

## 4 FRINGE BENEFITS

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### 4.1 Introduction

The definition of fringe benefits is a residual definition. Fringe benefits are that residual part of the total compensation provided by an employer to an employee, other than such direct elements of compensation as wage and salary, commission, bonus, overtime, and shift differential payments. Thus, employer contributions to social security; workers' compensation; unemployment compensation; health, life, and dental insurance; private pension plans; and cafeteria-style benefits plans are among the possible elements of a fringe benefit package.

The proper treatment of employer contributions to employee fringe benefits, as a major element of lost earning capacity and economic damages, becomes more important each year. At the beginning of World War II, fringe benefits were typically 5 percent of the total compensation provided by employers, even in manufacturing industries. Then began a steady rise in the percentage of payroll, and of total compensation, paid in fringe benefits. Among the reasons for this trend were the favorable income tax treatment of fringe benefits, for both employers and employees; the influence of both wartime wage controls and labor unions; and the demands of workers themselves for more security against such life "risks" as death, old age with diminished earning capacity, disability, sickness, and unemployment. Indeed, fringe benefits are intended to provide protection against various life risks.

In Table 1, the results of a U. S. Chamber of Commerce survey of average employer contributions to employee fringe benefits are shown for selected years in the 1929-1987 period. These employer-provided fringe benefits, as a percentage of base earnings, rose from 3.0 percent in 1929, to 21.5 percent in 1965, to 36.2

**TABLE 1**  
**GROWTH OF EMPLOYER CONTRIBUTIONS TO EMPLOYEE FRINGE**  
**BENEFITS FOR SELECTED YEARS, 1929-1987**

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Type of payment	1929	1955	1965	1975	1986	1987
(Percent of wages and salaries)						
1. Legally required . . . . .	0.8%	3.3%	5.3%	8.4%	11.1%	11.4%
Old-Age, Survivors, Disability and						
Health Insurance (FICA taxes) . . . .	0.0	1.4	2.3	4.6	5.9	5.9
Unemployment Compensation . . . . .	0.0	0.7	1.0	0.8	1.2	1.1
Workers' Compensation . . . . .	0.6	0.5	0.7	1.0	1.0	1.4
Government employees retirement . .	0.2	0.5	1.0	1.7	2.8	2.8
Other . . . . .	0.0	0.2	0.3	0.3	0.2	0.2
2. Agreed-upon . . . . .	0.4	3.6	4.6	7.4	9.7	9.9
Pensions . . . . .	0.2	2.2	2.3	3.6	2.8	3.2
Insurance . . . . .	0.1	1.1	2.0	3.4	5.6	5.6
Other . . . . .	0.1	0.3	0.3	0.4	1.3	1.1
3. Rest Periods . . . . .	1.0	3.0	3.1	3.7	3.3	2.7
4. Time not Worked . . . . .	0.7	5.9	7.3	9.4	10.2	11.0
Vacations . . . . .	0.3	3.0	3.8	4.8	5.2	5.7
Holidays . . . . .	0.3	2.0	2.5	3.2	3.1	3.3
Sick leave . . . . .	0.1	0.8	0.8	1.2	1.4	1.4
Other . . . . .	0.0	0.1	0.2	0.2	0.5	0.6
5. Bonuses profit-sharing, etc. . . . .	0.1	1.2	1.2	1.1	1.2	1.1
Total benefit payments . . . . .	3.0%	17.0%	21.5%	30.0%	35.5%	36.2%
(Billion Dollars)						
Wages and Salaries . . . . .	\$50.50	\$212.10	\$363.70	\$814.70	\$2,093.00	\$2,248.30
Total benefit payments . . . . .	\$1.50	\$36.10	\$78.20	\$244.40	\$743.00	\$813.90

SOURCE: Research Center, Economic Policy Division, U.S. Chamber of Commerce, *EMPLOYEE BENEFITS 1989 EDITION* (Washington, D.C., 1988), Table 17, p. 33.

percent in 1987.<sup>1</sup> This is an enormous, historical increase in the magnitude of employer fringe benefit payments in relation to the more direct elements of compensation. On the other hand, the annual increase in this percentage-of-wages figure has clearly declined in the last decade and may have leveled off. By at least one measure in the most recent Chamber of Commerce study, the percentage actually declined from 1986 to 1987, which is the last year measured at this writing.<sup>2</sup>

As will be explained in more detail later, employer payments such as paid vacations, sick leave, rest periods, lunch periods, and other payments for time not

<sup>1</sup> Research Center, Economic Policy Division, U.S. Chamber of Commerce, *EMPLOYEE BENEFITS 1988 EDITION* (Washington, D.C., 1988), p. 33.

