PENSION TREATMENT UNDER THE COLLATERAL SOURCE RULE

By Joseph I Rosenberg

Joseph I. Rosenberg, CFA, LLC (jrosenberg123@gmail.com)

I. ABSTRACT

Collateral source rules typically prohibit the admission of evidence that the plaintiff or victim has received compensation from some source other than from the defendant. Common sources of collateral source income include unemployment insurance, medical insurance, Social Security and Medicare benefits, and pensions. One common rationale for the collateral source income exclusion is the idea that such benefits may be viewed as part of the employment contract and thus the tortfeasor is not entitled to credit for them.

Exclusion of pension benefits as one collateral source offset to earnings loss is well established in federal courts and many state jurisdictions. Nonetheless, some limited discretion has been afforded to lower courts on appeal by allowing selected information pertaining to a plaintiff's pension, including possible incentives to retire at a particular age. A more interesting and possibly complex exception involves allowing pensions that are already being received by injured plaintiffs (or survivors of a decedent in a death case) to be presented by defense as offsets to lost pension benefits. This and other issues involving pensions as a collateral source income are examined in this paper.

II. INTRODUCTION

Collateral source rules (CSR) typically prohibit the admission of evidence that the plaintiff (or decedent's survivor) has received compensation from some source other than from the defendant. Common types of collateral source income include unemployment insurance, medical insurance, life insurance, Social Security and Medicare benefits, and pensions. One rationale for the collateral source income exclusion is the idea that such benefits may be viewed as part of the employment contract, and thus the tortfeasor/defendant is not entitled to credit for such benefits. Several courts also have referenced the idea that the purpose of the collateral source rule is not to prevent the plaintiff from being overcompensated, but rather to prevent the tortfeasor from paying twice. If the employer is the source of the funds at issue, then the payments can be deducted from the award. However, if employees earn the benefits as part of their compensation, the payments should not be subject to an offset. Evidence of medical insurance payments to an injured plaintiff has been the main exception to the inadmissibility of collateral source income, especially in malpractice cases as well as in the free provision of medical services.

Exclusion of pension benefits as one collateral source offset to earnings loss is well established in federal courts and many state jurisdictions. Nonetheless, some limited discretion has been afforded to lower courts on appeal by allowing selected information pertaining to a plaintiff's pension, including possible incentives to retire at a particular age. More interesting and in some ways more complex exceptions involve whether to allow as offset to the loss of a regular pension, evidence of disability pensions being received by injured plaintiffs, or of death benefits in the form of a survivor's pension provided via a decedent's retirement plan. In a California injury case, a trial court was reversed on appeal for disallowing evidence of the plaintiff's disability pension benefit as a collateral income source; it ruled that disability pension benefits were admissible as an offset to future lost pension benefits, but not as an offset to future lost earnings. This same California case was cited in a Delaware case, in which the trial court was reversed on appeal for not allowing the value of the survivor's existing pension benefit to be introduced as an offset to the decedent spouse's potential future pension benefit. And in a Florida death case, a trial court was also reversed, rejecting the idea that a death benefit was equivalent to "life insurance" which would have been prohibited under the CSR, instead noting that this benefit was created under a city's retirement plan and hence allowed its admission as evidence.

Case laws in many states are silent on nuanced pension issues such as the above. Where case law is silent, FE's may differ on whether disability and/or survivor's pensions should be considered at all, and if so, what losses are they offsetting, and how such pension offsets to losses should be valued. These and related issues involving pensions as a collateral source income are examined in this paper, including their resolution in a recent case in which the author was involved, resulting in a very satisfactory out-of-court settlement.

III. BACKGROUND

Many books and articles have been written about CSRs and their evolution as part of American tort law. According to Melancon and Brilleaux (2012), the CSR first appeared in American tort law via the United States Supreme Court decision "The Propeller Monticello v. Mollison, 58 U.S. 152 (1854)". In that case dealing with admiralty action, the Supreme Court ruled that damages awarded to the plaintiff should not be reduced by the amount of insurance proceeds that the plaintiff received. The principal that collateral benefits could not be considered in determining the recovery to which a plaintiff was entitled was applied from common law, and ultimately was adopted by the American Law Institute in its Restatement of Law (Second) of Torts:

> "Payments made to or benefits conferred on the injured party from other sources are not credited against the tortfeasor's liability, although they cover all or part of the harm for which the tortfeasor is liable", referenced in Melancon and Brilleaux, p. 1-2.

A comprehensive listing of other background sources on collateral source issues is beyond the scope of this paper. However, a good review of historical literature on this topic is contained in Schap and Feeley (2008). That article addressed various arguments, pro and con, involving the CSR and its purported facilitating of double recovery by the victim, as well as

various statutory reform efforts underway at that time. Schap and Feely examined all 50 states and other U.S. jurisdictions to identify and categorize the various reform efforts. The statutory reform efforts described in this article apparently were focused on issues with the largest public policy and expense implications for government at all levels. Not surprisingly, focus was on awards under which CSRs affected medical insurance premiums, and malpractice awards in particular.

Nine years later, in 2017, Feely and Schap, along with Horan, updated the 2008 article and broadened the number of major categories of statutes across all U.S. jurisdictions involving the CSR, from six to eight, summarized (in some cases modestly abridged here) as follows:

- Status of Collateral Source Rule (modified or eliminated);
- Insurance (payments from an insurer may or may not be considered as evidence);
- Medical Malpractice (whether evidence of collateral source payments may be introduced, or only introduced in such cases);
- Award Reductions (awards reduced for collateral source income received prior to verdict or either prior to or expected after verdict)
- Public Sector Collateral Sources (exception to ordinary CSR exists for any federal program or exception exists for worker's compensation program)
- Subrogations and Liens (collateral source payments may not be introduced if the source of the payment has a right of subrogation against the proceeds of plaintiff's recovery)
- Miscellaneous (exception for violent crime victim compensation).

Nothing specific to the either disability or survivor's pension under CSRs was mentioned in this article (Feely, Horan and Schap 2017). It appears that only by reviewing case law decisions across various jurisdictions can some clarity be provided about how CSRs are applied in damage calculations pertaining to pensions as a potential collateral income source.

To begin trying to categorize CSRs pertaining to pensions across jurisdictions, an in-depth review of case law was conducted using the various compilations of legal decisions of interest to Forensic Economists. Such compilations exist in databases maintained on line and accessible to all, by Thomas Ireland, Professor Emeritus of Economics (University of Missouri, St. Louis). His case law databases are accessible via links on his website: http://www.umsl.edu/~irelandt/index.html. In addition, structured searches of Dr. Ireland's data bases can be performed via a website maintained by David Boyd: https://forensicsdb.denison.edu/. Although another comprehensive case law database is accessible from LexisNexis on a subscription-only basis, most relevant decisions at the appellate level, except those going far back in time, are also obtainable without subscription via other free online sources such as Google Scholar (https://scholar.google.com/), Justia (https://www.justia.com/) and CaseText (https://casetext.com/).

Using the above free websites, case laws pertaining to pension treatment under the collateral source rule across all U.S. jurisdictions were reviewed and categorized. That is the subject of the next section.

IV. IMPORTANT INJURY, DEATH, AND EMPLOYMENT LAW CASES INVOLVING COLLATERAL SOURCE RULE (CSR) AND PENSIONS

Many Federal and state cases have involved the application of the CSR to pensions, either in whole or in part. Any selection of the most important of such cases, as well as the grouping of them by subtopic, requires some subjectivity. Here, a total of 23 cases were selected and grouped into five subtopic areas. A brief discussion of each subtopic area with the selection of the most salient of the 23 cases by subtopic area is covered in this section, below. More detailed summaries of all 23 cases are provided in Appendix A to this report. All cases are categorized by type within each subtopic area as involving either employment law (EL); wrongful death (WD); or one of two groupings of personal injury (PI) cases, i.e., subject either to Federal Employers' Liability Act (FELA)[1] or not.

1. **<u>Cases Establishing CSR as Prohibiting Pensions of Any Type (Ordinary, Disability, And "Widows") to Offset Lost Earnings/Earning Capacity.</u> 6 cases in Appendix A: EL=4; WD=1, PI-FELA=1;**

Perhaps the first major case specifically prohibiting a disability pension to offset lost earnings was **Eichel v. N.Y. Central Railroad co., 1963 (PI-FELA)**. Here, the U.S. Supreme Court reversed an appeals court decision, stating that evidence of a disability pension as a collateral benefit is "readily subject to misuse by a jury". In **EEOC v. Grady, 1988 (EL)**, a plaintiff who was forced to retire at age 70 successfully sued his employer for age discrimination. Defense's appeal, arguing that ordinary pension benefits that plaintiff had received should be allowed to offset back pay, was rejected based on the concept that pension benefits were a collateral source and may be viewed as compensation earned by the employee. **In Hamlin v. Charter Twp. of Flint (EL),** an appeals court ruled that collateral pension benefits should not be deducted from an award for discrimination violations; and although it upheld the general principal that a district court has discretion in awarding front pay, it added "that the decision of whether to offset collateral pension benefits from a discrimination award is a policy decision that should not be left to the individual discretion of each district court." **In McKinney v. California Portland Cement Co., 2002 (WD),** the CSR was broadly applied in upholding the exclusion from evidence of a widow's benefit. Even though her deceased husband had previously retired and was drawing pension and Social Security benefits prior to his death, and even though widow's benefit came from the same source as husband's earnings, the appeals court ruled that these were considered as "new benefits" issued for the first time in her name as a direct result of the death, and hence could not be introduced under the CSR.

2. **<u>Unsuccessful Challenges to CSR as Applied to Pensions. 5 cases in Appendix A: EL=2; PI-FELA=2; WD=1;</u>**

Many challenges to the CSR as applied to pensions have been unsuccessful. In **Melton v. Illinois Central Gulf Railroad Co., 1988 (PI-FELA)**, a trial court reject defense's argument that its payments made under a voluntary disability plan should be deductible from an award, a ruling that was upheld, citing Eichel, above. **In CSX v. Day, 1993 (PI-FELA)**, the trial court sustained an objection by defense of an allegedly prejudicial statement in defense's closing argument, stating about plaintiff that "He hasn't worked long enough to receive a pension", creating the impression that he'd never be eligible for a pension even though he would have been eligible at age 60. Defense's appeal was rejected because it did not request the trial court to give a "curative instruction" to the jury. In **Ortner v. Enterprise Rent-A-Car co., 2008 (WD**), defense appealed a trial court's exclusion of the survivor's (or "widow's") pension, citing Rotolo decision (see Subtopic 3). Appeals court upheld trial court's exclusion, rejecting Rotolo logic, instead citing McKinney decision (see Subtopic 1) since decedent could not have both retired for disability and subsequently received his regular pension or vice versa. In **Mize-Kurzman v. Marin community College Dist. 2012 (EL),** trial court said jury was entitled to consider the "availability" to a plaintiff of a retirement pension, and that the extent to which it could reduce her damages was an issue of fact for the jury. Appeals court rejected this argument, citing McKinney among other cases that state pensions are independent income sources from state schools, and that the CSR is no different because compensation comes from a pension rather than an insurance policy.

3. **<u>Successful Challenges to CSR as Applied to Pensions. 4 cases in Appendix A: 2=WD; 1=PI-Non-FELA; 1=EL;</u>**

Perhaps the most successful challenge to the broad application of the CSR by excluding disability pensions in injury cases came in **Rotolo v. Superior Court of Co. of Sam Bernadino, 2003 (PI-Non-FELA).** Trial court excluded evidence of disability retirement benefits under California's CSR. Defense appealed and was upheld, with the court noting that it was appropriate to consider disability retirement benefits as a collateral source but only for replacing regular retirement benefits, and not for replacing lost earnings.[2] Although this case was cited in the Mize-Kurzman case (see Subtopic 2), it's logic in that case was rejected in favor of the McKinney decision (see Subtopic 1). However, there is at least one reason why the Rotolo logic is more appropriate in PI rather than WD cases: Not permitting a disability pension to offset a regular pension was viewed by the court as resulting in "triple compensation", i.e., lost income, lost regular retirement benefits, and receipt of actual disability retirement benefits, which the court called an "inequitable result". This contrasts somewhat with WD cases, in which the survivor's pension rather than a disability pension replaces the lost regular retirement pension. Perhaps because a survivor's pension is issued in a different person's

name, and is not the same as a disability pension, courts have issued mixed rulings on this (see Sears and Russo under this subtopic, below, which differ somewhat with McKinney (see Subtopic I). The court's logic in Rotolo was in part prefigured by **Oden v. Chemung Co, NY 1995 (PI-Non-FELA)**, which placed a restriction on a disability pension to only offset the value of a lost regular pension (see Subtopic 5.)

Among other successful challenges to the CSR were two WD cases applicable in other jurisdictions. In **Sears v. Midcap, 2006 (WD),** a trial court awarded damages to the widow that included loss of a military pension and Social Security benefits, but applying the CSR, it excluded the fact that the widow would continue receiving substantial portions of both in the future. The Delaware Supreme Court reversed this exclusion, and citing Rotolo (above), it stated that plaintiff "… cannot use [CSR] to prevent [defense] from introducing evidence that [plaintiff] is, in fact, receiving a pension." In **Russo v. Lorenzo 2011 (WD)**, similar to Sears, above, a trial court excluded mentioning the widow's benefit as a collateral source, and precluded defense from questioning about her continuing benefits from her late husband's retirement plan. Decedent was a police officer who had not yet reached retirement age, was not yet vested in the retirement plan, but the widow had begun receiving death benefits from the retirement plan. A Florida appeals court said that the question was whether the death benefit should be considered a pension, for which evidence was permissible, as opposed to life insurance, which was impermissible under CSR. The appeals court rejected the notion that participation in the retirement plan was equivalent to life insurance within the meaning of CSR, and permitted as evidence the continued payment of retirement plan benefits in the form of a widow's pension.

4. Qualifications Involving Admissibility of Evidence Pertaining to Age of Retirement. 4 cases in Appendix A: all PI-FELA.

Four PI-FELA cases are included in the appendix involving the admissibility of evidence retaining to age of retirement. One obvious reason why this is so relevant to FELA cases is that railroad workers with 30 years of service can retire at age 60 and earn almost as much after taxes from their pension as continuing to work full time (Hudgins and Ireland 2008). In fact, in a 2015 study by the Railroad Retirement Board, among "30/60" eligible workers during 2010-2012, the vast majority retire within a few years of reaching age 60 (59%, 47%, and 36% of those remaining who reached the ages 60, 61 and 62 (US RRB 2015, Table S-30, p. 74). Making juries aware of these statistics has been controversial in possibly implying that the availability of such pension benefits might induce plaintiffs to use injuries occurring around age 60 as an excuse to retire early. The four PI-FELA cases below all involve similar issues. To generalize, evidence of an employee/plaintiff's eligibility for retirement benefits at a particular age is not usually permissible, but statistics about the average retirement age of railroad workers are permissible.

In **Greiser v. National Railroad Passenger Corp., 2000**, a trial court permitted defense to ask plaintiff's expert if plaintiff retired at age 62 he would receive about as much from pension

benefits as from working. The PA Supreme Court reversed the trail court and disallowed this evidence as violating the CSR, citing Eichel (see Subtopic 1). In **Norfolk Southern Railway Corp. v. Tiller, 2008**, a trial court was upheld on appeal for precluding testimony about the "30/60" retirement policy under CSR, even though the appeals court acknowledged that such evidence was "both relevant and material". In CSX v. Pitts, 2013, an appeals court drew a fine distinction somewhat more limiting than a Special Appeals Court had permitted, stating that "… "…although retirement eligibility information in a FELA case is barred by the collateral source rule, statistics about average retirement age for railroad workers is not". In **Giza v. BNSF Railway Co., 2014**, citing CSX v. Pitts, the IOWA Supreme Court precluded evidence on the availability of retirement benefits for employees meeting the 30.60 criteria, but reversed the trial court's exclusion of evidence of the retirement pattern of railroad workers.

5. **<u>Qualifications Involving Admissibility of Evidence Not Pertaining to Age of Retirement.</u> 4 cases in Appendix A: 3=PI-Non-FELA; 1=WD.**

In **Oden v. Chemung Co. Industrial Development Agency, NY, 1995**, a trial court applied logic that was partially similar to the later Rotolo decision (see Subtopic 3) in allowing evidence of disability retirement benefits, but since the disability benefits exceeded the present value of lost future pension benefits, the trial court went beyond the argument in the later Rotolo case to reduce the total award. The Appeals court modified this verdict and adjusted the award upward to allow the disability pension only as a full offset to the regular pension loss, i.e., a "pension to pension" offset. In **Firmes v. Chase Manhattan, 2008, PI-Non-FELA,** a potential collateral source offset from SSDI (in effect, a disability pension), for which plaintiff was eligible but had not yet applied, posed a dilemma for defense: If defense filed for a collateral source offset hearing before the application was made it probably would have been disallowed because no such offset was yet in existence. However, once plaintiff had begun receiving SSDI, defense filed a post-trial motion for such an offset hearing, which was denied as being "untimely". It is unclear whether the same dilemma and results would be as likely to apply if this were a private disability pension case, given the typically shorter lead times for approval in cases involving private pensions vs. SSDI.

