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ECONOMIC ANALYSIS IN EMPLOYMENT MATTERS

OVERVIEW

Compensatory Damages

Loss of earnings (all forms of compensation) past and future
Benefits, including pension.
No loss of Social Security possible

The Calculations

Historic Loss ('back pay')

Present Value of Future Loss ('front pay')

The Main Components

Worklife

Discount Rate

Net discount rate

Tax issue

Wage growth rate

Inflation rate

Salary or compensation basis

Other Issues

Pension

Health Benefits

Social Security

Unused vacation

Mitigation of loss

Taxes

Punitive Damages

Economic analysis only in assessing defendant's financial condition

Credit Score Damage

I. HISTORIC LOSS ('Back-pay')

This period is from time of incident to date of trial. Wage growth rates could be used but no discounting.

Adjustment for promotions, "lost-chance" damages: Backpay may be increased to take into account promotions the employee was likely to have received. [See Bishop v. Gainer (7th Cir. 2001) 272 F.3d 1009, 1015-1016]

II. PRESENT VALUE (PV) OF FUTURE LOSS (front-pay)

(i.e. the lump sum payment today that is equal to a stream of future compensation- assumes lump sum is used to purchase financial instruments that will generate returns in an amount approximately equivalent to the total future compensation)

Lifetime front pay upheld under FEHA: An award of front pay that compensated plaintiff for the remainder of her entire working life has been upheld under California's FEHA. [See Bihun v. AT&T Information Systems, Inc. (1993) 13 Cal.App.4th 976, 996-997, 16 Cal.Rptr.2d 787, 797-798--damage award upheld based on finding that plaintiff would have remained with AT&T "indefinitely" but for sexual harassment]. See also Williams v. Pharmacia.

Discounting to present value: As with future medicals and all other lump-sum

future damages awards, amounts recoverable for prospective earnings losses must be "discounted" (reduced) to present cash value for the probable period of disability. Broadly, "present cash value" is the amount of money which, together with investment return at the highest yield rate consistent with reasonable security, would defray the economic losses plaintiff is expected to sustain in the future. [BAJI No. 14.70; Rest.2d Torts § 913A; Scognamillo v. Herrick (2003) 106 Cal.App.4th 1139, 1151, 131 Cal.Rptr.2d 393, 402]

Rationale: The law assumes that a lump-sum damage award may be invested by plaintiff so as to eventually yield an amount equal to plaintiff's gross losses. Theoretically, at least, were the lump-sum award not discounted to present value, plaintiff would ultimately recover excessive compensatory damages (the gross amount plus the investment return on that amount). [See Rest.2d Torts § 913A, comm. "a"]

$PV = \text{the Summation of compensation (annual)} \times (1 + g)^n / (1 + d)^n$

Where g is the annual growth rate of compensation, d is the discount rate, and n is the number of years of future loss.

As an example, assume $n = 3$, the annual compensation is \$10,000, $g = 3.65\%$, and $d = 5\%$

Note on terminology: the net discount rate is given by $d-g$. In this example it is 1.35%

Continuing, we then have:

$$\begin{aligned} & \$10,000 (1.0365)^1 / (1.05)^1 + \$10,000 (1.0365)^2 / (1.05)^2 + \$10,000 \\ & (1.0365)^3 / (1.05)^3 = \$29,208 \end{aligned}$$

III. The Main Components of the Analysis

Worklife

Worklife is a statistical average of the number of years a person will be working. It factors out the probability of death, sickness, child rearing, and leaving the labor force.

Generally, the Worklife Expectancy Tables by the Bureau of Labor Statistics (BLS) were considered most authoritative but they are out of date (1986 has been the most recent). For instance, since 1986 worklife expectancy for women has increased. Subsequently, the few Worklife tables constructed by forensic economists using BLS employment data are reliable.

The flaws of using 'retirement' age or Social Security eligibility age are that these do not consider the factors stated above that are involved in the expected worklife.

Including an analysis using worklife is absolutely necessary. But since worklife is a statistical average and plaintiff may exceed expected worklife, it is reasonable to consider an alternative scenario of 'retirement' age in addition to the worklife scenario.

There are other worklife expectancy tables that have been constructed that consider education levels, gender, and other aspects. Lately, I've been using the worklife tables in the Journal of Forensic Economics 22(2) 2011, pp. 165-229. The authors are Skoog, Ciecka and Krueger. It appears the few existing authoritative worklife tables yield rather similar results.