<sup>2</sup> *Id.*, page 5. The average employer payment as a percentage of payroll (excluding benefits for retirees and former workers) declined from 38.3 percent in 1986 to 38.0 percent in 1987. See also Bradley R. Braden, "Increases in Employer Costs for Employee Benefits Dampen Dramatically," *MONTHLY LABOR REVIEW*, July 1988, pp. 3-7.



worked must not be included as fringe benefit losses in lost earning capacity estimates, since these payments already show up in annual wage and salary totals. With this portion of employer payments removed, our experience in relevant fringe benefit payments by employers indicates that the percentage-of-wages employer contribution to fringe benefits is usually in the 20-30 percent range.

The "statistical class" conclusion about employer contributions to fringe benefits does vary significantly by industry and region, as shown in Table 2. The relevant point is that a wealth of data exists, from the U.S. Chamber of Commerce studies alone, to refine U.S.-wide fringe benefit payments to reflect more specific situations.

#### 4.2 Why Include Fringe Benefits In Loss Estimates?

Several theoretical bases exist for including employer contributions to fringe benefits in estimates of the earning capacity, and therefore of the lost earning capacity, of individuals rendered incapable of work. The first might be called the "Market Theory" of fringe benefit loss. Earning capacity of an individual is, indeed, his capacity to earn some total of compensation in any time period, and it is the labor market, of employers and potential employees, which sets the value of this earning capacity. In the extreme, an employer could not hire an adequate quantity or quality of labor by simply paying competitive wages but no fringe benefits. With relevant fringes, for our purposes, around one-fourth of wages, employers must also pay substantial fringe benefits to attract and retain workers. Employers don't do this as a matter of charity or good will. They do so because they must. The market demands it, and the marketplace thereby sets the total earning capacity of any individual.

A second basis for including fringe benefits in loss estimates is the "Replacement Theory." Assume that a worker had been receiving employer-provided health insurance and pension contributions, for example. If the employee now cannot work, he and/or his family must replace these benefits at a comparable level in order to be made whole. The measure of damage would then be the cost of a replacement health insurance and pension plan purchased by the former employee and/or his family. As will be seen, loss estimates may differ according to whether a market or a replacement theory is emphasized. Both may be employed in estimating total loss of fringe benefits, but only one may be used for each individual fringe benefit category, in order to avoid double-counting.

A third reason why fringe benefits should be included in earning capacity estimates is that, within limits, direct compensation and fringe benefit compensation are interchangeable. Employees, particularly those represented by labor unions, have some influence over how any increase in total compensation will be split between increased direct payments and increased fringe benefits provided in whole or in part by the employer. Companies A and B may provide exactly the same total compensation to a particular type of worker, but employer contributions to fringe benefits might be 30 percent of total compensation in Company A and only 20 percent in Company B. The dead or injured former employee of Company A must have his fringes valued in full as lost earning capacity is estimated. Otherwise, he will be cheated *vis-a-vis* the same type of worker in Company B simply because

**TABLE 2**  
**EMPLOYEE BENEFITS AS PERCENT OF PAYROLL,**  
**BY REGION AND INDUSTRY GROUP, 1987**

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Industry group	Total, all regions	Northeast	East North Central	Southeast	West
Total, all industries . . . . .	39.0	36.2	44.1	39.2	37.9
Total, all manufacturing . . . . .	40.3	36.9	55.6	34.1	37.2
Manufacture of:					
Food, beverage, and tobacco . . . . .	33.7	33.9	40.2	34.0	32.0
Textile products and apparel . . . . .	28.5	...	37.0	28.5	21.8
Pulp, paper, lumber, and furniture . .	33.5	31.7	32.6	25.6	40.6
Printing and publishing . . . . .	33.5	35.0	33.8	28.6	36.4
Chemicals and allied products . . . . .	33.7	26.7	40.9	31.3	...
Petroleum industry . . . . .	38.0	...	...	34.4	38.4
Rubber, leather, and plastic products .	45.0	38.9	45.6	34.0	...
Stone, clay, and glass products . . . . .	33.4	34.6	...	...	41.0
Primary metal industries . . . . .	54.2	57.7	...	44.5	...
Fabricated metal products (excluding machinery and transportation equipment) . . . . .	42.0	38.5	46.9	36.0	36.8
Machinery (excluding electrical) . . . .	34.9	35.3	36.7	27.7	30.6
Electrical machinery, equipment, and supplies . . . . .	35.2	35.7	31.4	39.7	33.9
Transportation equipment . . . . .	52.3	36.3	72.5	...	39.3
Instruments and miscellaneous manufacturing industries . . . . .	35.4	37.0	37.4	30.2	34.2
Total, all nonmanufacturing . . . . .	38.0	34.6	35.3	39.8	38.7
Public utilities (electric, gas, water telephone, etc.) . . . . .	41.8	40.1	40.1	40.7	46.2
Department stores . . . . .	31.5	...	31.2	...	...
Trade (wholesale and other retail) . . .	36.6	...	37.8	34.1	35.8
Banks, finance companies, and trust companies . . . . .	31.5	30.9	29.9	32.1	34.1
Insurance companies . . . . .	34.4	34.6	34.0	35.0	36.6
Hospitals . . . . .	33.9	33.4	34.2	31.9	35.8
Miscellaneous nonmanufacturing industries* . . . . .	38.7	31.3	29.6	40.1	35.1
Number of companies . . . . .	910	176	255	253	226

\*Includes research, engineering, education, government agencies, construction, etc.