It should be noted that there are a number of PI-FELA cases pertaining to taxes that are paid by railroads to support railroad retiree pensions, and the admissibility of such taxes does affect the calculation of damages for lost earnings suffered by injured railroad workers. However, since these cases do not involve either the CSR nor disability pensions per se, no discussion of them is included in this paper.

V. COMPARISON OF METHODS ACCOUNTING FOR DISABILITY PENSIONS AS OFFSETS TO LOST REGULAR PENSIONS

It is clear from listserv discussions among FEs that opinions differ on how to account for disability pensions in PI cases where the loss of a regular defined benefit pension is part of the damage calculation. The most favorable methods to defense in PI cases have been sanctioned

by courts in the Rotolo and Oden cases (appeals courts in CA and NY, respectively). In these two cases, courts have permitted disability pension income entered into evidence from the time of injury such that its present value might at most fully offset the loss of a regular pension, but leaving the loss of future earnings untouched. However, limited case law elsewhere has left FEs and perhaps also attorneys uncertain of how to apply the CSR in other jurisdictions.

An alternative method that some FEs use involves four steps:

> (1) Calculate the regular pension earned by an injured plaintiff up to the date of injury as the disability pension basis;
> (2) Assuming that the lost pension has a COLA, grow this disability pension basis by a general inflation rate until an appropriate retirement age, had the plaintiff not been injured, e.g., 65;
> (3) Project the disability pension over time beginning from same uninjured expected retirement age as for the lost regular pension, with continued growth for both pensions at future inflation rates, if applicable. The annual net pension loss is obtained by deducting the disability pension from the lost regular pension over the period from the uninjured expected retirement age through life expectancy. Yearly net pension differences (regular less disability) are discounted back to present value.
> (4) Since employee contributions via payroll deductions are usually required to obtain a regular pension, these contributions may be netted against lost future earnings. But if one just wants to compare net pension losses between Rotolo-Oden method and this Alternative method and ignore lost future earnings, the present value of these employee contributions would need to be counted as a reduction in the net pension loss.

The logic behind this alternative method is that it ignores any source of income not provided by the defendant that is replacing earnings during his working life (i.e., the disability pension that would be earned during the working life of the plaintiff is obviously replacing his lost earnings).

Three separate arguments have been offered against this alternative approach:

(1) Quoting the Rotolo court, not fully accounting for the disability pension would result in "triple compensation", i.e., lost income, lost regular retirement benefits, and receipt of actual disability retirement benefits, which it called an "inequitable result";
(2) Disability pensions are conceptually the same as early retirement pensions in that they represent an “actuarial adjustment” by making smaller pension payments over a longer period of time. Doing so, they roughly equalize the present value of the same pension, and thus should not be viewed as a collateral source benefit that would be received by the early retiree. Social Security is such a system, in which early retirement is offered as a choice. Moreover, upon reaching full Social Security Retirement Age, someone who

had been receiving Social Security Disability Insurance (SSDI) benefits continues receiving the same dollar amount of benefits but it simply becomes referred to as regular Social Security Retirement benefits;

(3) A simple and direct argument is that an FE would only ignore pension payments received between the incident date and the likely date of retirement, but for the incident, if there were some legal requirement to do so. Examples of a "legal requirement" might include (a) the retaining attorney's insistence, given their expertise on such matters relative to an FE; (b) a very specific court decision; or (c) a statutory requirement.

How different the results might be using the method sanctioned in the Rotolo-Oden decisions vs. the Alternative method just discussed is examined below. This is done using two different pension models, three different sets of case facts regarding injury, and two different methods of netting disability pensions against lost regular pensions, as follows:

- **Two different pension system models (Cases 1 and 2):**
  - Federal Employee Retirement System (FERS);
  - Maryland's Reformed Contributory Benefit System applicable to new hires as of July 1, 2011, with Ordinary Disability Retirement benefits.
- **Three different sets of case facts regarding injury (Cases a, b, and c).** In all three cases the employee is assumed to have started work on January 1, his 25th birthday, with an expected retirement age of 65 and an expected lifetime of 85 years:
  - Case a: Base Case No Injury, Normal Retirement;
  - Case b: Injured at 55 (on day of birthday); Disability Retirement with 30 years of service;
  - Case c: Injured at age 35 (on day of birthday); Disability Retirement with 10 years of service;
- **Two different sets of CSR rules, i.e., two methods of netting disability pensions against lost regular pensions:**
  - Rotolo-Oden method (with a maximum offset equal to the regular pension value, since no excess disability pension can be applied against lost earnings. In other words:
    Net pension loss = Max [(regular pension PV – disability pension PV), zero]
  - Alternative method described above (i.e., calculate disability pension earned through date of injury, grown only at inflation until pre-injury expected retirement date, and then begin netting disability pension against lost regular pension from pre-injury retirement age through life expectancy, both growing with inflation, if applicable, and then discounted back to present value).

With these parameters, we have eight sets of results, pairing regular pension losses with offsetting disability pensions under two different CSR rules, as shown in Table 1:

Table 1: Summary of Results Under Different Net Pension Loss Methods

(PV of Lost Regular Pension Less Gain from Disability Pension Under Each Method)

Retirement & Disability Plan	Age at Time of Injury	Years of Service	Results shown in:	Case Detail Shown in Appendices:	Case Results Compared	ESTIMATED NET PENSION LOSS UNDER BOTH METHODS			
						Rotolo-Oden Method (1)	Aternative Method (2)		
						Losses begin w/ Disability Date; then discounted to (PV)	Losses begin @ Expected Retirement Date; then disc to PV	Employee Contributions (PV)	Alternative Method "Effective PV"
FERS	55	30	Table 2	Appendix B	Case 1a vs. 1b	-**$331,949** (= $784,660 - $1,116,608) **Net pension loss=0, can't be negative**	**$62,443** (= $832,571 - $770,128)	-**$47,911**	**$14,532**
FERS	35	10	Table 3	Appendix B	Case 1a vs. 1c	**$-240,763** (= $385,610 - $626,373) **Net pension loss=0, can't be negative**	**$76,067** (= $474,803 - $398,736)	-**$89,193**	-**$13,126**
State/MD (3)	55	30	Table 4	Appendix C	Case 2a vs. 2b	-**$852,200** (= $1,277,031 - $2,129,231) **Net pension loss=0, can't be negative**	**$0** (= $1,370,883 - $1,370,883)	-**$93,852**	-**$93,852**
State/MD (3)	35	10	Table 5	Appendix C	Case 2a vs. 2c	-**$1,125,279** (= $610,936 - $1,736,215) **Net pension loss=0, can't be negative**	**$168,586** (= $781,796 - $613,210)	-**$170,860**	-**$2,274**

(1) Under Rotolo-Oden method, both lost regular pension and disability pension are projected from date of disability, including mandatory employee contributions for regular pension until expected pre-injury retirement. Numbers in bold are the calcuated difference between the lost regular pension and the disability pension shown in parentheses. However, since the disability pension can only offset loss of a regular pension under Rotolo-Oden method, rule is: **Net pension loss = Max [(regular pension PV – disability pension PV), zero]**.

(2) Under Alternative method, both lost regular pension and disability pension are projected from expected pre-injury retirement date. Disability pension is calculated as earned pension at time of injury/disability, grown by inflation (assuming COLA) until pre-injury assumed retirement date, and from then on, is it projected out, netted against lost regular pension and discounted to PV. However, since completeness requires inclusion of employee's pension contributions toward his regular pension, and since this method only begins cacluating a net loss of both pensions begnning with the pre-injury expected retirement date, employee pension contributions are instead netted against lost future earnings. To be consistent in comparing methods, since Rotolo-Oden accounts for employee contributions as part of the regular pension, and net earnings loss is ignored here, these employee contributions must be included as part of the Alternative method results as the "Effective PV" of net pension loss.

(3) MD example is based on Reformed Contributory Pension Benefits system applicable to new hires as of 7/1/2011. Under Ordinary Disability formula, "There is no reduction applied for retiring before age 65", i.e., months of service on disability retirement is projected to age 65 and added to actual creditable service. Note, this is reason for much greater disability pension valuations under MD State system under Ordinary Disability retirement formula via a vis FERS retirement, holding other factors constant.

In Table 1, the estimated net pension losses are shown for all eight sets of results. The estimated net pension difference for each set of results is shown in **bold**. (Note: Negative values in bold mean that the first number in parentheses, the regular pension loss, is more than offset by the second number in parentheses, the disability pension under the applicable valuation method).

To project regular retirement pensions and disability pensions, it was necessary to utilize appropriate salary growth factors. Salary growth rates include both periodic step rate increases which cover up to twenty of the initial years of employment (20 for MD, 18 for FERS), as well as assumed COLAs, but only COLAs are assumed to apply to both regular and disability retirement benefits.

It should be noted that the FERS Disability and MD Ordinary Disability pension formulas have material differences in terms of equalizing what would be lost as compared with regular retirement pensions. Under FERS Disability, if someone is under age 62 at retirement, the formula offered is the larger of the "earned" annuity or a formula that factors a reduction from whatever Social Security benefit exists. Most importantly, it provides for an annuity "recast" upon reaching age 62 if time in service plus time in disability equals at least 20 years. This recast includes two major adjustments besides the COLAs that have been applied to date: (a) Total time in service includes a credit for time since receiving a disability annuity, and (b) an increase to 1.1% of the high-three salary, rather than a 1% multiplier if one is disabled under the age of 62 and not eligible for "immediate voluntary retirement" (the minimum retirement age for immediate voluntary retirement is over 55 for anyone born beginning in 1948). With these recast adjustments, FERS states that "When you reach age 62 your annuity will be recomputed using an amount that essentially represents the annuity that you would have received if you had continued working until the day before your 62nd birthday and then retired under FERS".[3]

Under its Reformed Contributory pension system (applicable to all hires beginning July 1, 2011), the MD Ordinary Disability pension is even more generous than FERS in making its disability pension very close to if not the same as what one would have received as a regular pension. It calculates the ordinary disability benefit with creditable service based on the sum of actual service time plus years and months of service projected to age 65, without having to wait for a recast at age 62.

As Table 1 shows, under the Rotolo-Oden method of netting regular and disability pensions, in all four cases the disability pension exceeds the present value of the regular retirement pension. This is because the FERS system largely (by age 62) and MD Reformed contributory system fully (immediately, with only five years of service) make disabled employees essentially whole as compared with their lost regular pension at an age-65 retirement date. In these hypothetical cases with very generous regular pension replacement with a disability pension, there might only be a net earnings loss depending on how the pension premiums are accounted for. As the Rotolo judge said: "A pension is a pension is a pension", and as affirmed in the Oden

case decision, one pension can only offset another pension, i.e., no excess disability pension is allowed to reduce future earning capacity losses.

The Alternative method described above and used by some FEs results in a net pension loss (i.e., regular pension in PV less disability pension in PV) in three of the four case pairings, leaving aside for the moment the present value of employee contributions while working to remain eligible for the regular pension. With this exclusion, the Alternative method greatly increases the net pension losses by eliminating the period until expected retirement in which a disabled plaintiff does in fact receive a disability pension, and for which the effect of discounting cash flows would be the least.

Only under the MD Reformed Contributory Pension System, Ordinary Disability formula Maryland July 2011, do we find one case pairing, Case 2a vs. 2b, that results in no regular pension loss using the Alternative method for netting both pensions beginning at age 65. As footnote 3 in Table 1 says, under the Ordinary Disability formula, as long as someone has reached five years of creditable service, there is no reduction applied for retiring before age 65. Since Case 2b assumes a disability retirement at age 55 after 30 years of service, all salary step rate increases (as opposed to COLA/inflation-related increases) are assumed to have occurred in the past. Since in Case 2b the disabling injury occurred at age 55 after all step increases have occurred, and under the Alternative method net losses only begin upon expected retirement, at age 65, the disability pension equals the regular pension each year in retirement. The same is not true with Case 2c, because all step rate increases are not yet assumed to have occurred.

Proponents of this Alternative method, by design, exclude any source of income not provided by the defendant during his working life that is replacing earnings, believing this to be in violation of the CSR. However, the above discussion leaves aside for the moment the present value of employee pension contributions while working. Since we cannot ignore the need for an employee to continue making pension contributions to remain eligible for a regular pension upon retirement, some way of accounting for the employee pension contributions must be found. A convenient way, and some FEs would argue, an appropriate way to do this within a damage award calculation is simply to reduce future earnings losses by the employee's contributions toward his pension, which typically occurs through mandatory payroll deductions.

Since this paper is focused only on comparing pension loss methods, the employee contributions must be factored into the net pension loss, rather than net earnings loss. This is done in the final two columns of Table 1. In the next to the last column, the present value of these employee contributions from the date of assumed injury/disablement until age 65 are displayed. In the last column, an **"Effective PV (Present Value)"** for the net pension loss is calculated by combining the prior two columns: (1) the PV of the net pension loss beginning from the expected retirement date, and (2) the PV of the employee contributions to remain eligible for the regular pension, which must be paid from date of disability until the expected pre-injury retirement date.

Not surprisingly, in all four case pairings shown in Table 1, the "Effective PVs" are higher (meaning either a positive number or a less negative number and hence a greater net pension loss) using the Alternative method of calculating pension losses vs. Rotolo-Oden, before the latter's negative losses are zeroed out. However, if the pension contributions required while still working are netted against the earnings loss, rather than considered part of the net pension loss, only the FERS Case 1a vs. 1b comparison would result in a total economic loss greater under the Alternative method as modeled here: **+$14,532**. The second FERS case would have a slight negative Effective PV under the Alternative method due to the employee pension premiums, that would only result in the same total economic loss as under Rotolo-Oden if the premium were counted as part of the net pension loss, which would then become zero under both methods.

The two State/MD comparisons using the Ordinary Disability retirement formula also has complex results. Comparing Case 2a vs. 2b, assuming disabling injury and retirement at age 55, both methods produce zero net pension losses, either because a negative loss is set to zero (Rotolo-Oden) or the calculated loss actually equals to zero (Alternative). The Alternative method net pension loss, without factoring in employee paid pension premiums, is calculated as exactly zero. This is a direct result of the fact that with only five years of actual service, the Ordinary Disability formula applies no pension reduction for retiring on disability before age 65. Hence, the high five salaries are the same at the time of disability, which applies by age 55 since this is passed all step-rate increases and forms the same basis for calculating both regular and disability retirement pensions. But because we have not yet accounted for the employee's required pension contributions that otherwise would reduce future earnings loss, we again account for it via reducing the net pension loss and reporting an "Effective PV". Since under Rotolo, the employee's pension contributions would have been factored into the negative net pension loss and set to zero, the counterintuitive result is that the total damage award would be less under the Alternative method than under Rotolo-Oden method. The simple reason for this is the same as with the second FERS comparison (Case 1a vs. 1c): For the MD Case 2a vs. 2b, under the Alternative method as defined in this paper, the employee's pension contributions until retirement would reduce the net earnings loss, but would not affect the net earnings loss under Rotolo-Oden.

The State/MD comparison of Case 2a vs. 2c also results in a lesser Effective PV/total damage award under the Alternative method vs. Rotolo-Oden, but it is much closer to the Effective PV award under the latter than in the previous example. That is because while the Alternative method produced a net pension loss of $168,586, this is slightly more than offset by -$170,860 in PV of employee pension contributions, resulting in an Effective PV of -$2,274. Although the Rotolo-Oden method produced a large negative net pension loss, because this is set to zero and subsumed the negative employee pension contributions, the Rotolo-Oden damage award would be $2,274 higher than under the Alternative method, other things being equal.

An important generalization can be made from the four sets of case results summarized in Table 1. **If the net pension loss under the Alternative method has a zero or negative "Effective PV", then Rotolo-Oden will result in a higher total damage award as long as the Alternative method includes pension premiums that reduce the net earnings loss. (This assumes that the net pension loss is also negative under Rotolo-Oden, which almost certainly will be true with the same case facts). Otherwise, the Alternative method may result in a higher damage award, but that will depend on many factors. One such factor is the generosity of a given program's disability pension formula in making the disabled pensioner "whole" relative to an expected regular pension. This can be done via a recast formula at age 62 as with FERS, or an even more generous virtual copying of the pension formula almost regardless of age of disability as with the MD Reformed Contributory system, since after five years of actual service, it imposes no service years or multiplier reductions for a disability retirement before age 65. The other factor is whether the employee's pension contributions that are required to remain eligible for a regular pension are valued as part of the net pension loss or as part of future earnings loss.**

The detailed cash flows generated for the individual cases are shown in six tables in two separate Appendices: Appendix B has three tables for Cases 1a, 1b, and 1c (under FERS); and Appendix C has three tables for Cases 2a, 2b, and 2c (under the Maryland Reformed Contributory Pension system assuming the Ordinary Disability Retirement formula). The four sets of net pension results which were summarized above in Table 1, are displayed in four separate tables of case pairings, below, in Tables 2-5.