IV. Discount Rate

The higher the (net) discount rate, the lower the present value of loss.

Presently, I use the discount rate of 2.644%. This is the combined average annual yields of 3-year Treasuries, 5-year Treasuries, 7-year Treasuries, and 10-year Treasuries for the period 2001-2020 (the source is the *FederalReserve.gov*). This would be considered the risk-free rate of return. Using Treasury securities is necessary because they are default risk free. Using some historic average is justified to smooth out cyclical fluctuations.

Using short-term securities is justified to remove inflation risk that may occur with longer term Treasuries (bonds). It is not always financially prudent to 'lock-in' to a T-Bond when future interest rates are expected to rise due to inflation. (This lowers the bond price of the previously issued bond). *Given the very low Treasury Bill rates currently, I now advocate using Treasury Bonds of varied maturities (avoiding inflation rate risk).*

Note: for a few months in the past (Nov 2005 to March 2006 for example) the yield curve flattened and then became inverted. **What this means is that the yield on long term Treasuries (bonds) was actually less than the short-term T-Bills.** This rarely happens and when it does it makes the business news. The anticipation is a slow-down in economic activity.

Typically, the longer the date to maturity the higher the yield because of the economic principle of forgoing liquidity.

The 'controversy' surrounding the selection of the (net) discount rate is 'much to do about nothing.'

In actual fact, it is really the net discount rate that ultimately matters most (d-g).

There is no set method for ascertaining the appropriate discount rate; indeed, the parties are normally given great leeway in arguing how reduction of the award is to be calculated. [e.g., *Noble v. Tweedy* (1949) 90 Cal.App.2d 738, 747-748, 203 P.2d 778, 783] But until evidence is taken on the issue (or comparable judicial notice, below), no present cash value instruction may be given. [*Wilson v. Gilbert* (1972) 25 Cal.App.3d 607, 102 Cal.Rptr. 31]

Burden of proof? No known reported California decision has squarely resolved which side has the burden of proving the appropriate reduction to present value. The result could conceivably go either way:

* Under a view that the reduction ultimately benefits defendant (who thereby pays out a smaller lump-sum amount), arguably defendant should shoulder the burden of producing evidence on the issue.

* But to the extent present value may be viewed as an element of compensatory damages, plaintiff just as plausibly should have the initial evidentiary burden.

The National Association Forensic Economics peer-reviewed Journal of Forensic Economics devoted an entire issue (April 1989) to the discount rate controversy:

In the article by Colella, a net discount rate of zero (total offset method) is supported. He states Alaska and Pennsylvania have legislated this.

Article by Conley is in support of net discount rate of 1.

In Falero's article, he supports the use of a variety of rates in his reports. Specifically, he supports the use of a short-term rate in all his reports. He suggests a 6-month T-Bill as the risk-free rate.

In the article by Fox, there is support for a weighted average discount rate that includes a 6-month T-Bill rate.

In the article by Ray, he argues against choosing a discount rate that has a maturity date that corresponds with the termination of future claims because this rate may change from the time of report to settlement. Plaintiff may incur loss. **He suggests a twenty-year average for 90-day T-Bills may be 'much more appropriate' (p.95).**

Slesinger in his article substantiates the disagreement among economists regarding the appropriate discount rate. He computes long-term average of the net discount rates for a variety of securities, representing a variety of risk levels including BAA rated corporate bonds. This range takes values from 1.35% to nearly 3%, representing different risk levels.

Continuing, in the article by Albrecht (*Journal of Forensic Economics* 6(3) 1993 pp. 271-272), support for a risk-free rate is given.

Further, in the article by Romans and Floss (Journal of Forensic Economics 5(3) 1993 pp. 265-266) the authors **offer four guidelines in the selection of a discount rate** in order to reduce the controversy. These are (1) the discount rate should be a default risk-free rate. This implies Treasury bond rates; **(2) the discount rate should be inflation risk-free rate. This implies a fairly short-term rate, such as Treasury Bills;**

Tax issues consideration: (3) the discount rate should be a tax-free rate. This implies a Treasury rate minus some effective average marginal tax rate (or use rate on low risk municipal bonds);

(4) the discount rate should be an average over some reasonable time period since the use of short-term rates require reinvesting. The authors state the averaging period should be identical to the earnings growth period. They argue that an average of three to five year Treasury bond rates would be at the high end of the band of discount rate selection. At the lower end, would be an average of Treasury bill rates or **municipal bond rates.** They favor fairly short term government rate with a tax adjustment and municipal bond rates which may, in part, account for this tax issue. (With either of these last two approaches, the discount rate is a lower value. The lower the value of the discount rate the higher the present value of future earnings.)

