TECHNICAL NOTE

Kelly, O'Shea and *Pfeifer*: What Guidance Is Given for Discount Rates?

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Abstract

Most forensic economists are generally aware of the guidance given by the United States Supreme Court in *Jones & Laughin Steel Company v. Pfeifer* (1983) with respect to the selection of discount rates, the three methods of calculation discussed in that decision, and the level of scrutiny that will be applied. Parts of that decision, however, are misunderstood as the result of not considering two antecedents of the *Pfeifer* decision. The "best and safest" language that described risk levels for discount rates in *Pfeifer* came from the United States Supreme Court decision in *Chesapeake & Ohio v. Kelly* (1916). The methodology being considered in *Pfeifer* may have come from or been influenced by a decision of Judge Richard Posner for the 7th Circuit in *O'Shea v. Riverway Towing* (1982) that was reached one year earlier than *Pfeifer*. This short paper reviews the impact and possible impact of *Kelly* and *O'Shea* on how the guidance on selection of discount rates and "below market" discount rates in *Pfeifer* should be understood by forensic economists.

Introduction

More than with any other type of expert reports and testimony, forensic economists must conform their calculations to the strictures of law. Even though ordinary financial analysis requires that interest be added to past payments when calculating the present value of that stream, economic experts cannot ordinarily add "pre trial" interest. Collateral source rules prevent calculations of actual damages in favor of "virtual" damages in the absence of collateral sources. Economic experts must calculate lost financial support to a spouse as if the spouses would have remained married to each other until one of them would have died a natural death even if one of the spouses had filed for divorce, and so forth. Nowhere is this more important, however, than in the area of the interest rates that economic experts use as discount rates to calculate the present values of damages in personal injury and wrongful death actions. The federal courts have spoken about the manner in which discount rates should be chosen, but they have not spoken clearly. State courts have often avoided even that limited guidance, so that unclear federal standards are often followed in state cases simply for lack of an alternative.

This note is about the guidance courts have given about discount rates in three decisions: *Chesapeake & Ohio Railway Company v. Kelly* (1916); *O'Shea v. Riverway Towing Company* (1982); and *Jones & Laughlin Steel Corp. v. Pfeifer* (1983). *Kelly* and *Pfeifer* were decisions of the Unites States Supreme Court. *O'Shea* was a decision of the 7th Circuit Court of Appeals that was written by Judge Richard A. Posner that many have argued contains the example that was used in the *Pfeifer* decision. A paper by Wolfson and Wolfson (2002) is closely related to this paper, but focuses on legal requirements in the 5th Circuit whereas this paper focuses the United States as a whole. This paper is written from the perspective that Pfeifer defines legal requirements in both FELA (Federal Employers Liability Act) cases and in cases decided under federal maritime law, but has also been adopted as having considerable relevance in FTCA (Federal Tort Claims Act) cases and in other types of cases governed by federal legislative acts.

Discounting and "Best and Safest Investments" in *Kelly*

Chesapeake & Ohio Railway Company v. Kelly (1916) is a decision relevant to how a forensic economist should use discount rates for two reasons. First, this decision of the United States Supreme Court definitively held that damage awards should be reduced to present value. Second, this was the decision from which the language, "the best and safest investments," was taken as the basis announced in *Pfeifer* for selection of a discount rate to be used in reducing future damages to present value. Kelly was a wrongful death decision under the relatively new Federal Employer's Liability Act (1908). Kelly reverses a decision of the trial court, affirmed by the Court of Appeals of Kentucky, holding that future damages did not have to be reduced to present value. As the following section of the decision will indicate, the

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reasons for discounting and the "best and safest" nature of the investment assets that should be assumed for purposes of determining a discount rate are closely intertwined in the *Kelly* decision:

> The damages should be equivalent to compensation for the deprivation of the reasonable expectation of pecuniary benefits that would have resulted from the continued life of the deceased . . .so far as a verdict is based upon the deprivation of future benefits, it will afford more than compensation if it be made up by aggregating the benefits without taking account of the earning power of the money that is presently to be awarded. It is self-evident that a given sum of money in hand is worth more than the like sum of money payable in the future. Ordinarily a person seeking to recover damages for the wrongful act of another must do that which a reasonable man would do under the circumstances to limit the amount of damages. . . And the putting out of money at interest is at this day so common a matter that ordinarily it can not be excluded from consideration in determining the present equivalent of future payments, since a reasonable man, even from selfish motives, would probably gain some money by way of interest upon the money recovered. Savings banks and financial institutions are in many cases accessible for the deposit of moderate sums at interest, *without substantial danger of loss; the sale of annuities is not unknown*; and, for larger sums, state and municipal bonds and other securities *of almost equal standing* are commonly available (italics added for emphasis).