1. Comparisons Based on FERS Retirement System, Disabled on 55th Birthday (Table 2, Cases 1a vs. 1b)

Table 2 compares the FERS retirement system pensions under both CSR methods for the hypothetical employee who either worked until age 65 and retired (Case 1a) vs. having been disabled and retired on his 55th birthday (Case 1b). For federal employees with at least 20 years of service in FERS and at age 62 or older, regular retirement pensions are calculated by multiplying 1.1% times the number of years of creditable service to the average "high three" of salaries (https://www.opm.gov/retirement-services/fers-information). The hypothetical employee is assumed to work exactly 40 years, both beginning and retiring on his birthday (ages 25 to 65), starting at $50,000 per year, with step rate increases spread over 18 years (with magnitude and timing of between-step salary increases based on OPM data (OPM, 2018) plus 2% COLAs assumed over all years. Given these assumptions, the regular retirement annuity at age 65 would be **$60,398.22** (= 1.1% x 40 x high three average of $137,268.68. This is derived in Appendix B, Table App. B-1a, column 5).

In Table 2, columns 2-7 are based on the Rotolo-Oden method of disability pension offset. In column 3, the amounts shown include the lost regular pension that without injury would have

begun at age 65 less the annual pension premiums at 4.4% of salary while still working. (The values shown here only begin at age 55, since that is when the period of disability is assumed to begin in Case 1b.) The **-$5,154** shown in Table 2, column 3 at age 55, under Case 1a for regular retirement, is calculated as the required employee charge of 4.4% (for FERS hires beginning in 2014) x the salary that would be earned at age 55, **$117,142.19** (shown in in Appendix B, Table App. B-1a, column 3). These annual employee contributions (or pension premiums) cease at age 65, when the regular retirement pension cited above begins.

Disability retirement computations depend upon whether someone is at least 62 years old at retirement or meets the age and service requirements for "immediate voluntary retirement", which is at least ten years of service. For Case 1b, the employee is under 62 but meets the minimum service requirement, and having done so, his FERS disability annuity is based on 1% (instead of 1.1%) x each year of service x high three average salary. For Case 1b, the annual pension that he would earn at age 55 would be **$33,782.44** (=1% x 30 X high three average of $112,608.13, shown in Appendix B, Table App. B-1b, column 11 and read into Table 2 column 4). Since this is a pension, subsequent adjustments are only at the 2% COLA assumed for all years. However, with the age 62 pension annuity recast, as explained above, the years of service now include the years on disability in the total service years, as well as the higher 1.1% multiplier. Hence, by age 62, the disability pension becomes **$52,646** (= $112,608.13 x 1.02^7 x .011 x 37 = $52,646, shown in Table 2 , column 4, and Appendix B Table B-1b, column 11).

Discounting both pension streams at 3% per year to the beginning of year 1, when the employee turns 55 years old, results in present values for the lost regular pension (with the employee premium paid until age 65) of **$784,660** vs. **$1,116,608** for the disability pension, shown in columns 6 and 7. Since the Rotolo-Oden method only allows disability pensions to offset regular pensions, the net pension loss that would be allowed is zero, as shown above in Table 1. Whatever is the damages amount calculated for earnings/earning capacity loss would remain unchanged.

The Alternative method of calculating a net pension loss has a very different result, with calculations in Table 2, columns 8-14. We have the same regular pension amounts by year in current dollars, shown in columns 3 and 9, but with column 9 excluding the employee's pension contributions which are applied separately as explained above. The **$60,398** in column 9 is the first year of regular pension losses, the same as with the Rotolo method.

The Alternative method disability pension calculation begins at **$33,782,** the same earned regular pension at age 55, shown in column 14, but is not assumed to begin offsetting the regular pension loss until the expected retirement at age 65**.** By age 62 the recast pension is the same under both methods, and so is the disability pension at age 65, when it starts to count as an offset. Hence the disability pension at age 65 grows after the age 62 recast by only three more years of 2% assumed COLAs to reach **$55,868.** All three values (for ages 55, 62 and 65) are highlighted in Table 2 column 14. Both the regular and disability pension streams are

assumed to continue to grow at 2% COLAs from age 65 through age 85, and then are discounted to present value at 3% per year. The end results using the Alternative method of applying the CSR are **$832,571** for Case 1a but only **$770,128** for Case 1b. Using the Alternative method of applying the CSR would add the difference, **$62,443,** to damages attributed to net pension loss, but before accounting for employee pension premiums subsequent to the injury at age 55.

Therefore, for a more complete comparison, we have to account for the present value of employee contributions until retirement in order to have become eligible for a regular pension at the expected retirement age of 65. Accounting for the PV of these employee contributions reduces the effective Alternative method of net pension loss by **$47,911** to **$14,532**, shown above in Table 1. (Note: The employee's pension contribution of $47,911 is simply the PV difference between regular pension loss between the Rotolo-Oden and Alternative methods, $784,660 - $832,571, in Table 2, columns 6 and 12). For a damage award calculated both ways, the Alternative method would provide a **$14,532 higher damage award**, other things being equal. That is because using Rotolo-Oden, the net pension loss would be capped at zero rather than be considered a net gain, but the employee pension contributions would not reduce whatever the future earnings loss might be as it would under the Alternative method.

Table 2: FERS Retirement Pension; Rotolo/Oden Method and Alternative Method of Applying Disability Pension Offset: Case 1a v. 1b - Lost Regular Retirement Pension (1a), Offset with Disability Pension, Retire at 55 w/ 30 Years of Service (1b)

	Rotolo-Oden Method of Disability Pension Offset						Alternative Method of Disability Pension Offset						
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Injured at 55: Case 1a vs. Case 1b				PV from Disability Date		Altern. Method: Offset Reg. Pens. w/ Earned				PV from Exp. Ret. Date		
					784,660	1,116,608	Pens. to Disab. Date, Grow @ COLA; net @ Ret.				832,571	770,128	
											PV Emp Cont (1)		Regular
		Case 1a	Case 1b					Case 1a	Case 1b		(47,911)		pension
		Lost Reg.			PV Lost Reg.	PV Gain		Lost Reg.			PV Lost	PV Gain	earned to
Age @	Yrs to	Pens. Less	Gain Disab.		Pens. Less	Disab.	Yrs to	Pens. Less	Gain Disab.		Regular	Disab.	disability
Beg yr	disc	Contrib.	Pension	Disc Fctr	Contrib.	Pension	disc	Contrib.	Pension	Disc Fctr	pension	Pension	date
55	1	(5,154)	33,782	0.97087	(5,004)	32,798	1			0.97087	-	-	33,782
56	2	(5,257)	34,458	0.94260	(4,956)	32,480	2			0.94260	-	-	34,458
57	3	(5,362)	35,147	0.91514	(4,907)	32,165	3			0.91514	-	-	35,147
58	4	(5,470)	35,850	0.88849	(4,860)	31,852	4			0.88849	-	-	35,850
59	5	(5,579)	36,567	0.86261	(4,813)	31,543	5			0.86261	-	-	36,567
60	6	(5,691)	37,299	0.83748	(4,766)	31,237	6			0.83748	-	-	37,299
61	7	(5,805)	38,045	0.81309	(4,720)	30,934	7			0.81309	-	-	38,045
62	8	(5,921)	52,646	0.78941	(4,674)	41,559	8			0.78941	-	-	52,646
63	9	(6,039)	53,699	0.76642	(4,628)	41,156	9			0.76642	-	-	53,699
64	10	(6,160)	54,773	0.74409	(4,583)	40,756	10			0.74409	-	-	54,773
65	11	60,398	55,868	0.72242	43,633	40,360	11	60,398	55,868	0.72242	43,633	40,360	55,868
66	12	61,606	56,986	0.70138	43,209	39,969	12	61,606	56,986	0.70138	43,209	39,969	56,986
67	13	62,838	58,125	0.68095	42,790	39,581	13	62,838	58,125	0.68095	42,790	39,581	58,125
68	14	64,095	59,288	0.66112	42,374	39,196	14	64,095	59,288	0.66112	42,374	39,196	59,288
69	15	65,377	60,474	0.64186	41,963	38,816	15	65,377	60,474	0.64186	41,963	38,816	60,474
70	16	66,685	61,683	0.62317	41,556	38,439	16	66,685	61,683	0.62317	41,556	38,439	61,683
71	17	68,018	62,917	0.60502	41,152	38,066	17	68,018	62,917	0.60502	41,152	38,066	62,917
72	18	69,379	64,175	0.58739	40,753	37,696	18	69,379	64,175	0.58739	40,753	37,696	64,175
73	19	70,766	65,459	0.57029	40,357	37,330	19	70,766	65,459	0.57029	40,357	37,330	65,459
74	20	72,181	66,768	0.55368	39,965	36,968	20	72,181	66,768	0.55368	39,965	36,968	66,768
75	21	73,625	68,103	0.53755	39,577	36,609	21	73,625	68,103	0.53755	39,577	36,609	68,103
76	22	75,098	69,465	0.52189	39,193	36,253	22	75,098	69,465	0.52189	39,193	36,253	69,465
77	23	76,600	70,855	0.50669	38,812	35,901	23	76,600	70,855	0.50669	38,812	35,901	70,855
78	24	78,132	72,272	0.49193	38,436	35,553	24	78,132	72,272	0.49193	38,436	35,553	72,272
79	25	79,694	73,717	0.47761	38,062	35,208	25	79,694	73,717	0.47761	38,062	35,208	73,717
80	26	81,288	75,191	0.46369	37,693	34,866	26	81,288	75,191	0.46369	37,693	34,866	75,191
81	27	82,914	76,695	0.45019	37,327	34,527	27	82,914	76,695	0.45019	37,327	34,527	76,695
82	28	84,572	78,229	0.43708	36,964	34,192	28	84,572	78,229	0.43708	36,964	34,192	78,229
83	29	86,264	79,794	0.42435	36,606	33,860	29	86,264	79,794	0.42435	36,606	33,860	79,794
84	30	87,989	81,390	0.41199	36,250	33,531	30	87,989	81,390	0.41199	36,250	33,531	81,390
85	31	89,749	83,017	0.39999	35,898	33,206	31	89,749	83,017	0.39999	35,898	33,206	83,017

(1) In Alternative method, one way to reflect required employee contributions while working is to net them against lost future earnings.

2. Comparisons Based on FERS Retirement System, Disabled on 35th Birthday (Table 3, Cases 1a vs. 1c)

Table 3 compares the FERS retirement system pensions under both CSR methods for the hypothetical employee who either worked until age 65 and retired vs. having been disabled and retired on his 35th birthday. In Table 3, columns 2-7 are again based on the Rotolo-Oden method of disability pension offset, but due to having only ten years of creditable service and starting 20 years earlier, columns 3 and 4 now show very different values from those seen in Table 2. Case 1a results in current dollars are the same, although with fewer working years of paying pension premiums, the results are discounted back an extra 20 years, to age 35. In Table 3, column 3 at age 35, under Case 1a for regular retirement, the **-$3,207** shown is calculated as the required employee pension contribution of 4.4% x the salary that would be

earned at age 35, or **$72,882.18** (shown in Appendix B Table App. B-1a, column 3). His regular retirement pension at age 65 would be the same **$60,398** as before.

As with Case 1b, in Case 1c the employee is under 62 but also meets the minimum service requirement of ten years. Thus, his FERS disability annuity, pre-age 62 recast, is again based on 1% (instead of 1.1%) x each year of service x high three average salary. For Case 1c, the annual pension that he would earn at age 35, shown in Table 3, column 4, would be **$6,880** (=1% x 10 x high three average of $68,801.22, shown in Appendix B, Table App. B-1c, column 17 and read into Table 3, column 4). Since this is a pension, subsequent adjustments are only at the 2% COLA assumed for all years.

For Case 1c, the age 62 pension annuity recast now is based on 37 years, 10 actual service and 27 years on disability (from age 35 to 62 in the total service years), as well as the higher 1.1% multiplier. Hence, by age 62, the disability pension becomes **$47,796** (= $68,801.22 x 1.02^{27} x .011 x 37 = $47,796, shown in Table 2, column 4, and Appendix B Table B-1b, column 11). As compared with the age 55 injured retiree in the prior example, the 35 year-old disabled retiree get a much larger recast effect because now 27 years of disabled service get added to his pension annuity rather than only 7 years for the age 55 disabled retiree.

Discounting both pension streams at 3% per year to the beginning of year 1, when the employee turns 35 years old, results in present values for the lost regular pension (with the employee premium paid until age 65) of **$385,610** vs. **$626,373** for the disability pension, shown in columns 6 and 7. Since the Rotolo-Oden method only allows disability pensions to offset regular pensions, the net pension loss that would be allowed is zero, as shown above in Table 1. Whatever the damages amount calculated for earnings/earning capacity loss would remain unchanged.

The Alternative method of calculating a net pension loss again has very different results in Table 3 from those in Table 2, with calculations shown columns 8-14. We begin with the same regular pension amounts by year in current dollars in both Tables 2 and 3, shown again in Table 3, columns 3 and 9, but with column 9 again excluding the employee's pension contributions after injury which are applied separately as explained above. The **$60,398** in Table 3, column 9 is the same first year of regular pension losses beginning at age 65 as it was in Table 2, but now it's 30 years after the disabling injury, rather than 10 years after.

The Alternative method disability pension value is based on the same earned regular pension at age 35, shown in column 14, and is recast at age 62 to be the same **$47,796.** Under the Alternative method, the first year of pension offset begins at age 65, and so applying three more years of 2% COLAs we obtain the first year of disability pension offset as **$50,722.** All three values (for ages 35, 62 and 65) are highlighted in Table 3 column 14. Both the regular and disability pension streams are assumed to continue to grow at 2% COLAs from age 65 through age 85, and then are discounted to present value at 3% per year. The end results using the Alternative method of applying the CSR in Case 1a vs. Case 1c are **$474,803** for PV of the

regular retirement pension but only **$398,736** for the disability retirement pension. Using the Alternative method of applying the CSR would add **$89,193** to damages attributed to net pension loss, but before accounting for employee pension premiums subsequent to the injury at age 35.

As noted previously, for a more complete comparison, we again have to account for the present value of employee contributions until retirement in order to have become eligible for a regular pension at the expected retirement age of 65. Accounting for the PV of these employee contributions reduces the effective Alternative method of net pension loss by **$89,193,** a much larger reduction than is the case of being disabled at age 55, because in comparing results if disabled at age 35, there are an extra 20 years of required pension premiums**.** Hence, the Effective PV under the Alternative method, becomes -**$13,126**. shown above in Table 1. For a damage award calculated that includes pension premiums as part of the net pension loss, there would be no difference between methods for this relatively young disabled retiree, since both methods would result in negative pension loss and hence be zeroed out. However, keeping with the Alternative method assumed here of applying pension premiums to the net lost future earnings stream, the Alternative method would produce a slightly lower damage award than with the Rotolo-Oden method, -$13,126, as shown by its Effective PV.