[See generally, Trevino v. United States (9th Cir. 1986) 804 F.2d 1512, 1519, cert.den. (1987) 484 U.S. 816; Jones & Laughlin Steel Corp. v. Pfeifer (1983) 462 U.S. 523, 541-546, 103 S.Ct. 2541, 2552-2555; Schiernbeck v. Haight (1992) 7 Cal.App.4th 869, 9 Cal.Rptr.2d 716, 721]

V. Growth Rate (of salary)

The higher the growth rate, the higher the Present Value of future earnings.

I typically use a historic twenty-year national average growth rate of some type of wage (that is, private sector nonagricultural wage or public sector) published by BLS. Currently, I use 2.525% as the private sector nonagricultural wage average growth rate for 2001-2020. And I use 2.25% as the public sector (state and local) wage average growth rate for the period 2001-2020. For federal government, it is currently 2.443%.

Why not use past average wage growth rate of plaintiff?

Info may not be fully available.

The future is uncertain.

Entering another occupation may be considered.

Often the historic national average may be less than plaintiff's past wage increases. So, I duly note in my Report or in testimony, that a more conservative number is being used. If I have what I consider to be good amount of reliable salary history with the same employer, then I would prefer to use this, of course.

Why not use the inflation rate, as given by the Consumer Price Index?

The unfortunate reality is that for the average American wage growth has not been keeping up with inflation since approx 1975! This may be referred to as the phenomenon of the falling real wage.

Using the inflation rate, therefore, may overstate the loss.

Using this wage growth rate is more conservative (and more accurate/more astute) and should be duly noted in the Report and in testimony.

Effect of inflation: In arriving at a realistic gross award, the trier of fact is allowed to consider inflationary factors--i.e., that the purchasing power of the dollar is decreasing and that wages are increasing with the cost of living. The inflationary index factor, however, must be based on "sound and substantial economic evidence." Again, this generally requires the testimony of expert economists. [Rodriguez v. McDonnell Douglas Corp. (1978) 87 Cal.App.3d 626, 151 Cal.Rptr. 399]

VI. Salary Base

In the peer-reviewed Journal of Forensic Economics 12(1), 1999, pp. 13-32, the authors of an article entitled "The Valuation of Earning Capacity Definition, Measurement and Evidence," state:

For the average worker, past earnings history remains the most important source of factual information for earning capacity...This earnings data is likely to have an impact on the eventual compensation award. This is true because past behavior is, after all, strong evidence of what a person was capable of doing in the past, and absent identifiable changes, *strong evidence of what they would be capable of doing in the future. Actual earnings data is often the starting point for measuring capacity. If there is no information to the contrary, it is usually assumed that actual earnings demonstrate earning capacity* (emphasis added).

This notion is bolstered by yet another peer-reviewed publication, Litigation Economics Digest. In an article entitled "Principles of Establishing the Lost Earnings Base," in Litigation Economics Digest 1(1), 1995, pp.45-61, the authors conclude, at page 59 "In choosing a lost earnings base, **forensic economists look to the specific earnings history of the individual, when available, and exercise judgment in determining the earning capacity that should be expected in future years.**

The analysis set forth in the two journal articles demonstrates the typical process for determinations of lost future earning capacity, which necessarily considers past earnings. The subject documents are plainly necessary for this purpose, and the experts should be permitted to rely upon such data, and opine accordingly.

Salary and generally compensation differentials are used as annual compensation basis in the computations for employment matters.

VII. Other Issues or non-Issues

Pension

Lost pension and other deferred compensation benefits may be recoverable as backpay. [County of Alameda v. Fair Employment & Housing Comm'n (1984) 153 Cal.App.3d 499, 509, 200 Cal.Rptr. 381, 386--fringe benefits properly included in backpay award (citing United States v. Lee Way Motor Freight, Inc. (10th Cir. 1979) 625 F.2d 918, 945--"A normal part of the backpay award should have been the inclusion of the company's health, welfare and pension benefits"); Ackerman v. Western Elec. Co., Inc. (ND CA 1986) 643 F.Supp. 836, 855, aff'd (9th Cir. 1988) 860 F.2d 1514--plaintiff entitled to full backpay award, which includes pension benefits]