For clarification, the *Kelly* Court also added:

> We do not mean to say that the discount rate should be at what is commonly called the "legal rate" of interest; that is, the rate limited by law, beyond which interest is prohibited. It may be that such rates are not obtainable upon investments on safe securities, at least without the exercise of financial experience and skill in the administration of the fund; and it is evident that the compensation should be awarded upon a basis that does not call upon the beneficiaries to exercise such

> skill, for where this is necessarily employed the interest return is in part earned by the investor rather than by the investment. This, however, is a matter than ordinarily may be adjusted by scaling to rate of interest to be adopted in computing the present value of the future benefits; it being a matter of common knowledge that, as a rule, the best and safest investments, and those that require the least care, yield only a moderate return.
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> We are not in this case called upon to lay down a precise formula, and it is not our purpose to do this, but merely to indicate some of the considerations that support the view we have expressed that, in computing the damages recoverable for the deprivation of future benefits, the principle limiting the recovery to compensation requires that adequate allowance is made, according to circumstances, for the earning power of money; in short, that when future payments or other pecuniary benefits are to be anticipated, the verdict should be made up on the basis of their present value only.
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> We are aware that it may be a difficult mathematical computation for the ordinary juryman to calculate interest on deterred payments, with annual rests, and reach a present value. Whether the difficulty should be met by admitting the testimony of expert witnesses, or by receiving in evidence the standard interest and annuity tables in which present values are worked out at various rates of interest and for various periods covering the ordinary expectancies of life, it is not for us in this case to say. Like other questions of procedure and evidence, it is to be determined according to the law of the forum.

The requirement for present value discounting derives in the *Kelly* decision from the requirement to mitigate damages. The focus of the Kelly decision on "best and safest investments" for the determination of discount rates is based on what would be expected of a "reasonable man" to mitigate damages resulting from future losses. It should be noted that "safest" is not an absolute standard. The *Kelly* court gave examples to avoid creating a "formula." It provided examples rather than trying to provide tight

restrictions that would apply to each and every circumstance.

Methodology and Dicta in *O'Shea*

Margaret O'Shea was coming off duty as a cook on a towboat plying the Mississippi River at the time of her injury. She was 57 years of age and weighed 200 pounds at a height of 5' 7" tall. After her injury, Judge Posner described Margaret O'Shea as:

> [A] middle aged woman, very overweight, badly scarred on one arm and one leg, unsteady on her feet, in constant and serious pain from the accident, with no education beyond high school and no work skills other than cooking, a job that happens to require standing for long periods of time which she is incapable of doing. It seems unlikely that someone in this condition could find gainful employment at the minimum wage.

Margaret O'Shea's economist based his calculations of damages on the alternatives of six and eight percent wage growth and used a discount rate of 8.5 percent to discount future values to present values. Judge Posner found both the growth rate and discount rates to be too low under current market circumstances, but considered the differences to be offsetting. Losses were projected to age 65 without reduction for negative work-life contingencies. Judge Posner went on to say:

> There are (at least) two ways to deal with inflation in computing the present value of future wages. One is to take it out of both wages and the discount rate – to say to Mrs. O'Shea, "we are going to calculate your probable wage in 1990 on the assumption, unrealistic as it is, that there will be zero inflation between now and then; and to be consistent, we are going to discount the amount calculated by the interest rate that would be charged under the same assumption of zero inflation." Thus, if we thought Mr.s O'Shea's real (i.e., inflation free) wage rate would not rise in the future, we would fix her lost earnings in 1990 as $7200 and, to be consistent, we would discount that to present (1980) value using an estimate of the real discount rate. At two percent,

> this procedure would yield a present value of $5906. Of course, she would not invest this money at a mere two percent. She would invest it at the much higher prevailing interest rate. But that would not give her a windfall; it would just enable her to replace her lost 1990 earnings with an amount equal to what she would in fact have earned in that year if inflation continues, as most people expect it to do. (If people did not expect continued inflation, long-term interest rates would be much lower; those rates impound investors' inflationary expectations.)
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> An alternative approach, which yields the same result, is to use a (higher) discount rate based on the current risk-free 10-year interest rate, but apply that rate to an estimate of lost future wages that includes expected inflation. Contrary to Riverway's argument, this projection would not require gazing into a crystal ball. The expected rate of inflation can, as just suggested, be read off from the current long-term interest rate. If that rate is 12 percent, and if as suggested earlier the real or inflation-free interest rate is only one to three percent, this implies that the market is anticipating 9-11 percent inflation over the next ten years, for a long-term interest rate is simply the sum of the real interest rate and the anticipated rate of inflation during the term.

In the *O'Shea* decision, Judge Posner added dicta of his own about issues that were not raised by Riverway Towing Company in its appeal. For those unfamiliar with the term, "dicta" refers to comments made by a judge in an opinion that were not necessary for reaching the opinion that was reached. In that sense, "dicta" should be understood as unsolicited observations by a judge which could nevertheless have an influence on what future judges decided was reasonable in future decisions. Judge Posner's first observation was that the plaintiff economist's assumption that Margaret O'Shea could have worked to age 65 was a certainty assumption that could have been challenged on the basis that the probabilities were less than 100 percent that she would work each year to that age. In this discussion, Judge Posner is suggesting using work-life probability estimates along the lines of an LPE methodology. It is for this reason that Anthony Gamboa frequently references the *O'Shea* decision in promotional materials for Vocational Economics. In

context, however, Judge Posner is only offering an example of how work-life expectancy might be introduced into a forensic economic calculation of damages.