Table 3: FERS Retirement Pension; Rotolo/Oden Method and Alternative Method of Applying Disability Pension Offset:
Case 1a v. 1c - Lost Regular Retirement Pension (1a), Offset with Disability Pension, Retire at 35 w/ 10 Years of Service (1c)

	Rotolo-Oden Method of Disability Pension Offset						Alternative Method of Disability Pension Offset						
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Injured at 35: Case 1a vs. Case 1c				PV from Disability Date		Altern. Method: Offset Reg. Pens. w/ Earned				PV from Exp. Ret. Date		
					385,610	626,373	Pens. to Disab. Date, Grow @ COLA; net @ Ret.				474,803	398,736	
											PV Emp Cont (1)		Regular
		Case 1a	Case 1c					Case 1a	Case 1c		(89,193)		pension
		Lost Reg.			PV Lost Reg.	PV Gain		Lost Reg.			PV Lost	PV Gain	earned to
Age @	Yrs to	Pens. Less	Gain Disab.		Pens. Less	Disab.	Yrs to	Pens. Less	Gain Disab.		Regular	Disab.	disability
Beg yr	disc	Contrib.	Pension	Disc Fctr	Contrib.	Pension	disc	Contrib.	Pension	Disc Fctr	pension	Pension	date
35	1	(3,207)	6,880	0.97087	(3,113)	6,680	1			0.97087			6,880
36	2	(3,271)	7,018	0.94260	(3,083)	6,615	2			0.94260			7,018
37	2	(3,427)	7,158	0.94260	(3,230)	6,747	2			0.94260			7,158
38	3	(3,496)	7,301	0.91514	(3,199)	6,682	3			0.91514			7,301
39	4	(3,566)	7,447	0.88849	(3,168)	6,617	4			0.88849			7,447
40	5	(3,733)	7,596	0.86261	(3,220)	6,553	5			0.86261			7,596
41	6	(3,808)	7,748	0.83748	(3,189)	6,489	6			0.83748			7,748
42	7	(3,884)	7,903	0.81309	(3,158)	6,426	7			0.81309			7,903
43	8	(4,064)	8,061	0.78941	(3,208)	6,364	8			0.78941			8,061
44	9	(4,145)	8,222	0.76642	(3,177)	6,302	9			0.76642			8,222
45	10	(4,228)	8,387	0.74409	(3,146)	6,241	10			0.74409			8,387
46	11	(4,313)	8,555	0.72242	(3,116)	6,180	11			0.72242			8,555
47	12	(4,399)	8,726	0.70138	(3,085)	6,120	12			0.70138			8,726
48	13	(4,487)	8,900	0.68095	(3,055)	6,061	13			0.68095			8,900
49	14	(4,577)	9,078	0.66112	(3,026)	6,002	14			0.66112			9,078
50	15	(4,668)	9,260	0.64186	(2,996)	5,943	15			0.64186			9,260
51	16	(4,762)	9,445	0.62317	(2,967)	5,886	16			0.62317			9,445
52	17	(4,857)	9,634	0.60502	(2,939)	5,829	17			0.60502			9,634
53	18	(4,954)	9,827	0.58739	(2,910)	5,772	18			0.58739			9,827
54	19	(5,053)	10,023	0.57029	(2,882)	5,716	19			0.57029			10,023
55	20	(5,154)	10,223	0.55368	(2,854)	5,661	20			0.55368			10,223
56	21	(5,257)	10,428	0.53755	(2,826)	5,606	21			0.53755	-	-	10,428
57	22	(5,362)	10,637	0.52189	(2,799)	5,551	22			0.52189	-	-	10,637
58	23	(5,470)	10,849	0.50669	(2,771)	5,497	23			0.50669	-	-	10,849
59	24	(5,579)	11,066	0.49193	(2,745)	5,444	24			0.49193	-	-	11,066
60	25	(5,691)	11,288	0.47761	(2,718)	5,391	25			0.47761	-	-	11,288
61	26	(5,805)	11,513	0.46369	(2,692)	5,339	26			0.46369	-	-	11,513
62	27	(5,921)	47,796	0.45019	(2,665)	21,517	27			0.45019	-	-	47,796
63	28	(6,039)	48,752	0.43708	(2,640)	21,309	28			0.43708	-	-	48,752
64	29	(6,160)	49,727	0.42435	(2,614)	21,102	29			0.42435	-	-	49,727
65	30	60,398	50,722	0.41199	24,883	20,897	30	60,398	50,722	0.41199	24,883	20,897	50,722
66	31	61,606	51,736	0.39999	24,642	20,694	31	61,606	51,736	0.39999	24,642	20,694	51,736
67	32	62,838	52,771	0.38834	24,402	20,493	32	62,838	52,771	0.38834	24,402	20,493	52,771
68	33	64,095	53,827	0.37703	24,166	20,294	33	64,095	53,827	0.37703	24,166	20,294	53,827
69	34	65,377	54,903	0.36604	23,931	20,097	34	65,377	54,903	0.36604	23,931	20,097	54,903
70	35	66,685	56,001	0.35538	23,699	19,902	35	66,685	56,001	0.35538	23,699	19,902	56,001
71	36	68,018	57,121	0.34503	23,468	19,709	36	68,018	57,121	0.34503	23,468	19,709	57,121
72	37	69,379	58,264	0.33498	23,241	19,517	37	69,379	58,264	0.33498	23,241	19,517	58,264
73	38	70,766	59,429	0.32523	23,015	19,328	38	70,766	59,429	0.32523	23,015	19,328	59,429
74	39	72,181	60,617	0.31575	22,792	19,140	39	72,181	60,617	0.31575	22,792	19,140	60,617
75	40	73,625	61,830	0.30656	22,570	18,954	40	73,625	61,830	0.30656	22,570	18,954	61,830
76	41	75,098	63,066	0.29763	22,351	18,770	41	75,098	63,066	0.29763	22,351	18,770	63,066
77	42	76,600	64,328	0.28896	22,134	18,588	42	76,600	64,328	0.28896	22,134	18,588	64,328
78	43	78,132	65,614	0.28054	21,919	18,408	43	78,132	65,614	0.28054	21,919	18,408	65,614
79	44	79,694	66,926	0.27237	21,706	18,229	44	79,694	66,926	0.27237	21,706	18,229	66,926
80	45	81,288	68,265	0.26444	21,496	18,052	45	81,288	68,265	0.26444	21,496	18,052	68,265
81	46	82,914	69,630	0.25674	21,287	17,877	46	82,914	69,630	0.25674	21,287	17,877	69,630
82	47	84,572	71,023	0.24926	21,080	17,703	47	84,572	71,023	0.24926	21,080	17,703	71,023
83	48	86,264	72,443	0.24200	20,876	17,531	48	86,264	72,443	0.24200	20,876	17,531	72,443
84	49	87,989	73,892	0.23495	20,673	17,361	49	87,989	73,892	0.23495	20,673	17,361	73,892
85	50	89,749	75,370	0.22811	20,472	17,192	50	89,749	75,370	0.22811	20,472	17,192	75,370

(1) In Alternative method, one way to reflect required employee contributions while working is to net them against lost future earnings.

3. Comparisons Based on Maryland Reformed Contributory Retirement System, with Ordinary Disability Benefits, Disabled on 55th Birthday (Table 4, Cases 2a vs. 2b)

Table 4 compares the Maryland Reformed Contributory Retirement System, with Ordinary Disability Retirement benefits under both CSR methods for the hypothetical employee who either worked until age 65 and retired vs. having been disabled and retired on his 55th birthday. For Maryland state employees under this system, regular retirement pensions are calculated by multiplying 1.5% times the "high five" consecutive annual of salaries, i.e., Average Final Compensation or AFC times Years of Credit for the Annual Basic Allowance, with no reduction if the employee is at least 65 years old. (MD, pp. 34-35). The same hypothetical employee without injury is assumed to work exactly 40 years, both beginning and retiring on his birthday (ages 25 to 65). He is assumed to start earning $50,000 per year, with step rate increases spread over 20 years (the magnitude of which the between-step salary increases are based on State of Maryland Standard Salary Schedule (State of Maryland, effective July 1, 2016, apparently unchanged as of July 1, 2018, http://www.dbm.maryland.gov/employees/Pages/SalaryInformation.aspx and then select

http://www.dbm.maryland.gov/employees/Documents/SalaryInfo/Standard.pdf), plus 2% COLAs assumed over all years. Given these assumptions, the regular retirement annuity at age 65 would be **$99,449.74** (= 1.5% x 40 x high five average of $165,749.56. This is derived in Appendix B, Table App. C-2a, column 5).

In Table 4, columns 2-7 are based on the Rotolo-Oden method of disability pension offset. In column 3, the amounts shown include the lost regular pension that without disabling injury would have begun at age 65. The annual pension premiums at 7% of salary are applied for the prior years while he is assumed to be still working, but shown here only beginning at age 55, since that is when the period of disability is assumed to begin in Case 2b. The **-$10,097** shown in column 3 at age 55, under Case 2a for regular retirement, is calculated as the required employee charge of 7% beginning with new hires on 7/1/2011 x the average salary that would be earned at age 55, **$144,238.40** (shown in Appendix C Table App. C-2a, column 3). These annual employee contributions (or pension premiums) cease at age 65, when the regular retirement pension cited above begins.

As explained above, the Reformed Contributory Pension Benefit under the Maryland State Retirement and Pension System, Ordinary Disability benefits experience no reductions in terms of years of service, or the multiplier, if retiring before age 65. For Case 2b, the annual disability pension would be **$81,583** at age 55, calculated based on the employee's average "high five" of $135,972.37 x 1.5% x 40 years of service, assuming 30 years creditable + 10 more years to reach age 65) (This is shown in Appendix C, Table App. C-2b, column 11 and read into Table 4 column

4). Due to the Case 2b assumption that disability occurs at age 55, all step rate increases over 18 years will have occurred, and thus subsequent salary and disability increases will both continue at the same COLA assumption of 2% per year. Hence, by age 65, the disability pension becomes **$99,950** (= $81,583.42 x 1.02^{10} = $99,949.74, which equals the regular retirement benefit, shown in Table 4 , columns 3 and 4, as well as Appendix B Tables C-2a and C-2b, column 5 and column 11, respectively).

Discounting both pension streams at 3% per year to the beginning of year 1, when the employee turns 55 years old, results in present values for the lost regular pension (with the employee premium paid until age 65) of **$1,277,031** vs. **$2,129,231** for the ordinary disability pension, shown in Table 4, columns 6 and 7. Since the Rotolo-Oden method only allows disability pensions to offset regular pensions, the net pension loss is zero.

The Alternative method of offsetting the regular pension with the Ordinary Disability pension, i.e., Case 2a vs. 2b, shown in Table 4, columns 8-14, also results in a zero net pension loss (before considering the employee's pension contributions). As just discussed, regular and disability pensions are the same if disability occurs by age 55, due to lack of remaining step increases to increase salaries at retirement more than by subsequent COLAs and the fact that under the Ordinary Disability Retirement rules, creditable service is the sum of actual service plus service projected to age 65. The annual disability pension at age 55 calculated above of $81,583.42 (before rounding) grows for 10 years at 2% per year equals **$99,449.74** (rounded to $99,450), which is the same as the regular retirement pension at age 65, shown in columns 9 and 10. Hence the net result using the Alternative method is exactly zero, before accounting for the employee's pension contributions until retirement with both regular and disability pensions value from age 65 onward equaling $1,370,883.

The more complete comparison again requires accounting for the employee's pension contributions. Since the net pension loss based on the Alternative method of pension valuation excluding the employee's contributions is exactly zero, the Effective PV with its inclusion is simply the PV of the employee's contributions or -$93,852. And since the net pension loss under Rotolo is also zero simply because no net pension loss is allowed, the difference between net pension loss under the Rotolo-Oden method vs. the Alternative method is the same: 0 – (-$93,852)= -**$93,852**. This result illustrates a rule that should determine which method leads to a greater damage award when the Alternative method "Effective PV" is negative:

> **If (a) under the Alternative method, the Effective PV is <u>negative</u>, which shows the impact of net pension loss on total damages, and (b) under Rotolo-Oden, the net pension loss is negative and thus zeroed out, then the Alternative method will result in a lower total damage award that also includes lost future earnings.** That is a direct result of the different ways that employee pension contributions are accounted for

under each method. Using the Alternative method as described in this paper, the employee's pension contributions are accounted for separately from the net pension loss, since the net pension loss is calculated only beginning from the pre-injury expected retirement date. In contrast, using the Rotolo-Oden method, the employee's pension contributions are often zeroed out because these contributions reduce the net regular pension loss, which begins being calculated from the date of disabling injury. **Hence, if the above two conditions hold, then the Alternative method will produce a lower total damage award.**

Table 4: MD Ordinary Disab. Pension; Rotolo/Oden Method and Alternative Method of Applying Disability Pension Offset: Case 2a v. 2b - Lost Regular Retir't Pension (2a), Offset with Ordinary Disab. Pension, Retire at 55 w/ 30 Years of Service (2b)

	Rotolo-Oden Method of Disability Pension Offset						Alternative Method of Disability Pension Offset						
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Injured at 55: Case 2a vs. Case 2b				PV from Disability Date		Altern. Method: Offset Reg. Pens. w/ Earned				PV from Exp. Ret. Date		
					1,277,031	2,129,231	Pens. to Disab. Date, Grow @ COLA; net @ Ret.				1,370,883	1,370,883	
											PV Emp Cont (1)		Regular
		Case 2a	Case 2b					Case 2a	Case 2b		(93,852)		pension
		Lost Reg.			PV Lost Reg.	PV Gain		Lost Reg.			PV Lost	PV Gain	earned to
Age @	Yrs to	Pens. Less	Gain Disab.		Pens. Less	Disab.	Yrs to	Pens. Less	Gain Disab.		Regular	Disab.	disability
Beg yr	disc	Contrib.	Pension	Disc Fctr	Contrib.	Pension	disc	Contrib.	Pension	Disc Fctr	pension	Pension	date
55	1	(10,097)	81,583	0.97087	(9,803)	79,207	1			0.97087	-	-	81,583
56	2	(10,299)	83,215	0.94260	(9,707)	78,438	2			0.94260	-	-	83,215
57	3	(10,505)	84,879	0.91514	(9,613)	77,677	3			0.91514	-	-	84,879
58	4	(10,715)	86,577	0.88849	(9,520)	76,923	4			0.88849	-	-	86,577
59	5	(10,929)	88,309	0.86261	(9,427)	76,176	5			0.86261	-	-	88,309
60	6	(11,148)	90,075	0.83748	(9,336)	75,436	6			0.83748	-	-	90,075
61	7	(11,371)	91,876	0.81309	(9,245)	74,704	7			0.81309	-	-	91,876
62	8	(11,598)	93,714	0.78941	(9,156)	73,978	8			0.78941	-	-	93,714
63	9	(11,830)	95,588	0.76642	(9,067)	73,260	9			0.76642	-	-	95,588
64	10	(12,066)	97,500	0.74409	(8,979)	72,549	10			0.74409	-	-	97,500
65	11	99,450	99,450	0.72242	71,845	71,845	11	99,450	99,450	0.72242	71,845	71,845	99,450
66	12	101,439	101,439	0.70138	71,147	71,147	12	101,439	101,439	0.70138	71,147	71,147	101,439
67	13	103,468	103,468	0.68095	70,456	70,456	13	103,468	103,468	0.68095	70,456	70,456	103,468
68	14	105,537	105,537	0.66112	69,772	69,772	14	105,537	105,537	0.66112	69,772	69,772	105,537
69	15	107,648	107,648	0.64186	69,095	69,095	15	107,648	107,648	0.64186	69,095	69,095	107,648
70	16	109,801	109,801	0.62317	68,424	68,424	16	109,801	109,801	0.62317	68,424	68,424	109,801
71	17	111,997	111,997	0.60502	67,760	67,760	17	111,997	111,997	0.60502	67,760	67,760	111,997
72	18	114,236	114,236	0.58739	67,102	67,102	18	114,236	114,236	0.58739	67,102	67,102	114,236
73	19	116,521	116,521	0.57029	66,450	66,450	19	116,521	116,521	0.57029	66,450	66,450	116,521
74	20	118,852	118,852	0.55368	65,805	65,805	20	118,852	118,852	0.55368	65,805	65,805	118,852
75	21	121,229	121,229	0.53755	65,166	65,166	21	121,229	121,229	0.53755	65,166	65,166	121,229
76	22	123,653	123,653	0.52189	64,534	64,534	22	123,653	123,653	0.52189	64,534	64,534	123,653
77	23	126,126	126,126	0.50669	63,907	63,907	23	126,126	126,126	0.50669	63,907	63,907	126,126
78	24	128,649	128,649	0.49193	63,287	63,287	24	128,649	128,649	0.49193	63,287	63,287	128,649
79	25	131,222	131,222	0.47761	62,672	62,672	25	131,222	131,222	0.47761	62,672	62,672	131,222
80	26	133,846	133,846	0.46369	62,064	62,064	26	133,846	133,846	0.46369	62,064	62,064	133,846
81	27	136,523	136,523	0.45019	61,461	61,461	27	136,523	136,523	0.45019	61,461	61,461	136,523
82	28	139,254	139,254	0.43708	60,865	60,865	28	139,254	139,254	0.43708	60,865	60,865	139,254
83	29	142,039	142,039	0.42435	60,274	60,274	29	142,039	142,039	0.42435	60,274	60,274	142,039
84	30	144,879	144,879	0.41199	59,688	59,688	30	144,879	144,879	0.41199	59,688	59,688	144,879
85	31	147,777	147,777	0.39999	59,109	59,109	31	147,777	147,777	0.39999	59,109	59,109	147,777

(1) In Alternative method, one way to reflect required employee contributions while working is to net them against lost future earnings.

4. Comparisons Based on Maryland Reformed Contributory Retirement System, with <u>Ordinary</u> Disability Benefits, Disabled on 35th Birthday (Table 5, Cases 2a vs. 2c)

Table 5 compares the Maryland Reformed Contributory Retirement System, with Ordinary Disability Retirement benefits under both CSR methods for the hypothetical employee who either worked until age 65 and retired vs. having been disabled and retired on his 35th birthday. In Table 5, columns 2-7 are again based on the Rotolo-Oden method of disability pension offset, but due to having only ten years of creditable service and starting 20 years earlier, columns 3 and 4 now show very different values from those seen in Table 4. Case 2a regular pension results in current dollars are the same in Tables 4 and 5, although with fewer working years of paying pension premiums in Table 5. And now under the Rotolo-Oden method, the results are discounted back an extra 20 years, to age 35. In Table 5, column 3 at age 35, under Case 2a for regular retirement, the **-$5,631** shown is calculated as the required employee charge of 7% beginning with new hires on 7/1/2011 x the average salary that would be earned that year or $80,441.48 (shown in Appendix C, Table App. C-2a, column 3).

