, to expect that the trial court judge will have added six years of pre-trial interest to 1995 earnings, five years of pre-trial interest to 1996 earnings, four years to 1997 earnings and so forth is to expect a level of sophistication many judges would not have. It is not clear that all judges would have the sophistication to correctly add 5.46 percent for six years to the present value

of \$346,231, but it is certainly an easier and more precise calculation, as indicated in the text of the footnote. Whether it is more accurate depends on the calculation skills of the judge and statutory requirements relating to the addition of pre-trial interest.

**Table 1. Earnings Losses by Common Method**

Year	Age	Lost Earning	Present Value	Cumulative
1995	48	\$25,000	\$25,000	\$25,000
1996	49	\$25,848	\$25,848	\$50,848
1997	50	\$26,725	\$26,725	\$77,573
1998	51	\$27,631	\$27,631	\$105,204
1999	52	\$28,569	\$28,569	\$133,773
2000	53	\$29,538	\$29,538	\$163,311
2001	54	\$30,540	\$28,959	\$192,269
2002	55	\$31,576	\$28,391	\$220,660
2003	56	\$32,647	\$27,834	\$248,494
2004	57	\$33,754	\$27,288	\$275,783
2005	58	\$34,899	\$26,753	\$302,536
2006	59	\$36,083	\$26,229	\$328,765
2007	60	\$37,307	\$25,714	\$354,479
2008	61	\$38,573	\$25,210	\$379,689
2009	62	\$39,881	\$24,716	\$404,405
2010	63	\$41,234	\$24,231	\$428,636

Based on a discount rate of 5.46 percent and a wage growth rate of 3.34 percent for a 16 year worklife expectancy.

**Table 2. Earnings Losses by Footnote 22 Method**

Year	Age	Lost Earning	Present Value	Cumulative
1995	48	\$25,000	\$25,000	\$25,000
1996	49	\$25,848	\$24,510	\$49,510
1997	50	\$26,725	\$24,029	\$73,539
1998	51	\$27,631	\$23,558	\$97,097
1999	52	\$28,569	\$23,096	\$120,193
2000	53	\$29,538	\$22,643	\$142,836
2001	54	\$30,540	\$22,199	\$165,036
2002	55	\$31,576	\$21,764	\$186,800
2003	56	\$32,647	\$21,337	\$208,137
2004	57	\$33,754	\$20,919	\$229,056
2005	58	\$34,899	\$20,509	\$249,565
2006	59	\$36,083	\$20,107	\$269,671
2007	60	\$37,307	\$19,712	\$289,383
2008	61	\$38,573	\$19,326	\$308,709
2009	62	\$39,881	\$18,947	\$327,656
2010	63	\$41,234	\$18,575	\$346,231
			with interest	\$476,314

Based on a discount rate of 5.46 percent and a wage growth rate of 3.34 percent for a 16 year worklife expectancy. The final figure includes six years of pre-trial interest at 5.46 percent.

## Why the Customary Method Can Result in Double Interest Addition

Pre-trial interest is a very complex issue in law that is not ordinarily confronted by forensic economists. "A Primer on Prejudgment Interest" by Michael S. Knoll (1996) should be required reading for all forensic economists. Forensic economists do deal with the issue, but only in the sense that forensic economists do not add pre-trial interest to past damages, and this can be the source of confusion. Assume that a forensic economist presented the damage amount listed in Table 1, which was \$428,636, and that the jury awarded this amount. Assume further that the trial court judge believed that the amount awarded was free of pre-trial interest and therefore added six years of interest at 5.46 percent to that amount. The result would be an award to the plaintiff of \$589,679, which would represent \$113,365 more than the correct value of \$476,314. This difference consists of double counting of interest on the future damages amount from the date of the injury to the date of the trial. By not calculating the present value of future damages back to the date of injury, the present value of future damages already contains implicit interest from the date of the injury to the judgment. If the trial court judge then adds pre-trial interest to that amount for the period from the injury to the judgment, interest has been added twice. Note that the error involved is substantially greater than the difference between the present value at the time of injury versus the time of judgment.

## Practical and Statutory Aspects of Pre-trial Interest

Because forensic economists are usually not involved with the calculation of pre-trial interest, a kind of myopia tends to develop. The underlying justification for the manner that is customarily used to calculate damages is a presumption that the amount awarded by the jury will be the amount given to the plaintiff and that no pre-trial interest will be added. The fundamental truth, however, is that most forensic economists really do not know what happens to most awards that are made. In many cases and probably most, the period between the injury and the judgment is short enough that pre-trial interest is not a critical issue. If past damages consist of only one or two years, differences fall within a ten to fifteen percent range. However, this also means that in those cases where there is a substantial period of past damages they may be treated in the same way as cases with only very small past damages, but with a substantially greater distortion of the outcome. This writer is not aware of any literature that looks at whether or not pre-trial interest is really awarded at the trial court level, regardless of what is supposed to happen. If judges should be adding pre-trial interest, as presupposed by the Footnote 22 Method, but are not actually doing so, the

customary method used by forensic economists will result in more accurate outcomes. If judges are adding pre-trial interest, the customary method used by forensic economists will result in a larger distortion of outcomes.