Calculating loss: No widespread consensus exists on how to calculate these lost benefits. [See Baker v. North Central Dialysis Ctr., S.D. (ND IL 1987) 48 FEP 31, 36--cut-off when plaintiff obtains other employment; Ventura v. Federal Life Ins. Co. (ND IL 1983) 571 F.Supp. 48, 50-51--pension paid through normal retirement date; Blum v. Witco Chem. Corp. (3rd Cir. 1987) 829 F.2d 367, 374--lost pension benefits may be calculated as part of "front pay"]

According to the forensic economics literature, we would say the best approach would be to compute the reduction in payout at the time of retirement, rather than employer contribution. This approach, however, is more complicated, uses assumptions contributing to perhaps a more approximated figure and this method is more time-consuming for the economist.

Deduct employee contributions to pension fund.

There is case law discussing diminished public sectors pensions as collateral source. See the collateral source rule given in *Mize-Kurzman v. Marin Community College Dist.* 202 Cal.App.4th 832 and *Russo v. Matson Nav. Co.* 486 F.2d 1018.

Health Benefits

GENERALLY: Fringe benefits lost-use employer contributions. If unavailable or too difficult to obtain then use appropriate national averages. For instance, I use:

Loss of non-legally required benefits as a percent of salary according to the United States Department of Labor, Bureau of Labor Statistics, *Employer Costs per Hour*, September 2009. The national average non-legally required benefits as a percent of salary for a professional employee in the public sector is 27.1%. This figure includes paid leave,

supplemental pay, insurance, and retirement. Another approach is using the hourly dollar value of these benefits.

Regarding documents and information used in valuing benefits, it is now important to consider hearsay issues as discussed in *People v. Sanchez*.

Recovery may be allowed for the replacement cost to the plaintiff (premiums plaintiff must pay to obtain substitute coverage), not merely the amount it would have cost the employer to provide such coverage. [Wise v. Southern Pac. Co. (1970) 1 Cal.3d 600, 607-608, 83 Cal.Rptr. 202, 207]

Social Security

It is certainly inappropriate to consider this potential loss in employment matters. (The reduction in employer contribution is offset by reduction in employee contribution.) In personal injury matters it is less clear.

Certainly any Social Security Disability payments must be deducted from any potential loss. Employee contributions must also be deducted

I offer the following references and case law in support of potentially excluding legally required benefits in employment cases:

Factor, McConaghy, and Phillips, *Litigation Economics*, 1997.

Ireland, Horner, and Rodgers, *Expert Testimony: Reference Guide for Judges and Attorneys*, 1998.

Roseman and Fort, *Journal of Forensic Economics*, 1992.

Taylor and Ireland, *Litigation Economics Review*, Fall 1996, pp. 79-88.

Fleming v. Nestor 363 US 603, 4L ed 2d 1435, 80 S Ct 1367 (1960)

Richardson v. Belcher, 404 US 78, 30 L Ed 2d 231, 92 S Ct 254 (1971)

Weinberger v. Wisenfeld, 65 Cal App 3d 136, 135 Cal Rptr 189 (1976)

Marriage of Nizenkoff, 65 Cal App 3d 136, 135 Cal Rptr 189 (1976)

Farquharson v. Travelers Insurance Company, Mich Appp. 329 N W 2d 484 (1982)

Unused Vacation

Unused vacation: Payment for unused vacation time is recoverable as part of backpay. **Vacation pay constitutes additional compensation for services rendered.** [Henry v. Amrol, Inc. (1990) 222 Cal.App.3d Supp. 1, 4-5, 272 Cal.Rptr. 134, 136].

Backpay includes "not only the periodic monetary earnings of the employee, but also the other benefits to which he is entitled as part of his compensation." [Wise v. Southern Pac. Co. (1970) 1 Cal.3d 600, 607, 83 Cal.Rptr. 202, 207].

Nonforfeitable: California law prohibits employers from enforcing a "use it or lose it" vacation policy (unused vacation time not compensable and cannot be carried over to following year): "(W)henever a contract of employment . . . provides for paid vacations, and an employee is terminated without having taken off his vested vacation time, **all vested vacation shall be paid to him as wages . . .**" [Ca Labor § 227.3; see Henry v. Amrol, Inc., supra, 222 Cal.App.3d Supp. at 4-5, 272 Cal.Rptr.