For Case 2c, the annual pension that he would earn at age 35, shown in Table 5, column 4, would be **$43,064.01** which is calculated based on the employee's average "high five" of $71,773.36 x 1.5% x the same effective 40 years of service (again, under Ordinary Disability Retirement rules, creditable service is the sum of actual service plus service projected to age 65, in this case assuming 10 years creditable service + 30 more years to reach age 65). This Ordinary Disability pension grows at 2%/year annual COLAs for 30 years and thus reaches **$78,005** by age 65 ($43,064.01 x 1.02^{30} = $78,004.50, shown in Appendix C, Table C-2c, column 17.

Discounting Case 2a and 2c pension streams at 3% per year to the beginning of year 1, when the employee turns 35 years old, results in present values for the lost regular pension (with the employee premium paid until age 65) and for the ordinary disability pension of **$610,936** vs. **$1,736,215**, respectively, shown in Table 5, columns 6 and 7. Since the Rotolo-Oden method only allows disability pensions to offset regular pensions, the net pension loss again is zero.

The Alternative method of offsetting the regular pension with the Ordinary Disability pension gives a very different result for Case 2a vs. 2c, shown in Table 4, columns 8-14. Instead of having a large net gain (before zeroing out the results) from the disability pension exceeding the lost regular pension as under the Rotolo-Oden method, here we again have a net pension loss under the Alternative method, **$168,586** (=$781,796 - $613,210). The greater loss using the Alternative method is unsurprising. Although the same factors creating a greater Alternative method loss with three of other paired cases remain true here, the Alternative net pension loss is greater for Cases 2a vs. 2c in Table 5 as compared with the net pension loss for Cases 2a vs. 2b in Table 4. That is because with a disabling injury assumed to occur at age 35 in year 10, all of the step rate increases have not yet occurred. That is why by age 65, the disability pension is only **$78,005** (seen in columns 4 and 8) as compared with the regular pension of **$99,450** (seen in columns 3 and 7). Another comparison can be made between the MD Ordinary Retirement system results vs. FERS. The disability pension of **$78,005** by age 65 is

the same under both pension valuation methods in Tables 4 and 5 because the MD Ordinary Disability pension benefit applies the same service multiplier and effective number of years of service, unlike in Tables 2 and 3 with FERS.

Finally, the more complete comparison again requires separately accounting for the employee's pension contributions. The PV of the employee's regular pension contributions = **$170,860**, shown near the top of column 12. The Alternative method's "Effective PV" of **$-2,274** combines the net pension loss measured from the retirement date, $168,586, with PV of the employee's regular pension contributions of $170,860. For a complete comparison between methods, we can observe almost the same net loss or damages: Using Rotolo-Oden, the large net pension loss is zeroed out, out while using the Alternative method, the Effective PV is slightly negative.

Thus, the rule that was cited at the end of the last section holds here too, although just barely: **If (a) under the Alternative method, the Effective PV is <u>negative</u>, which shows the impact of net pension loss on total damages, and (b) under Rotolo-Oden, the net pension loss is negative and thus zeroed out, then the Alternative method will result in a lower total damage award that also includes lost future earnings.**

Table 5: MD Ordinary Disab. Pension; Rotolo/Oden Method and Alternative Method of Applying Disability Pension Offset:
Case 2a v. 2c - Lost Regular Retir't Pension (2a), Offset with Ordinary Disab. Pension, Retire at 35 w/ 30 Years of Service (2c)

	Rotolo-Oden Method of Disability Pension Offset						Alternative Method of Disability Pension Offset						
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Injured at 35: Case 2a vs. Case 2c				PV from Disability Date		Altern. Method: Offset Reg. Pens. w/ Earned				PV from Exp. Ret. Date		
					610,936	1,736,215	Pens. to Disab. Date, Grow @ COLA; net @ Ret.				781,796	613,210	
											PV Emp Cont (1)		
		Case 2a	Case 2c					Case 2a	Case 2c		(170,860)		Regular
		Lost Reg.			PV Lost Reg.	PV Gain		Lost Reg.			PV Lost	PV Gain	pension
Age @	Yrs to	Pens. Less	Gain Disab.		Pens. Less	Disab.	Yrs to	Pens. Less	Gain Disab.		Regular	Disab.	earned to
Beg yr	disc	Contrib.	Pension	Disc Fctr	Contrib.	Pension	disc	Contrib.	Pension	Disc Fctr	pension	Pension	disability date
35	1	(5,631)	43,064	0.97087	(5,467)	41,810	1			0.97087			43,064
36	2	(5,852)	43,925	0.94260	(5,516)	41,404	2			0.94260			43,925
37	2	(6,082)	44,804	0.94260	(5,733)	42,232	2			0.94260			44,804
38	3	(6,321)	45,700	0.91514	(5,785)	41,822	3			0.91514			45,700
39	4	(6,570)	46,614	0.88849	(5,837)	41,416	4			0.88849			46,614
40	5	(6,828)	47,546	0.86261	(5,890)	41,014	5			0.86261			47,546
41	6	(7,097)	48,497	0.83748	(5,944)	40,616	6			0.83748			48,497
42	7	(7,376)	49,467	0.81309	(5,998)	40,221	7			0.81309			49,467
43	8	(7,667)	50,456	0.78941	(6,052)	39,831	8			0.78941			50,456
44	9	(7,969)	51,465	0.76642	(6,108)	39,444	9			0.76642			51,465
45	10	(8,283)	52,495	0.74409	(6,163)	39,061	10			0.74409			52,495
46	11	(8,448)	53,545	0.72242	(6,103)	38,682	11			0.72242			53,545
47	12	(8,617)	54,616	0.70138	(6,044)	38,306	12			0.70138			54,616
48	13	(8,790)	55,708	0.68095	(5,985)	37,934	13			0.68095			55,708
49	14	(8,966)	56,822	0.66112	(5,927)	37,566	14			0.66112			56,822
50	15	(9,145)	57,958	0.64186	(5,870)	37,201	15			0.64186			57,958
51	16	(9,328)	59,118	0.62317	(5,813)	36,840	16			0.62317			59,118
52	17	(9,514)	60,300	0.60502	(5,756)	36,483	17			0.60502			60,300
53	18	(9,705)	61,506	0.58739	(5,700)	36,128	18			0.58739			61,506
54	19	(9,899)	62,736	0.57029	(5,645)	35,778	19			0.57029			62,736
55	20	(10,097)	63,991	0.55368	(5,590)	35,430	20			0.55368			63,991
56	21	(10,299)	65,271	0.53755	(5,536)	35,086	21			0.53755			65,271
57	22	(10,505)	66,576	0.52189	(5,482)	34,746	22			0.52189			66,576
58	23	(10,715)	67,908	0.50669	(5,429)	34,408	23			0.50669			67,908
59	24	(10,929)	69,266	0.49193	(5,376)	34,074	24			0.49193			69,266
60	25	(11,148)	70,651	0.47761	(5,324)	33,743	25			0.47761			70,651
61	26	(11,371)	72,064	0.46369	(5,272)	33,416	26			0.46369			72,064
62	27	(11,598)	73,505	0.45019	(5,221)	33,091	27			0.45019			73,505
63	28	(11,830)	74,975	0.43708	(5,171)	32,770	28			0.43708			74,975
64	29	(12,066)	76,475	0.42435	(5,120)	32,452	29			0.42435			76,475
65	30	99,450	78,005	0.41199	40,972	32,137	30	99,450	78,005	0.41199	40,972	32,137	78,005
66	31	101,439	79,565	0.39999	40,574	31,825	31	101,439	79,565	0.39999	40,574	31,825	79,565
67	32	103,468	81,156	0.38834	40,180	31,516	32	103,468	81,156	0.38834	40,180	31,516	81,156
68	33	105,537	82,779	0.37703	39,790	31,210	33	105,537	82,779	0.37703	39,790	31,210	82,779
69	34	107,648	84,435	0.36604	39,404	30,907	34	107,648	84,435	0.36604	39,404	30,907	84,435
70	35	109,801	86,123	0.35538	39,021	30,607	35	109,801	86,123	0.35538	39,021	30,607	86,123
71	36	111,997	87,846	0.34503	38,642	30,310	36	111,997	87,846	0.34503	38,642	30,310	87,846
72	37	114,236	89,603	0.33498	38,267	30,015	37	114,236	89,603	0.33498	38,267	30,015	89,603
73	38	116,521	91,395	0.32523	37,896	29,724	38	116,521	91,395	0.32523	37,896	29,724	91,395
74	39	118,852	93,223	0.31575	37,528	29,435	39	118,852	93,223	0.31575	37,528	29,435	93,223
75	40	121,229	95,087	0.30656	37,163	29,150	40	121,229	95,087	0.30656	37,163	29,150	95,087
76	41	123,653	96,989	0.29763	36,803	28,867	41	123,653	96,989	0.29763	36,803	28,867	96,989
77	42	126,126	98,929	0.28896	36,445	28,586	42	126,126	98,929	0.28896	36,445	28,586	98,929
78	43	128,649	100,907	0.28054	36,092	28,309	43	128,649	100,907	0.28054	36,092	28,309	100,907
79	44	131,222	102,925	0.27237	35,741	28,034	44	131,222	102,925	0.27237	35,741	28,034	102,925
80	45	133,846	104,984	0.26444	35,394	27,762	45	133,846	104,984	0.26444	35,394	27,762	104,984
81	46	136,523	107,083	0.25674	35,050	27,492	46	136,523	107,083	0.25674	35,050	27,492	107,083
82	47	139,254	109,225	0.24926	34,710	27,225	47	139,254	109,225	0.24926	34,710	27,225	109,225
83	48	142,039	111,410	0.24200	34,373	26,961	48	142,039	111,410	0.24200	34,373	26,961	111,410
84	49	144,879	113,638	0.23495	34,039	26,699	49	144,879	113,638	0.23495	34,039	26,699	113,638
85	50	147,777	115,911	0.22811	33,709	26,440	50	147,777	115,911	0.22811	33,709	26,440	115,911

(1) In Alternative method, one way to reflect required employee contributions while working is to net them against lost future earnings.

VI. HOW NET LOST PENSION INCOME WAS ADDRESSED IN A RECENT CASE

The author of this article was involved as an expert for the defense in a PI case in which the plaintiff claimed losses for both future earning capacity as well as for lost net pension benefits. Plaintiff's economist claimed a net loss of a regular pension by acknowledging that plaintiff was receiving a disability pension. However, whereas the lost regular pension was calculated with reasonable assumptions of work life expectancy, expected salary growth but for the injury, and discounting to present value, the disability pension was netted against it in a manner that conformed neither to the Rotolo-Oden nor Alternative methods explained above. Rather, plaintiff's existing disability pension was simply applied, as is, about 20 years into the future, without any COLA adjustments for those intervening years, and simply netted against the regular pension loss beginning at the expected retirement date, all discounted back to present value.

Needless to say, this methodology was disputed. In rebuttal, a few alternative scenarios were offered, in each of which the same future COLAs that were applied to the lost regular pension beginning 20 years into the future, were also applied to the disability pension over the 20 years until the expected retirement date. This is essentially the Alternative method that was utilized in the previous section for comparison of results with the Rotolo-Oden method. An out-of-court settlement was achieved in this recent case that, while details were not revealed, was understood as having resulted in a satisfactory settlement to both parties.

VII. OBSERVATIONS AND CONCLUSIONS

Collateral source rules applied to pensions have been applied differently in various jurisdictions. In jurisdictions where case law has been limited or non-existent pertaining specifically to the CSR applied to pension, FEs have employed varying methods in calculating damages. Many PI, WD and Employment Law cases throughout the U.S. have favored plaintiffs by precluding entry into evidence of disability and survivor's (widow's) pensions. The ostensibly most favorable methods to defense in PI cases have been sanctioned by courts in the Rotolo and Oden cases (CA and NY appeals courts, respectively). In these two cases, courts have permitted disability pension income entered into evidence from the time of injury such that its present value might at most fully offset the loss of a regular pension, while leaving the loss of future earnings untouched. In WD cases, survivor's pensions have been excluded as evidence when viewed as a new benefit akin to life insurance (McKinney, CA appeals court), or included when viewed directly as a retirement plan pension and explicitly not as akin to life insurance (Russo, FL appeals court) or as offset to the decedent spouse's potential future pension benefit (DE Sup. Ct. However, ambiguity can still arise in the same jurisdiction, such as in Mize-Kurzman, an employment law case (also a CA appeals court), in which a pension was described as no different than an insurance policy, citing McKinney as precedent.

In terms of calculating damages, FEs may choose to follow the Rotolo-Oden method or some Alternative method that only considers a disability or survivor's pension as offsetting during the expected retirement period, pre-injury or pre-death. However, depending on the pension plan specifics, such an Alternative method may not lead to a higher damage award than Rotolo-Oden. The Rotolo-Oden method provides mixed results based on the FERS retirement plan in terms of the relative magnitude of total damage awards as compared with the Alternative method spelled out in this paper. The effective total damage award will depend not only on the relative generosity of disability pension formulae in replacing lost regular pension benefits, but also on whether the required pension premiums are netted against lost future earnings and not as part of the net pension loss. In the Maryland Reformed Contributory system, assuming an "Ordinary Disability" claim and an extremely generous regular pension replacement formula, the comparative results shown here favor Rotolo-Oden for higher awards, but only as long as required pension premiums are netted against lost future earnings and not as part of the net pension loss.

Given the legal ambiguity that exists among cases even within a jurisdiction but with only similar sets of case facts, it can be difficult to establish definitive rules for pension loss calculation. When considering additional differences in pension plan features, it also becomes difficult to generalize which pension loss calculation method will result in relatively higher or lower present value of results. Greater uniformity of case law across jurisdictions would help clarify these uncertainties. In addition, reporting by FEs on how their methods have been received in court, perhaps via a question on this matter posed in the periodic JFE questionnaire to its readers, would also assist in clarifying which methods FEs should use, and under which circumstances.

VIII. ENDNOTES

[1] FELA establishes compensation rules that apply to injured railroad workers in lieu of worker's compensation. One primary difference is that under FELA, worker's must prove their employee is at fault.

[2] The Appeals Court claimed that by not permitting the disability pension to be considered, the plaintiff would wind up with "…triple compensation. He will obtain damages based on lost income, additional damages based on his lost 'regular' retirement benefits, and his actual disability retirement benefits". The court said the CSR "…does not require this inequitable result. It emphasized its logic by stating that "A pension is a pension is a pension", which spawned an interesting article by that name exploring this decision's far reaching potential application. Ireland, Thomas R. and Lane Hudgins, "A Technical Note: A Pension is a Pension is a Pension", *The Earnings Analyst*, Vol. X 2008, pp. 128-133.

[3] See Disability Retirement Computation via link:
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APPENDIX A: **Table App. A-1: IMPORTANT INJURY, DEATH, AND EMPLOYMENT LAW CASES INVOLVING COLLATERAL SOURCE RULE (CSR) AND PENSIONS, GROUPED BY SUBTOPIC**

Note: Case types are identified within each subtopic as one of the following: Employment Law (EL); Wrongful Death (WD); Personal Injury-FELA; or Personal Injury-Non-FELA).

I. CASES ESTABLISHING CSR AS PROHIBTING PENSIONS OF ANY TYPE (ORDINARY, DISABILITY, AND "WIDOWS") TO OFFSET LOST EARNINGS/EARNING CAPACITY:

1. **Eichel v. New York Central Railroad Co., 375 U.S. 253 (1963)** (Federal Employers' Liability Act or FELA case, thus **PI-FELA**). Trial court excluded evidence of disability pension payments to plaintiff. Defense argued that such payments were offered to impeach the testimony of the plaintiff as to his motive for not returning to work. On appeal, defense agreed that it would have been highly improper for disability pension payments to be considered in mitigation of damages, but rather that it should be admissible as bearing on the extent and duration of the disability, and that the pension would show a motive of the plaintiff not continuing work. Appeals court reversed the trial court's decision to exclude disability pension evidence, and remanded for a new trial limited to damages. It said it was prejudicial error to exclude evidence of the disability pension, because ""Its substantive probative value cannot reasonably be said to be outweighed by the risk that it will … create substantial danger of undue prejudice through being considered by the jury for the incompetent purpose of a set-off against lost earnings". However, the U.S. Supreme Court reversed the appeals court, stating that evidence of disability pension as collateral benefit is "readily subject to misuse by a jury" and if such benefits were allowed as evidence, this would involve "... a substantial likelihood of prejudicial impact".
2. **EEOC v. O'Grady, 857 F.2d 383 (7th Cir. 1988) (EL).** Plaintiffs forced to retire at age 70 in violation of Age Discrimination in Employment Act (ADEA). Defense appealed trial court's decision not to offset back pay with ordinary pension benefits that plaintiffs had received from defendant. Appeals court upheld, noting that pension benefits were a collateral source that may be viewed as compensation earned by employee, and that payments (by the employer) were made to carry out a state policy under state law independent of ADEA.
3. **Hamlin v. Charter Twp. of Flint, 942 F.Supp. 1129, 1138 (E.D.Mich., 1996) (EL).** Plaintiff sued township for termination, allegedly violating Americans with Disabilities Act (ADA) and state law. Trial court granted township's motion to offset jury's award with present value of disability pension. Appeals court reversed trial court, saying collateral pension benefits should not be deducted from a jury's award for discrimination violations. Court cited Lussier decision (see Table App. A-1, Subtopic II) , noting that although in principal, district courts have discretion in awarding front pay, decision "...to offset collateral pension benefits from a discrimination award is a policy determination that should not be left to individual discretion of each district court".