Judge Posner then points out a second issue that was not raised by Riverway Towing Company in its appeal:

> [T]he economist selected the 8.5 percent figure for the discount rate because that was the current interest rate on Triple A 10-year state and municipal bonds, but it would not make sense in Mrs. O'Shea's federal income tax bracket to invest in tax-free bonds. If he wanted to use nominal rather than real interest rates and wage increases (as we said was proper), the economist should have used a higher discount rate and a higher expected rate of inflation. But as these adjustments would have been largely or entirely offsetting, the failure to make them was not critical.

This passage focuses on the fact that Margaret O'Shea had been earnings such a low income that she should not have invested in tax-free bonds. This is not a criticism of tax-free bonds, as such, but only their fit to the circumstances of Mrs. O'Shea. However, Judge Posner did not go on to point out that if another tax liable interest rate had been used, some sort of tax adjustment might need to be made for tax liability generated by that discount rate.

Essential Points in *Pfeifer* about Discount Rates

The immediate issue in *Pfeifer* arose from an appeal of the decision from the Supreme Court of Pennsylvania, The Pennsylvania Supreme Court had held in *Kaczkowski v. Bolubąsz* (1980) that a total offset between inflation and the interest rate used to reduce future values to present values should be used in all Pennsylvania personal injury cases. The *Pfeifer* decision held that decisions like *Kaczkowski v. Bolubasz* at the state level were not binding in federal actions under maritime and FELA legislative authorizations. This same message was sent to the Pennsylvania Supreme Court five years later in *Monessen Southwestern Railway v. Morgan* (1988) when an attempt was again made to impose Pennsylvania standards on an FELA case. As indicated

in Wolfson and Wolfson (2002), the *Monessen* decision was ultimately determined by the 5th Circuit to have reversed *Culver II* (1983) for similar reasons. The *Pfeifer* decision was insistent that it was not choosing one method "for all time," but providing a general framework for how damage calculations should be made.

Pfeifer affirmed the U.S. Supreme Court's own decision in *Norfolk & Western R. Co. v. Liepelt* (1980) that earnings losses should be calculated on an after-tax basis and that tax implications of the discount rate used to determine present values should also be taken into account in damage projections. *Pfeifer* also indicated that three methods might be used to prepare estimates of damages, two of which were the same as or similar to the two methods discussed by Judge Posner in the *O'Shea* decision. The third "method" was the total offset method that had been used at the trial court level and sanctioned by the Pennsylvania Supreme Court before reversal at the U.S. Supreme Court level. This method could only be used if supported by the evidence and was least allowed. The *Pfeifer* Court allowed use of nominal projections of wage increase and current discount rates in a method that has since come to be called the "case by case" method, but expressed a preference for use of what it called a "below market discount rate." The language used for the "case by case" and "below market discount rate" methods is important:

> In calculating an award for a longshoreman's lost earnings caused by the negligence of a vessel, the discount rate should be chosen on the basis of the factors that are used to estimate the stream of lost earnings. If the trier of facts relies on a specific forecast of the future rate of price inflation, and if the estimated lost stream of future earnings is calculated to include price inflation along with individual factors and society factors, then the proper discount rate would be the after-tax market interest rate. But since specific forecasts of future price inflation remain too unreliable to be useful in many cases, it will normally be a costly and ultimately unproductive waste of longshoremen's resources to make forecasts as the centerpiece of litigation under § 5(b). As Judge Newman has warned: "the average accident trial should not be converted into a graduate seminar on economic forecasting." Doca v. Marina Mercante Nicaraguense, S.A., 634 F.2d, at 39. *For that reason, both plaintiffs and trial*

> *courts should be discouraged from pursuing that approach.* (Italics added for emphasis.)
>
> On the other hand, if forecasts of future price inflation are not used, it is necessary to choose an appropriate below-market discount rate. As long as inflation continues, one must ask how much should be offset against the market rate. Once again, that amount should be chosen on the basis of the same factors that are used to estimate the lost stream of future earnings. If full account is taken of the individual and societal factors (excepting price inflation) that can be expected to have resulted in wage increases, then all that should be set off against the market interest rate is an estimate of future price inflation. This would result in one of the "real interest rate" approaches described above. Although we find the economic evidence distinctly inconclusive regarding an essential premise of these approaches, we do not believe a trial court adopting such an approach in a suit under § 5(b) should be reversed if it adopts a rate between 1 and 3% and explains its choice.

The language that has been italicized for emphasis may be the reason for the decision of the 5th Circuit to mandate use of the "below market discount rate" method for use in the 5th Circuit in *Culver II* (1983). It is clear, however, from subsequent decisions, particularly *Monessen* in 1988, that both the "case by case" and "below market discount rates" methods will be accepted.

References

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