Loss of Future Earnings ("Front Pay"): Damages may include, in addition to backpay, an award of the salary and benefits a wrongfully discharged plaintiff would have earned from the employment after the time of trial. [See Pollard v. E.I. du Pont de Nemours & Co. (2001) 532 U.S. 843, 848, 121 S.Ct. 1946, 1949; Smith v. Brown-Forman Distillers Corp. (1987) 196 Cal.App.3d 503, 518, 241 Cal.Rptr. 916, 924].

VIII. Mitigation of Loss

Subtract these earnings from past loss and future loss. If the new employment, however, is considered 'inferior,' then perhaps subtracting the earnings is unnecessary (see *Villacorta v. Cemex Cement*).

See also *California School Employees Assn. V. Personnel Commission* (1973) 30 Cal.App.3d 241, *Parker v. Twentieth Century-Fox Film Corp.* (1970) 3 Cal.3d, and *Candari v. Los Angeles Unified School District* (2011) 193 Cal.App. 4th regarding inferior employment may not be used to mitigate damages.

Repeating from a previous section above:

Lifetime front pay upheld under FEHA: An award of front pay that compensated plaintiff for the remainder of her entire working life has been upheld under California's FEHA. [See *Bihun v. AT&T Information Systems, Inc.* (1993) 13 Cal.App.4th 976, 996-997, 16 Cal.Rptr.2d 787, 797-798--damage award upheld based on finding that plaintiff would have remained with AT&T "indefinitely" but for sexual harassment]. See also *Williams v. Pharmacia*.

A female employee was denied a promotion to company controller because of gender discrimination. Because no comparable position was available, she could not be "made whole" by staying on the job. An award of post-resignation backpay and front pay damages was therefore proper (subject to duty to mitigate damages). [Cloud v. Casey, supra, 76 Cal.App.4th at 908, 90 Cal.Rptr.2d at 765]

The seminal California case regarding the **collateral source rule** is *Helfand v. So. Cal. Rapid Transit Dist.* (1970) 2 Cal.3d 1. There, the California Supreme Court stated: "We therefore reaffirm our adherence to the collateral source rule in tort cases in which the plaintiff has been compensated by an independent collateral source-such as insurance, pension, continued wages, or disability payments..." *Id.* at 13.

Further, numerous federal courts have applied the collateral source rule to prohibit introduction of disability or unemployment benefits to offset wage loss claims in employment discrimination cases. *Whatley v. Skaggs Co.* (10th Cir. 1983) 707 F.2d 1129, 1138 (Title VII action, court held: "The trial court's refusal to deduct plaintiff's disability benefits from defendant's back pay liability is likewise not error. Such benefits are from a collateral source, and offset is not required."); *EEOC v. Sandia Corp.* (10th Cir. 1980) 639 F.2d 600, 625

IX. Taxes

Not an issue for federal or State of California. Evidence of future income tax consequences is inadmissible. (*Brokopp v. Ford Motor Co.* (1977) 71 Cal.App.3d 841, 139 Cal.Rptr.88; *Rodriguez v. McDonnell Douglas Corp.* (1978) 87 Cal.App.3d 626, 151 Cal.Rptr. 399]

Plaintiff is not required to produce personal tax returns. (*Rifkind v. Superior Court* (1981) 123 Cal.App.3d 1045, 177 Cal.Rptr. 82; *Schnabel v. Superior Court* (1993) 5 Cal.4th 704, 21 Cal.Rptr.2d 200; *Webb v. Standard Oil Co.* (1957) 49 Cal.2d 509, 319 P.2d 621)

It may be likely that a lump-sum award or settlement may have potentially adverse tax consequences. In the past, some courts found the computation of the adverse tax consequence to be speculative. Recently though, we have the ruling in *Arthur Clemens, Jr. v. Centurylink Inc. and Qwest Corporation*, 2017 WL 5013661 (9th Cir. 2017). This court ruled that a 'gross-up' be permitted to offset the adverse tax consequences. The computation would involve several hours of work. There should be mention of potential adverse tax consequences at least.

X. Punitive Damages

Economic analysis may be required only in assessing defendant's financial condition. This may include computing net worth and/or business valuation. The latter, in particular, requires somewhat different methodology than what has been discussed herein.

XI. Credit Score Damage

Plaintiff's credit score could have been damaged due to wrongful termination. This potential economic loss aspect involves a separate and perhaps involved analysis.

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