4. **Salveson v. Douglas County, 630 N.W.2d 182 (WI 2001) (EL).** Plaintiff sued county for supervisor's sexual harassment and gender discrimination. After confirmation by county investigators, plaintiff claimed these actions caused her to suffer from PTSD. She then terminated employment and began receiving a disability pension. In EEOC suit, trial court denied county claim that compensatory and punitive damages were subject to damages cap, and also declined to offset damages (i.e., back and front pay, pain and suffering, medical) with disability benefits. Appeals court upheld damages cap but reversed lower court's exclusion of plaintiff's disability pension, allowing it as an offset to damages. WI Supreme court reversed appeals court and reinstated exclusion of disability pension, citing EEOC v. O'Grady (see this Table App. A-1, Subtopic I, above) that if benefits are part of compensation, such payments should not be subject to an offset.

5. **McKinney v. California Portland Cement Company, 96 Cal.App. 4th 1214 (2002) (WD).** Decedent had previously retired and began drawing pension and Social Security benefits prior to his death, allegedly related to asbestos exposure. Defense objected to trial court award that excluded mention of widow's pension benefits. It claimed that widow's pension payments were not "paid in connection with the injury or death as issue", and that the CSR only applies to pension benefits when they are paid to replace something that was lost because of the death. Appeals court upheld trial court ruling, noting that even though widow's benefit came from the same source as husband's earnings, this made no difference in the application of the collateral source rule and thus could not be introduced. It added that the survivor's benefit that spouse received after husband's death were new benefits, issued for the first time in her name, as a direct result of the death.

6. **Lovett v. City and County of San Francisco, 2004 (Cal. App.) (EL).** Appeals court upheld lower court verdict and award that state agency had discriminated against plaintiff by failing to make a reasonable accommodation for disability. Appeals court held "... that a pension benefit is a collateral source, separate from the employer's status as a tortfeasor. Like insurance, such payments are secured by the plaintiff's efforts as a part of the employment contract, and the tortfeasor is generally entitled to no credit for them."

II. UNSUCCESSFUL CHALLENGES TO CSR AS APPLIED TO PENSIONS:

1. **Melton v. Illinois Central Gulf Railroad Co., 763 SW 2d 321 - Mo: Court of Appeals, Eastern Dist., 4th Div. 1988 (PI-FELA).** Trial court rejected Railroad's efforts to set off disability benefit payments it made to Railroad Retirement Board on plaintiff's behalf. On appeal, defendant cited a case referring to section 5 of FELA, in which payments made by the railroad under a voluntary disability plan were deductible from a jury award. Appeals Court rejected this, citing Eichel [see Table App. A-1, Subtopic I], noting that recovery of contributions to Railroad Retirement Board differed because they were required under federal law, and thus affirmed trial court decision.
2. Lussier v. Runyon, 50 F. 3d 1103 - Court of Appeals, 1st Circuit 1995 (EL). Wrongfully discharged postal worker was awarded damages by the trial court, but it allowed disability benefits from two retirement plan sources to offset front pay losses. The appeals court noted that it tended to agree with those courts that have considered the "interplay between collateral benefits and back pay to be a matter within the district (trial) court's discretion". In this case, the only question before it applied to front pay, which it considered of a more speculative nature and thus more heavily dependent upon the informed discretion of the lower court. Thus, it held "… that it is within trial court's discretion to tailor a front pay award to take account of collateral benefits in a discrimination case, and that the court acted within the realm of this discretion in the case at bar." However, on procedural grounds, once the record was closed (i.e., only partially reopening the record to allow additional factual information) the award was canceled and returned. [The award that included the higher pension amount that was provided late was not allowed. Reference was made to the discretion of a trial court in offsetting front pay with pension benefits in Hamlin decision, under Table App. A-1, Subtopic I].

3. **CSX Transportation, Inc., v. Day, 613 So. 2d 883 (Ala 1993) (PI-FELA)**. Trial Court ruled in favor of plaintiff, awarding amount for loss of past and future income, as well as pain and suffering. Defense appealed on several grounds, including closing remarks by plaintiff's attorney, saying of plaintiff "He hasn't worked long enough to get a pension". Defense contended these remarks were highly prejudicial, leaving the impression on the jury that plaintiff would never be eligible to receive a pension even though plaintiff would be eligible for a pension upon reaching age 60. AL Supreme Court affirmed the trial court's decision, saying that although defense objected to plaintiff's attorney's comments about a pension at trial, it did not request a curative instruction be made to the jury. Not having made such a request, defense could not now claim that trial court erred in not giving a curative instruction to the jury. Since CSX did not request such an instruction at trial, it could not claim that the trial court erred, and so the issue was not preserved for appeal. [Note: Many railroad FELA cases involve nuances on how CSR applies to admissibility of age-related testimony. These are addressed separately in Table App. A-1, Subtopic IV.]
4. **Ortner v. Enterprise Rent-A-Car Company of Los Angeles, 2008 Cal. App. (WD).** Trial court excluded mention of a survivor's (or widow's) pension. Defense appealed, among other points citing Rotolo decision [see Table App-A1,-Subtopic III] in which defense was successful in including a disability pension as an offset to the loss of a future regular pension/retirement benefits. Appeals court upheld trial court, citing McKinney [see Table App. A-1,-Subtopic I], and rejected Rotolo logic. It called defense argument specious that decedent could not have received both his regular pension and the death benefit, since it was possible that his widow could have received both if her spouse had first retired, received pension payments, and then died. In present case, decedent could under no circumstances retire for disability and subsequently receive his regular pension, or vice versa.

5. **Mize-Kurzman v. Marin Community College Dist., 202 Cal.App.4th 832 (2012) 136 Cal.Rptr.3d 259 (EL).** Whistleblower case in which plaintiff was a community college dean who alleged that her superiors violated state law in several matters. (e.g., tampering with hiring process, awarding publicly-funded scholarships based on ethnicity). Plaintiff asserted retaliation and eventually was reassigned to a lower-paid counselor position. However, given her previously higher salary as a dean, her retirement pension would not have been materially reduced, and including Social Security, exceeded what she could have earned had she stayed as a dean. Trial court said that jury was "entitled to consider the 'availability' to plaintiff of a retirement pension and that "[t]he extent to which such a retirement pension could reduce" her damages was an issue of fact for the jury." It considered the amount of her retirement pension admissible on the issue of mitigation of plaintiff's damages and that the jury could determine whether and to what extent such retirement pension could reduce her damages. Appeals court rejected this argument, citing precedents (including McKinney) that state pensions are considered independent income sources from state schools, and that the CSR is no different because the compensation comes from a pension rather than an insurance policy. It added that defendant's wrongful conduct would result in an unacceptable choice, forcing an employee who is eligible to retire but does not wish to do so, retire for economic reasons rather than pursuing a claim against wrongdoer that might take years to come to fruition.

III. <u>SUCCESSFUL CHALLENGES TO CSR AS EXCLUDING PENSIONS:</u>

1. **Fariss v. Lynchburg Foundry, 769 F. 2nd 958- Court of appeals, 4th Circuit 1985 (EL)** Age Discrimination in Employment Act (ADEA) case, in which Plaintiff had subsequently died after his allegedly wrongful termination. Several questions pertained to how his life insurance, which was lost upon his termination, should be calculated; the court ruled that its value was only for the continuing premium payments that defense would have made. Regarding pensions, the appeals court noted that because plaintiff declined a survivor benefit option in favor of the lump sum, no pension benefits would have been paid had he remained employed until his death. It therefore ruled that defense was entitled to an offset against back pay and front pay for the lump sum pension benefits that plaintiff received when he was terminated. Moreover, since the lump sum was larger than his lost earnings due to his subsequent death, there was no loss of financial support from his lost earnings to his surviving wife.

2. **Rotolo Chevrolet v. The Superior Court of the County of San Bernadino, 105 Cal.App.45h 242; 129 Cal. Rptr. 2d 283 (Cal.App. 2003) (PI-Non-FELA).** Injured plaintiff was forced into premature retirement, intending to claim losses of future earnings and regular pension/retirement benefits. Trial court excluded evidence of disability retirement benefits under CA CSR. Defense appealed and was upheld. Appeals court said trial court erred in considering disability retirement benefits as collateral source replacing regular retirement benefits. If not overruled, plaintiff would result with "triple compensation", i.e., lost income, lost regular retirement benefits, and receipt of actual disability retirement benefits, which it called an "inequitable result". Thus, plaintiff "...cannot use [CSR] to prevent [defense] from introducing evidence that [plaintiff] is, in fact, receiving a pension." [See Table App. A-1, Subtopic V, Oden case, for partial support of logic similar to Rotolo]
3. **Sears, Roebuck and Co. v. Midcap, 893 A.2d 542 (Del. 2006) (WD).** Decision defined the application of CSR to pension benefits when a death results in reduced benefits to the spouse of a decedent. Damages awarded by trial court included loss of military pension and Social Security benefits, but it applied CSR to benefits from those same sources, excluding fact that widow would continue to receive substantial portions of both in the future. DE Supreme Court reversed, stating that although the CSR generally excludes evidence of such retirement benefits, "... facts in this case are more analogous to those in Rotolo ..." [cited above], restating Rotolo ruling that plaintiff "...cannot use [CSR] to prevent [defense] from introducing evidence that [plaintiff] is, in fact, receiving a pension."
4. **Russo v. Lorenzo, 67 So. 3d 1165 - Fla: Dist. Court of Appeals, 4th Dist. 2011 (WD).** Trial court ruled that widow's benefit was a collateral source, and did not allow defense to question plaintiff's economic expert about the wife's continuing benefits from her late husband's retirement plan. (Husband was a police officer who had not yet reached retirement age and was not yet vested in retirement plan, but wife started immediately to receive retirement benefits). Appeals Court said the question was whether the death benefit was to be considered a pension, for which evidence was to be permitted, as opposed to life insurance which was not permitted as a collateral source. Upon reversal, appeals court stated: "Although described as a "death benefit," we reject the notion that the monthly payment to the wife, derived from Officer Lorenzo's participation in the retirement plan, is equivalent to "life insurance" within the meaning of the collateral source statute.

IV. QUALIFICATIONS INVOLVING ADMISSIBILITY OF EVIDENCE PERTAINING TO AGE OF RETIREMENT:

1. **Griesser v. National Railroad Passenger Corporation, 2000 PA Super 313; 761 A.2d 606 (PI-FELA).** Trial court permitted defendant to repeatedly inject collateral source evidence into the proceedings. Plaintiff was 45 at the time of trial with damages projected for lost earning capacity to ages of 65 or 70. Plaintiff's expert was asked on cross examination if he was aware of retirement benefits available to railroad workers with 30 years of experience at age 60, adding that if plaintiff retired at age 62 he would be receiving basically as much from pension benefits as from continuing to work. The PA Superior Court, citing Eichel, reversed the trial court decision to admit evidence about plaintiff's retirement benefits in a way that violated the collateral source rule.
2. **Norfolk Southern Railway Corp. v. Tiller, 944 A.2d 1272 (Md. App. 2008) (PI-FELA).** Plaintiff was employed by railway company for 29 years and 5 months and just under age 52 at time of injury and testified that he intended to work until age 65. Based on CSR, trial court granted a motion to preclude defense's expert from testifying that plaintiff would be eligible to retire "with full benefits" at age 60 under "30/60" retirement policy. Appeals court noted that "…employee's eligibility for retirement benefits at a particular age … is unquestionably relevant evidence as to the probable age at which the employee might have been expected to stop working." However, despite such evidence being "… indisputably both relevant and material, [it] is on a direct collision course… with the massive and imposing bulk of the collateral source rule…[which in MD] traces back to 1899."
3. **CSX Transportation v. Pitts, 38 A. 3d 445 - Md: Court of Special Appeals 2012, and CSX Transportation v. Pitts, 61 A. 3d 767 - Md: Court of Appeals 2013 (PI-FELA).** Plaintiff was 59 at time of trial and contended that, but for his injury, he would have retired at age 67 or 68. Defense was not allowed to question plaintiff's expert about the average age of retirement for railroad employees, which would have shown that his planned retirement age would have been substantially higher than the age when most railroad employees retire and become eligible to receive pensions. Referencing Tiller [see above], the Court of Special Appeals rejected defense's appeal and held that "… evidence of an employee's expected retirement age was not an exception to the collateral source rule…[and] is not admissible to diminish a plaintiff's damages." It added that defense wished to offer "… purported statistical information that 'the overwhelming majority of people that retire in the railroad industry were, in fact, 60 years old' [but since this did not relate to the plaintiff individually it fell] … within the trial judge's discretion [to exclude]." The following year, the Appeals Court offered this somewhat clarifying distinction that "…although retirement eligibility information in a FELA case is barred by the collateral source rule, statistics about average retirement age for railroad workers is not".

4. **Giza v. BNSF Railway Company, 2014 Iowa Sup. LEXIS 19 (Iowa 2014) (PI-FELA)**. In case similar to CSX v. Pitts, above, here injured railroad plaintiff was 59 at time of injury and claimed he planned to work until age 66. Defense tried to counter this claim by attempting to introduce evidence that plaintiff was eligible to retire with full benefits at age 60, that plaintiff had checked on railroad's website regarding his retirement benefits, and also by offering statistical evidence that most railroad employees with 30 years of service retire at age 60 in report noting that employees with 30+ years of service retire on average at age 60.7. Trial court prohibited defense from overriding this evidence, but was reversed. Iowa Supreme court agreed with plaintiff on precluding evidence on availability of retirement benefits for employees meeting 30/60 criteria, but reversed trial court's exclusion of evidence of retirement pattern of railroad workers. It reiterated Pitts decision that stated: "Use of industry statistics about average retirement age in this context is not evidence of other compensation the plaintiff would receive for the same damage, but rather, evidence that shows that the full amount of lost wages claimed by the plaintiff may not exist. In other words, the tables may cast doubt on a plaintiff's statement that he would work until a certain age, and thus suggest to the fact-finder that the lost wage claim was exaggerated. . ."

V. QUALIFICATIONS INVOLVING ADMISSIBILITY OF EVIDENCE NOT PERTAINING TO AGE OF RETIREMENT:

1. **Matter of Adventure Bound Sports, Inc., 858 F. Supp. 1192 (S.D. Ga. 1994) (WD).** Wrongful death case in which compensation for loss of military retirement income was sought by family. District court ruled that claimant's pecuniary losses need not be established with mathematical precision, but that "the amount awarded must bear some relation to the evidence and cannot be based on speculation."

2. **Oden v. Chemung County Industrial Development Agency, 87 N.Y.2d 81; 661 N.E.2d 142; 637 N.Y.S. 2d 670 (N.Y. 1995) (PI-Non-FELA).** Trial court accepted the specific amounts of calculated losses for, among other things, lost future earnings and employee benefits as well as the loss of ordinary future pension benefits. However, plaintiff had disability retirement benefits that exceeded in present value the lost future pension benefits, and the trial court used this greater amount of disability retirement benefits to reduce the overall award. Appeals court modified this verdict by restoring the original award for lost future earnings and employee benefits and adjusted to total award upward. It held that "where a jury award for a discrete category of economic loss is wholly satisfied and in fact exceeded by a collateral source of the very same category, …[the law] operates only to eliminate the jury award for that category." In other words, only the award for lost pension benefits was sufficiently related to the collateral disability retirement benefits to qualify for the offset. [See Table App. A-1, Subtopic III, Rotolo case, for more expansive but similar logic]
3. **Firmes v. Chase Manhattan, 50 AD 3d 18 - NY: Appellate Div., 2nd Dept. 2008 (PI-Non-FELA).** After being injured, plaintiff was eligible to apply for Social Security disability. This potential collateral source offset posed a dilemma for defense. If it filed for a collateral source offset hearing before the application was made this would have involved an offset for a collateral payment not yet in existence. In a post-trial motion during which plaintiff apparently had been receiving SSDI payments, defense requested a collateral source hearing. However, appeals court denied this request as untimely. It is unclear whether the same dilemma and results would be as likely to apply if this were a private disability pension case, given the typically shorter lead times for approval in cases involving private pensions vs. SSDI.
4. **Cohen v. Cuomo, 2009 N.J. Super. Unpub. LEXIS 2290 (N.J. Super. 2009) (PI-Non-FELA).** Plaintiff's expert testified that plaintiff lost what would have been a fully vested pension. However, expert relied upon a key information source that defense claimed was "hearsay", which trial court agreed should be excluded, rather than rebutted on cross-examination. Appeals court upheld this exclusion because expert could not provide "foundational support for the use of hearsay evidence.