A second problem is that many legal venues have statutory or prescriptive rules for pre-trial interest that result in financially inaccurate outcomes. In some constituencies, pre-trial interest rules still reflect a hangover from the great inflation of the 1970s and early 1980s. Pre-trial interest rates of 9 or 10 percent give plaintiffs some incentive not to worry about early resolution of outstanding damages in the context of current economic conditions. In other constituencies, prejudgment interest rules using five percent simple interest give defendants an incentive to continue appeals. At 5 percent simple interest per year on damages, defendants may continue appeals for a decade or longer (Knoll 1996). Using the examples provided in Tables 1 and 2, one can easily see how different rules for pre-trial interest can result in different degrees of distortion, creating incentives for one litigating party or the other to engage in delaying tactics.

### When is the "Time of Injury?"

In footnote 22 of the *Pfeifer* decision, it is presumed that the time of injury is also the moment from which earning capacity was impaired. In the theoretical sense, this must be true because the injury is presumed to be the proximate cause of the resulting damages. However, some injuries are such that the worker returns to work relatively quickly after the injury itself and continues to work without earnings loss for some substantial period before complications of the injury begin to cause earnings losses. In such circumstances, the question becomes whether "injury" refers to the physical injury or the beginning of financial damages caused by the injury. It is not uncommon to see cases in which financial damages do not begin to occur until a year and a half after the physical injury. If the method described in footnote 22 was performed correctly with a prejudgment interest rate that was the same as the discounting rate used to reduce losses to present value as of the time of the injury, it would not matter whether the point of injury was assumed to be the date of the physical injury or the date of the first harm. However, if statutory rules for prejudgment interest favored the plaintiff, it would be in the plaintiff's interest to argue in favor of the date of the physical injury. Likewise, if statutory rules for prejudgment interest favored the defendant, it would be in the defendant's interest to argue in favor of the date of the physical injury. If this decision is made by a judge and attorneys for both sides with limited financial sophistication, the results may not be predictable, even in a theoretical sense. This is an area where

attorneys should seek advice from their forensic economists, but this writer has never heard of such consultation occurring.

### **Impact of Footnote 22 on Other Controversies in Forensic Economics**

Forensic economists have areas of disagreement that depend on the starting point from which a calculation should be made. For example, one of the negative worklife contingencies that limits future earnings estimates is the possibility of mortality during the projected earnings period. Suppose, as in the example underlying Tables 1 and 2, that the injury took place at the end of 1994 and the trial is occurring at the end of 2000. The worker has not died during the period during the six year period of past losses. Projected as of the date of the injury, there was some probability of mortality during the period from the injury to the judgment. The fact that the individual remains alive after the past damages period is not an absolute guarantee that he might not have died during that period, but it surely reduces the probability of mortality very significantly. Footnote 22 seems to suggest that damages should be calculated on the basis of all information known at the time of the injury, which does not include the subsequently revealed information that the individual has, in fact, survived through the damage period.

Someone could calculate the survival probability as 1.000 for years between the injury and the trial, but is that consistent with the spirit of the method? The spirit of the method appears to suggest that the point of injury defines the damages--that the worker lost the present value of what the worker could reasonably have expected at the moment of the injury. Such a perspective would favor a calculation of worklife on the basis of the worklife factors known at the point of injury and not the worklife factors that would have existed if the worker had lived and worked to the age the worker would have had on the date of the trial. However, pattern jury instructions do not typically instruct the jury to take the perspective that all variables should be considered without regard to what information may have been subsequently revealed in the period between the injury and the date of the judgment. If the worker has since died due to a circumstance that was obviously unrelated to the injury (heart attack, cancer, and so forth), it seems quite likely that a jury would take that into account in reaching its decision. Why would it not follow that the jury would also take fully into account the fact that the worker is still living at the time of the trial?

However, such mortality factors as criminal attack, automobile accident, freak of nature accidents and so forth are conditional on time and place. Those types of mortality considerations are presumably the same for the damage period, as they would have been projected to be at the time of the

injury. In other words, survival from the point of injury to the point of judgment significantly alters survival probabilities in favor of the plaintiff, but it does not absolutely guarantee survival during that period. This, however, is a point of sophistication that may well have no usefulness in jury deliberations, which already involve degrees of complexity that challenge the average jury pool. Case law in some venues seems to favor assuming factors in existence at the point of injury, whichever point that is, but case law in other venues seems not to address this issue at all. This writer is not aware of any rulings that explicitly allow consideration of information about survival probabilities that have become known because of the survival of the injured party to the point of judgment. On the other hand, there appear to be no rules that prohibit such information from being taken into account in those venues.

### Concluding Remarks

This short paper has raised many more questions than it has been able to answer. It has hopefully demonstrated how the customary method used for calculating past damages and future damages separately can result in serious distortion if judges add pre-trial interest in the manner presumed in footnote 22 of the *Pfeifer* decision. However, the more important conclusion of this paper is more subtle. Forensic economists need to be more aware of the issues posed by how the legal system awards pre-trial interest. Reading Michael Knoll's important paper (1996) on this subject is an important way to start developing that awareness.

### References

- Knoll, Michael S. 1996. "A Primer on Prejudgment Interest." *Texas Law Review* 75(2): 293-374.
- Jones & Laughlin Steel Corp. v. Pfeifer*, 462 U.S. 523, 103 S. Ct. 2541, 76 L. Ed. 2<sup>nd</sup> 768 (1983).