APPENDIX B: SAME CASES BASED ON FEDERAL EMPLOYMENT RETIREMENT SYSTEM:

- **Table App. B-1a: Base Case, No Injury, Normal Retirement**
- **Table App. B-1b: Injured at 55, Disability Retirement (w/ 30 Yrs of Svc)**
- **Table App. B-1c: Injured at 35, Disability Retirement (w/ 10 Yrs of Svc)**

Table App. B-1a - FERS: Base Case, No Injury, Normal Retirement							
1	2	3	4	5	6	7	8
		Case 1a					
Years Worked	Age @ Beg yr	Salary	COLA+Step for Sal & Pens	Pension (w/ COLA)	Employee Contribution	Empl Contr & Pension	Cum PV,Contr & Pension
1	25	50,000.00	5.33%		(2,200.00)	(2,200.00)	(2,200.00)
2	26	52,666.62	5.23%		(2,317.33)	(2,317.33)	(4,517.33)
3	27	55,418.83	5.12%		(2,438.43)	(2,438.43)	(6,955.76)
4	28	58,259.00	2.00%		(2,563.40)	(2,563.40)	(9,519.16)
5	29	59,424.18	5.03%		(2,614.66)	(2,614.66)	(12,133.82)
6	30	62,413.35	2.00%		(2,746.19)	(2,746.19)	(14,880.01)
7	31	63,661.61	4.94%		(2,801.11)	(2,801.11)	(17,681.12)
8	32	66,807.20	2.00%		(2,939.52)	(2,939.52)	(20,620.63)
9	33	68,143.34	4.86%		(2,998.31)	(2,998.31)	(23,618.94)
10	34	71,453.11	2.00%		(3,143.94)	(3,143.94)	(26,762.88)
11	35	72,882.18	2.00%		(3,206.82)	(3,206.82)	(29,969.69)
12	36	74,339.82	4.78%		(3,270.95)	(3,270.95)	(33,240.65)
13	37	77,891.56	2.00%		(3,427.23)	(3,427.23)	(36,667.87)
14	38	79,449.39	2.00%		(3,495.77)	(3,495.77)	(40,163.65)
15	39	81,038.38	4.70%		(3,565.69)	(3,565.69)	(43,729.34)
16	40	84,849.32	2.00%		(3,733.37)	(3,733.37)	(47,462.71)
17	41	86,546.31	2.00%		(3,808.04)	(3,808.04)	(51,270.74)
18	42	88,277.24	4.63%		(3,884.20)	(3,884.20)	(55,154.94)
19	43	92,365.81	2.00%		(4,064.10)	(4,064.10)	(59,219.04)
20	44	94,213.13	2.00%		(4,145.38)	(4,145.38)	(63,364.42)
21	45	96,097.39	2.00%		(4,228.29)	(4,228.29)	(67,592.70)
22	46	98,019.34	2.00%		(4,312.85)	(4,312.85)	(71,905.55)
23	47	99,979.73	2.00%		(4,399.11)	(4,399.11)	(76,304.66)
24	48	101,979.32	2.00%		(4,487.09)	(4,487.09)	(80,791.75)
25	49	104,018.91	2.00%		(4,576.83)	(4,576.83)	(85,368.58)
26	50	106,099.29	2.00%		(4,668.37)	(4,668.37)	(90,036.95)
27	51	108,221.27	2.00%		(4,761.74)	(4,761.74)	(94,798.69)
28	52	110,385.70	2.00%		(4,856.97)	(4,856.97)	(99,655.66)
29	53	112,593.41	2.00%		(4,954.11)	(4,954.11)	(104,609.77)
30	54	114,845.28	2.00%		(5,053.19)	(5,053.19)	(109,662.96)
31	55	117,142.19	2.00%		(5,154.26)	(5,154.26)	(114,817.22)
32	56	119,485.03	2.00%		(5,257.34)	(5,257.34)	(120,074.56)
33	57	121,874.73	2.00%		(5,362.49)	(5,362.49)	(125,437.05)
34	58	124,312.23	2.00%		(5,469.74)	(5,469.74)	(130,906.79)
35	59	126,798.47	2.00%		(5,579.13)	(5,579.13)	(136,485.92)
36	60	129,334.44	2.00%		(5,690.72)	(5,690.72)	(142,176.63)
37	61	131,921.13	2.00%		(5,804.53)	(5,804.53)	(147,981.16)
38	62	134,559.55	2.00%		(5,920.62)	(5,920.62)	(153,901.78)
39	63	137,250.74	2.00%		(6,039.03)	(6,039.03)	(159,940.82)
40	64	139,995.76	2.00%		(6,159.81)	(6,159.81)	(166,100.63)
41	65		2.00%	60,398.22	-	60,398.22	(105,702.41)
42	66		2.00%	61,606.19	-	61,606.19	(44,096.22)
43	67		2.00%	62,838.31	-	62,838.31	18,742.09
44	68		2.00%	64,095.07	-	64,095.07	82,837.16
45	69		2.00%	65,376.98	-	65,376.98	148,214.14
46	70		2.00%	66,684.52	-	66,684.52	214,898.65
47	71		2.00%	68,018.21	-	68,018.21	282,916.86
48	72		2.00%	69,378.57	-	69,378.57	352,295.43
49	73		2.00%	70,766.14	-	70,766.14	423,061.57
50	74		2.00%	72,181.46	-	72,181.46	495,243.04
51	75		2.00%	73,625.09	-	73,625.09	568,868.13
52	76		2.00%	75,097.60	-	75,097.60	643,965.73
53	77		2.00%	76,599.55	-	76,599.55	720,565.27
54	78		2.00%	78,131.54	-	78,131.54	798,696.81
55	79		2.00%	79,694.17	-	79,694.17	878,390.98
56	80		2.00%	81,288.05	-	81,288.05	959,679.03
57	81		2.00%	82,913.81	-	82,913.81	1,042,592.85
58	82		2.00%	84,572.09	-	84,572.09	1,127,164.94
59	83		2.00%	86,263.53	-	86,263.53	1,213,428.47
60	84		2.00%	87,988.80	-	87,988.80	1,301,417.27
61	85		2.00%	89,748.58	-	89,748.58	1,391,165.85

Table App. B-1b - FERS: Injured at 55, Disability Retirement (w/ 30 Yrs of Svc)

1	2	9	10	11	12	13	14
		Case 1b					
Years Worked	Age @ Beg yr	Salary	COLA+Step for Sal & Pens	Pension (w/ COLA)	Employee Contribution	Empl Contr & Pension	Cum PV,Contr & Pension
1	25	50,000.00	5.33%		(2,200.00)	(2,200.00)	(2,200.00)
2	26	52,666.62	5.23%		(2,317.33)	(2,317.33)	(4,517.33)
3	27	55,418.83	5.12%		(2,438.43)	(2,438.43)	(6,955.76)
4	28	58,259.00	2.00%		(2,563.40)	(2,563.40)	(9,519.16)
5	29	59,424.18	5.03%		(2,614.66)	(2,614.66)	(12,133.82)
6	30	62,413.35	2.00%		(2,746.19)	(2,746.19)	(14,880.01)
7	31	63,661.61	4.94%		(2,801.11)	(2,801.11)	(17,681.12)
8	32	66,807.20	2.00%		(2,939.52)	(2,939.52)	(20,620.63)
9	33	68,143.34	4.86%		(2,998.31)	(2,998.31)	(23,618.94)
10	34	71,453.11	2.00%		(3,143.94)	(3,143.94)	(26,762.88)
11	35	72,882.18	2.00%		(3,206.82)	(3,206.82)	(29,969.69)
12	36	74,339.82	4.78%		(3,270.95)	(3,270.95)	(33,240.65)
13	37	77,891.56	2.00%		(3,427.23)	(3,427.23)	(36,667.87)
14	38	79,449.39	2.00%		(3,495.77)	(3,495.77)	(40,163.65)
15	39	81,038.38	4.70%		(3,565.69)	(3,565.69)	(43,729.34)
16	40	84,849.32	2.00%		(3,733.37)	(3,733.37)	(47,462.71)
17	41	86,546.31	2.00%		(3,808.04)	(3,808.04)	(51,270.74)
18	42	88,277.24	4.63%		(3,884.20)	(3,884.20)	(55,154.94)
19	43	92,365.81	2.00%		(4,064.10)	(4,064.10)	(59,219.04)
20	44	94,213.13	2.00%		(4,145.38)	(4,145.38)	(63,364.42)
21	45	96,097.39	2.00%		(4,228.29)	(4,228.29)	(67,592.70)
22	46	98,019.34	2.00%		(4,312.85)	(4,312.85)	(71,905.55)
23	47	99,979.73	2.00%		(4,399.11)	(4,399.11)	(76,304.66)
24	48	101,979.32	2.00%		(4,487.09)	(4,487.09)	(80,791.75)
25	49	104,018.91	2.00%		(4,576.83)	(4,576.83)	(85,368.58)
26	50	106,099.29	2.00%		(4,668.37)	(4,668.37)	(90,036.95)
27	51	108,221.27	2.00%		(4,761.74)	(4,761.74)	(94,798.69)
28	52	110,385.70	2.00%		(4,856.97)	(4,856.97)	(99,655.66)
29	53	112,593.41	2.00%		(4,954.11)	(4,954.11)	(104,609.77)
30	54	114,845.28	2.00%		(5,053.19)	(5,053.19)	(109,662.96)
31	55		2.00%	33,782.44	-	33,782.44	(75,880.52)
32	56		2.00%	34,458.09		34,458.09	(41,422.43)
33	57		2.00%	35,147.25		35,147.25	(6,275.18)
34	58		2.00%	35,850.19		35,850.19	29,575.01
35	59		2.00%	36,567.20		36,567.20	66,142.21
36	60		2.00%	37,298.54		37,298.54	103,440.75
37	61		2.00%	38,044.51		38,044.51	141,485.27
38	62		2.00%	52,646.00		52,646.00	194,131.26
39	63		2.00%	53,698.92		53,698.92	247,830.18
40	64		2.00%	54,772.90		54,772.90	302,603.08
41	65		2.00%	55,868.35		55,868.35	358,471.43
42	66		2.00%	56,985.72		56,985.72	415,457.15
43	67		2.00%	58,125.44		58,125.44	473,582.59
44	68		2.00%	59,287.94		59,287.94	532,870.53
45	69		2.00%	60,473.70		60,473.70	593,344.24
46	70		2.00%	61,683.18		61,683.18	655,027.41
47	71		2.00%	62,916.84		62,916.84	717,944.25
48	72		2.00%	64,175.18		64,175.18	782,119.43
49	73		2.00%	65,458.68		65,458.68	847,578.11
50	74		2.00%	66,767.85		66,767.85	914,345.97
51	75		2.00%	68,103.21		68,103.21	982,449.18
52	76		2.00%	69,465.28		69,465.28	1,051,914.46
53	77		2.00%	70,854.58		70,854.58	1,122,769.04
54	78		2.00%	72,271.67		72,271.67	1,195,040.71
55	79		2.00%	73,717.11		73,717.11	1,268,757.82
56	80		2.00%	75,191.45		75,191.45	1,343,949.27
57	81		2.00%	76,695.28		76,695.28	1,420,644.54
58	82		2.00%	78,229.18		78,229.18	1,498,873.73
59	83		2.00%	79,793.77		79,793.77	1,578,667.49
60	84		2.00%	81,389.64		81,389.64	1,660,057.14
61	85		2.00%	83,017.44		83,017.44	1,743,074.57

Table App. B-1c - FERS: Injured at 35, Disability Retirement (w/ 10 Yrs of Svc)

1	2	15	16	17	18	19	20
		Case 1c					
Years Worked	Age @ Beg yr	Salary	COLA+Step for Sal & Pens	Pension (w/ COLA)	Employee Contribution	Empl Contr & Pension	Cum PV,Contr & Pension
1	25	50,000.00	5.33%		(2,200.00)	(2,200.00)	(2,200.00)
2	26	52,666.62	5.23%		(2,317.33)	(2,317.33)	(4,517.33)
3	27	55,418.83	5.12%		(2,438.43)	(2,438.43)	(6,955.76)
4	28	58,259.00	2.00%		(2,563.40)	(2,563.40)	(9,519.16)
5	29	59,424.18	5.03%		(2,614.66)	(2,614.66)	(12,133.82)
6	30	62,413.35	2.00%		(2,746.19)	(2,746.19)	(14,880.01)
7	31	63,661.61	4.94%		(2,801.11)	(2,801.11)	(17,681.12)
8	32	66,807.20	2.00%		(2,939.52)	(2,939.52)	(20,620.63)
9	33	68,143.34	4.86%		(2,998.31)	(2,998.31)	(23,618.94)
10	34	71,453.11	2.00%		(3,143.94)	(3,143.94)	(26,762.88)
11	35		2.00%	6,880.12	-	6,880.12	(19,882.76)
12	36		2.00%	7,017.72	-	7,017.72	(12,865.03)
13	37		2.00%	7,158.08	-	7,158.08	(5,706.95)
14	38		2.00%	7,301.24	-	7,301.24	1,594.29
15	39		2.00%	7,447.27	-	7,447.27	9,041.55
16	40		2.00%	7,596.21	-	7,596.21	16,637.76
17	41		2.00%	7,748.13	-	7,748.13	24,385.90
18	42		2.00%	7,903.10	-	7,903.10	32,288.99
19	43		2.00%	8,061.16	-	8,061.16	40,350.15
20	44		2.00%	8,222.38	-	8,222.38	48,572.54
21	45		2.00%	8,386.83	-	8,386.83	56,959.37
22	46		2.00%	8,554.57	-	8,554.57	65,513.93
23	47		2.00%	8,725.66	-	8,725.66	74,239.59
24	48		2.00%	8,900.17	-	8,900.17	83,139.76
25	49		2.00%	9,078.17	-	9,078.17	92,217.94
26	50		2.00%	9,259.74	-	9,259.74	101,477.67
27	51		2.00%	9,444.93	-	9,444.93	110,922.61
28	52		2.00%	9,633.83	-	9,633.83	120,556.44
29	53		2.00%	9,826.51	-	9,826.51	130,382.95
30	54		2.00%	10,023.04	-	10,023.04	140,405.99
31	55		2.00%	10,223.50	-	10,223.50	150,629.48
32	56		2.00%	10,427.97	-	10,427.97	161,057.45
33	57		2.00%	10,636.53	-	10,636.53	171,693.98
34	58		2.00%	10,849.26	-	10,849.26	182,543.24
35	59		2.00%	11,066.24	-	11,066.24	193,609.49
36	60		2.00%	11,287.57	-	11,287.57	204,897.05
37	61		2.00%	11,513.32	-	11,513.32	216,410.37
38	62		2.00%	47,796.40	-	47,796.40	264,206.77
39	63		2.00%	48,752.33	-	48,752.33	312,959.10
40	64		2.00%	49,727.37	-	49,727.37	362,686.47
41	65		2.00%	50,721.92	-	50,721.92	413,408.39
42	66		2.00%	51,736.36	-	51,736.36	465,144.75
43	67		2.00%	52,771.09	-	52,771.09	517,915.84
44	68		2.00%	53,826.51	-	53,826.51	571,742.35
45	69		2.00%	54,903.04	-	54,903.04	626,645.38
46	70		2.00%	56,001.10	-	56,001.10	682,646.48
47	71		2.00%	57,121.12	-	57,121.12	739,767.60
48	72		2.00%	58,263.54	-	58,263.54	798,031.15
49	73		2.00%	59,428.81	-	59,428.81	857,459.96
50	74		2.00%	60,617.39	-	60,617.39	918,077.35
51	75		2.00%	61,829.74	-	61,829.74	979,907.09
52	76		2.00%	63,066.33	-	63,066.33	1,042,973.42
53	77		2.00%	64,327.66	-	64,327.66	1,107,301.08
54	78		2.00%	65,614.21	-	65,614.21	1,172,915.29
55	79		2.00%	66,926.50	-	66,926.50	1,239,841.79
56	80		2.00%	68,265.03	-	68,265.03	1,308,106.82
57	81		2.00%	69,630.33	-	69,630.33	1,377,737.14
58	82		2.00%	71,022.93	-	71,022.93	1,448,760.08
59	83		2.00%	72,443.39	-	72,443.39	1,521,203.47
60	84		2.00%	73,892.26	-	73,892.26	1,595,095.73
61	85		2.00%	75,370.11	-	75,370.11	1,670,465.84

APPENDIX C: SAME CASES BASED ON EXAMPLE OF MARYLAND STATE REFORMED CONTRIBUTORY PENSION BENEFIT SYSTEM AND ORDINARY DISABILITY RETIREMENT FORMULA:

- **Table App. C-2a: Base Case, No Injury, Normal Retirement (Note: Case 2a = Case 3a)**
- **Table App. C-2b: Injured at 55, Ordinary Disability Retirement (w/ 30 Yrs of Svc)**
- **Table App. C-2c: Injured at 35, Ordinary Disability Retirement (w/ 10 Yrs of Svc)**

Table App. C-2a - MD, Ord Dis: Base Case, No Injury, Normal Retirement

1	2	3	4	5	6	7	8
		Case 2a					
Years Worked	Age @ Beg yr	Salary	COLA+Step for Sal & Pens	Pension (w/ COLA)	Employee Contribution	Empl Contr & Pension	Cum PV,Contr & Pension
1	25	50,000.00	5.81%		(3,500.00)	(3,500.00)	(3,500.00)
2	26	52,907.30	5.81%		(3,703.51)	(3,703.51)	(7,203.51)
3	27	55,983.64	5.82%		(3,918.86)	(3,918.86)	(11,122.37)
4	28	59,244.67	5.83%		(4,147.13)	(4,147.13)	(15,269.49)
5	29	62,699.94	5.84%		(4,389.00)	(4,389.00)	(19,658.49)
6	30	66,359.46	3.92%		(4,645.16)	(4,645.16)	(24,303.65)
7	31	68,960.80	3.92%		(4,827.26)	(4,827.26)	(29,130.91)
8	32	71,665.93	3.92%		(5,016.61)	(5,016.61)	(34,147.52)
9	33	74,477.78	3.93%		(5,213.44)	(5,213.44)	(39,360.97)
10	34	77,402.82	3.93%		(5,418.20)	(5,418.20)	(44,779.16)
11	35	80,441.48	3.93%		(5,630.90)	(5,630.90)	(50,410.07)
12	36	83,601.98	3.93%		(5,852.14)	(5,852.14)	(56,262.21)
13	37	86,887.09	3.93%		(6,082.10)	(6,082.10)	(62,344.30)
14	38	90,304.14	3.93%		(6,321.29)	(6,321.29)	(68,665.59)
15	39	93,854.66	3.93%		(6,569.83)	(6,569.83)	(75,235.42)
16	40	97,544.81	3.94%		(6,828.14)	(6,828.14)	(82,063.55)
17	41	101,385.78	3.94%		(7,097.00)	(7,097.00)	(89,160.56)
18	42	105,378.02	3.94%		(7,376.46)	(7,376.46)	(96,537.02)
19	43	109,527.58	3.94%		(7,666.93)	(7,666.93)	(104,203.95)
20	44	113,841.58	3.94%		(7,968.91)	(7,968.91)	(112,172.86)
21	45	118,325.73	2.00%		(8,282.80)	(8,282.80)	(120,455.66)
22	46	120,692.24	2.00%		(8,448.46)	(8,448.46)	(128,904.12)
23	47	123,106.09	2.00%		(8,617.43)	(8,617.43)	(137,521.54)
24	48	125,568.21	2.00%		(8,789.77)	(8,789.77)	(146,311.32)
25	49	128,079.57	2.00%		(8,965.57)	(8,965.57)	(155,276.89)
26	50	130,641.16	2.00%		(9,144.88)	(9,144.88)	(164,421.77)
27	51	133,253.99	2.00%		(9,327.78)	(9,327.78)	(173,749.55)
28	52	135,919.07	2.00%		(9,514.33)	(9,514.33)	(183,263.88)
29	53	138,637.45	2.00%		(9,704.62)	(9,704.62)	(192,968.51)
30	54	141,410.20	2.00%		(9,898.71)	(9,898.71)	(202,867.22)
31	55	144,238.40	2.00%		(10,096.69)	(10,096.69)	(212,963.91)
32	56	147,123.17	2.00%		(10,298.62)	(10,298.62)	(223,262.53)
33	57	150,065.63	2.00%		(10,504.59)	(10,504.59)	(233,767.12)
34	58	153,066.94	2.00%		(10,714.69)	(10,714.69)	(244,481.81)
35	59	156,128.28	2.00%		(10,928.98)	(10,928.98)	(255,410.79)
36	60	159,250.85	2.00%		(11,147.56)	(11,147.56)	(266,558.35)
37	61	162,435.87	2.00%		(11,370.51)	(11,370.51)	(277,928.86)
38	62	165,684.58	2.00%		(11,597.92)	(11,597.92)	(289,526.78)
39	63	168,998.27	2.00%		(11,829.88)	(11,829.88)	(301,356.66)
40	64	172,378.24	2.00%		(12,066.48)	(12,066.48)	(313,423.14)
41	65		2.00%	99,449.74	-	99,449.74	(213,973.40)
42	66		2.00%	101,438.73	-	101,438.73	(112,534.67)
43	67		2.00%	103,467.51	-	103,467.51	(9,067.16)
44	68		2.00%	105,536.86	-	105,536.86	96,469.70
45	69		2.00%	107,647.59	-	107,647.59	204,117.29
46	70		2.00%	109,800.55	-	109,800.55	313,917.84
47	71		2.00%	111,996.56	-	111,996.56	425,914.39
48	72		2.00%	114,236.49	-	114,236.49	540,150.88
49	73		2.00%	116,521.22	-	116,521.22	656,672.10
50	74		2.00%	118,851.64	-	118,851.64	775,523.74
51	75		2.00%	121,228.68	-	121,228.68	896,752.42
52	76		2.00%	123,653.25	-	123,653.25	1,020,405.67
53	77		2.00%	126,126.31	-	126,126.31	1,146,531.98
54	78		2.00%	128,648.84	-	128,648.84	1,275,180.82
55	79		2.00%	131,221.82	-	131,221.82	1,406,402.64
56	80		2.00%	133,846.25	-	133,846.25	1,540,248.89
57	81		2.00%	136,523.18	-	136,523.18	1,676,772.07
58	82		2.00%	139,253.64	-	139,253.64	1,816,025.71
59	83		2.00%	142,038.71	-	142,038.71	1,958,064.42
60	84		2.00%	144,879.49	-	144,879.49	2,102,943.91
61	85		2.00%	147,777.08	-	147,777.08	2,250,720.99

Table App. C-2b - MD, Ord Dis: Injured at 55, Disability Retire't (w/30 Yrs of Svc)							
1	2	9	10	11	12	13	14
		Case 2b					
Years Worked	Age @ Beg yr	Salary	COLA+Step for Sal & Pens	Pension (w/ COLA)	Employee Contribution	Empl Contr & Pension	Cum PV,Contr & Pension
1	25	50,000.00	5.81%		(3,500.00)	(3,500.00)	(3,500.00)
2	26	52,907.30	5.81%		(3,703.51)	(3,703.51)	(7,203.51)
3	27	55,983.64	5.82%		(3,918.86)	(3,918.86)	(11,122.37)
4	28	59,244.67	5.83%		(4,147.13)	(4,147.13)	(15,269.49)
5	29	62,699.94	5.84%		(4,389.00)	(4,389.00)	(19,658.49)
6	30	66,359.46	3.92%		(4,645.16)	(4,645.16)	(24,303.65)
7	31	68,960.80	3.92%		(4,827.26)	(4,827.26)	(29,130.91)
8	32	71,665.93	3.92%		(5,016.61)	(5,016.61)	(34,147.52)
9	33	74,477.78	3.93%		(5,213.44)	(5,213.44)	(39,360.97)
10	34	77,402.82	3.93%		(5,418.20)	(5,418.20)	(44,779.16)
11	35	80,441.48	3.93%		(5,630.90)	(5,630.90)	(50,410.07)
12	36	83,601.98	3.93%		(5,852.14)	(5,852.14)	(56,262.21)
13	37	86,887.09	3.93%		(6,082.10)	(6,082.10)	(62,344.30)
14	38	90,304.14	3.93%		(6,321.29)	(6,321.29)	(68,665.59)
15	39	93,854.66	3.93%		(6,569.83)	(6,569.83)	(75,235.42)
16	40	97,544.81	3.94%		(6,828.14)	(6,828.14)	(82,063.55)
17	41	101,385.78	3.94%		(7,097.00)	(7,097.00)	(89,160.56)
18	42	105,378.02	3.94%		(7,376.46)	(7,376.46)	(96,537.02)
19	43	109,527.58	3.94%		(7,666.93)	(7,666.93)	(104,203.95)
20	44	113,841.58	3.94%		(7,968.91)	(7,968.91)	(112,172.86)
21	45	118,325.73	2.00%		(8,282.80)	(8,282.80)	(120,455.66)
22	46	120,692.24	2.00%		(8,448.46)	(8,448.46)	(128,904.12)
23	47	123,106.09	2.00%		(8,617.43)	(8,617.43)	(137,521.54)
24	48	125,568.21	2.00%		(8,789.77)	(8,789.77)	(146,311.32)
25	49	128,079.57	2.00%		(8,965.57)	(8,965.57)	(155,276.89)
26	50	130,641.16	2.00%		(9,144.88)	(9,144.88)	(164,421.77)
27	51	133,253.99	2.00%		(9,327.78)	(9,327.78)	(173,749.55)
28	52	135,919.07	2.00%		(9,514.33)	(9,514.33)	(183,263.88)
29	53	138,637.45	2.00%		(9,704.62)	(9,704.62)	(192,968.51)
30	54	141,410.20	2.00%		(9,898.71)	(9,898.71)	(202,867.22)
31	55		2.00%	81,583.42	-	81,583.42	(121,283.80)
32	56		2.00%	83,215.09		83,215.09	(38,068.70)
33	57		2.00%	84,879.39		84,879.39	46,810.69
34	58		2.00%	86,576.98		86,576.98	133,387.67
35	59		2.00%	88,308.52		88,308.52	221,696.19
36	60		2.00%	90,074.69		90,074.69	311,770.88
37	61		2.00%	91,876.19		91,876.19	403,647.07
38	62		2.00%	93,713.71		93,713.71	497,360.78
39	63		2.00%	95,587.98		95,587.98	592,948.76
40	64		2.00%	97,499.74		97,499.74	690,448.50
41	65		2.00%	99,449.74		99,449.74	789,898.24
42	66		2.00%	101,438.73		101,438.73	891,336.97
43	67		2.00%	103,467.51		103,467.51	994,804.48
44	68		2.00%	105,536.86		105,536.86	1,100,341.34
45	69		2.00%	107,647.59		107,647.59	1,207,988.93
46	70		2.00%	109,800.55		109,800.55	1,317,789.48
47	71		2.00%	111,996.56		111,996.56	1,429,786.03
48	72		2.00%	114,236.49		114,236.49	1,544,022.52
49	73		2.00%	116,521.22		116,521.22	1,660,543.74
50	74		2.00%	118,851.64		118,851.64	1,779,395.38
51	75		2.00%	121,228.68		121,228.68	1,900,624.06
52	76		2.00%	123,653.25		123,653.25	2,024,277.30
53	77		2.00%	126,126.31		126,126.31	2,150,403.62
54	78		2.00%	128,648.84		128,648.84	2,279,052.46
55	79		2.00%	131,221.82		131,221.82	2,410,274.27
56	80		2.00%	133,846.25		133,846.25	2,544,120.53
57	81		2.00%	136,523.18		136,523.18	2,680,643.71
58	82		2.00%	139,253.64		139,253.64	2,819,897.35
59	83		2.00%	142,038.71		142,038.71	2,961,936.06
60	84		2.00%	144,879.49		144,879.49	3,106,815.55
61	85		2.00%	147,777.08		147,777.08	3,254,592.63

Table App. C-2c - MD, Ord Dis: Injured at 35, Disability Retire't (w/ 10 Yrs of Svc)							
1	2	15	16	17	18	19	20
		Case 2c					
Years Worked	Age @ Beg yr	Salary	COLA+Step for Sal & Pens	Pension (w/ COLA)	Employee Contribution	Empl Contr & Pension	Cum PV,Contr & Pension
1	25	50,000.00	5.81%		(3,500.00)	(3,500.00)	(3,500.00)
2	26	52,907.30	5.81%		(3,703.51)	(3,703.51)	(7,203.51)
3	27	55,983.64	5.82%		(3,918.86)	(3,918.86)	(11,122.37)
4	28	59,244.67	5.83%		(4,147.13)	(4,147.13)	(15,269.49)
5	29	62,699.94	5.84%		(4,389.00)	(4,389.00)	(19,658.49)
6	30	66,359.46	3.92%		(4,645.16)	(4,645.16)	(24,303.65)
7	31	68,960.80	3.92%		(4,827.26)	(4,827.26)	(29,130.91)
8	32	71,665.93	3.92%		(5,016.61)	(5,016.61)	(34,147.52)
9	33	74,477.78	3.93%		(5,213.44)	(5,213.44)	(39,360.97)
10	34	77,402.82	3.93%		(5,418.20)	(5,418.20)	(44,779.16)
11	35		2.00%	43,064.01	-	43,064.01	(1,715.15)
12	36		2.00%	43,925.29	-	43,925.29	42,210.15
13	37		2.00%	44,803.80	-	44,803.80	87,013.95
14	38		2.00%	45,699.88	-	45,699.88	132,713.82
15	39		2.00%	46,613.87	-	46,613.87	179,327.70
16	40		2.00%	47,546.15	-	47,546.15	226,873.85
17	41		2.00%	48,497.07	-	48,497.07	275,370.92
18	42		2.00%	49,467.02	-	49,467.02	324,837.94
19	43		2.00%	50,456.36	-	50,456.36	375,294.29
20	44		2.00%	51,465.48	-	51,465.48	426,759.78
21	45		2.00%	52,494.79	-	52,494.79	479,254.57
22	46		2.00%	53,544.69	-	53,544.69	532,799.26
23	47		2.00%	54,615.58	-	54,615.58	587,414.84
24	48		2.00%	55,707.89	-	55,707.89	643,122.74
25	49		2.00%	56,822.05	-	56,822.05	699,944.79
26	50		2.00%	57,958.49	-	57,958.49	757,903.28
27	51		2.00%	59,117.66	-	59,117.66	817,020.95
28	52		2.00%	60,300.02	-	60,300.02	877,320.96
29	53		2.00%	61,506.02	-	61,506.02	938,826.98
30	54		2.00%	62,736.14	-	62,736.14	1,001,563.12
31	55		2.00%	63,990.86	-	63,990.86	1,065,553.98
32	56		2.00%	65,270.68	-	65,270.68	1,130,824.65
33	57		2.00%	66,576.09	-	66,576.09	1,197,400.74
34	58		2.00%	67,907.61	-	67,907.61	1,265,308.36
35	59		2.00%	69,265.76	-	69,265.76	1,334,574.12
36	60		2.00%	70,651.08	-	70,651.08	1,405,225.20
37	61		2.00%	72,064.10	-	72,064.10	1,477,289.30
38	62		2.00%	73,505.38	-	73,505.38	1,550,794.69
39	63		2.00%	74,975.49	-	74,975.49	1,625,770.18
40	64		2.00%	76,475.00	-	76,475.00	1,702,245.18
41	65		2.00%	78,004.50	-	78,004.50	1,780,249.68
42	66		2.00%	79,564.59	-	79,564.59	1,859,814.27
43	67		2.00%	81,155.88	-	81,155.88	1,940,970.15
44	68		2.00%	82,779.00	-	82,779.00	2,023,749.16
45	69		2.00%	84,434.58	-	84,434.58	2,108,183.74
46	70		2.00%	86,123.27	-	86,123.27	2,194,307.01
47	71		2.00%	87,845.74	-	87,845.74	2,282,152.75
48	72		2.00%	89,602.65	-	89,602.65	2,371,755.40
49	73		2.00%	91,394.71	-	91,394.71	2,463,150.10
50	74		2.00%	93,222.60	-	93,222.60	2,556,372.70
51	75		2.00%	95,087.05	-	95,087.05	2,651,459.75
52	76		2.00%	96,988.79	-	96,988.79	2,748,448.55
53	77		2.00%	98,928.57	-	98,928.57	2,847,377.12
54	78		2.00%	100,907.14	-	100,907.14	2,948,284.26
55	79		2.00%	102,925.28	-	102,925.28	3,051,209.54
56	80		2.00%	104,983.79	-	104,983.79	3,156,193.33
57	81		2.00%	107,083.46	-	107,083.46	3,263,276.79
58	82		2.00%	109,225.13	-	109,225.13	3,372,501.92
59	83		2.00%	111,409.64	-	111,409.64	3,483,911.56
60	84		2.00%	113,637.83	-	113,637.83	3,597,549.39
61	85		2.00%	115,910.59	-	115,910.59	3,713,459.97