...Fewer than three companies reporting

NORTHEAST	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont
EAST NORTH CENTRAL	Illinois, Indiana, Michigan, Ohio, and Wisconsin
SOUTHEAST	Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia
WEST	Alaska, Arizona, California, Colorado, Hawaii, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming

SOURCE: Research Center, Economic Policy Division, U.S. Chamber of Commerce, *EMPLOYEE BENEFITS 1989 EDITION* (Washington, D.C., 1988), Table 17, p. 33.



he, his former employer, and/or his labor union desired a greater fraction of total compensation in fringe benefits.

Finally, employer-provided fringe benefits should be included in lost earning capacity estimates because this element of loss does not double-count with any other elements of loss if the estimate is properly made. Several types of fringes provide benefits only if a given event occurs. One receives disability benefits if disabled, life insurance if death occurs, workers' compensation if injured on the job, and unemployment compensation if unemployed. Normally, each of these types of benefits is valued as the amount of employer contributions going into an insurance fund or pool, rather than as the amount of benefits to be drawn out if the deleterious event occurs. This is done primarily for simplicity. It will be remembered that under the Life-Participation-Employment approach to work-life expectancy, wage estimates were lowered in each year by the probability that these same events might occur. Thus, it is entirely appropriate to add back a value for any employer-provided benefit which would be available when and if such events as injury, sickness, disability, unemployment, or death happen.

On the other hand, if a wage estimate assumes a greater-than-average probability of life, labor force participation, or employment at any age, and if such fringes as unemployment compensation, workers' compensation, and disability insurance are also being added in at that age, then it can be argued that the estimate does involve double-counting. It does not seem logical or consistent to add a value for disability or unemployment in a given year if, in the wage estimate, one has assumed a 100 percent probability of labor force participation and continuous employment in that year.

#### **4.3 General Approaches to Estimating Fringe Benefits**

Most commonly, the estimation of fringe benefit loss is based upon the market theory of loss. Thus, employer contributions to all fringe benefit categories (except paid time off) are measured, because this is the market-determined value of fringes which the employer must provide.

The measurement or estimation process should center upon the fringe benefits being paid on behalf of the specific injured or deceased person. As is true for wage and salary loss estimates, the best approach usually involves the unique history of the individual rather than averages for large, statistical classes of persons. Therefore, either the attorney or the economist must obtain fringe benefit information from the last employer, a labor union, or perhaps the plaintiff and his family. The data sought are the exact employer contributions to each category of fringe benefits in the last year of work, or sometimes in the current year, if later. The amount of employer contribution to each category may be expressed either as a percentage of wage or salary payments or as a dollar contribution per week, month, or year. When it is expressed in dollars, perhaps \$150 per month in employer contributions to a family health and dental plan, the dollars may be converted to a percentage of salary in the same year. Assume the \$150 per month, or \$1,800 per year, employer contribution in this example and a \$30,000 annual salary in the same year. The employer contribution to the health and dental plan would be expressed as  $\$1,800/\$30,000$ , or 6.0 percent of salary.



Employer contributions to each fringe benefit category would therefore either be collected as a percentage of annual wages or salary or converted to such a percentage figure. The sum of the percentages for each fringe category is the total percentage of employer contributions to fringe benefits. Typically, this percentage of annual wage or salary earnings is in the 20-30 percent range, but employer contributions to fringe benefits vary widely. They tend to be lower in smaller companies and in the service sector of the economy. They tend to be higher in larger companies, unionized companies, and in the manufacturing sector of the economy. The annual U.S. Chamber of Commerce study captures many of these variations in tables such as Table 2, and useful disaggregations of fringe benefit data, such as hourly versus salaried workers, and part-time workers, are also provided.

Normally, the fringe benefit percentage obtained for the last work year, or perhaps the current year if later, would be used to estimate fringes in all future years. If it were 25 percent, for example, then lost earning capacity in employer-provided fringe benefits would be estimated as 25 percent of the annual wage loss estimate in each year of expected working life. Until recent years, such an approach was considered to be conservative by many forensic economists. As seen in Table 1, the percentage-of-wages figures that represent the value of fringe benefits had been rising dramatically in annual surveys. A few economists adjusted percentage fringe contributions obtained for a plaintiff in a current year upwards by some trend rate reflecting this historical increase in absolute and relative fringe benefit values.

Table 1 also shows that this upward trend in fringe benefit payments, as a percentage of direct compensation, has leveled. The case for increasing future fringe benefits, based upon a percentage of wages at any future time, is difficult to make, and some forensic economists may argue that the percentage-of-wages contributions will decline. While forensic economists need to closely watch these trends, for now the best assumption is that currently measured employer payments in fringe benefits, as a percentage of direct compensation, should be frozen when projecting future payments. Thus, fringe benefit loss estimates would rise with wage loss estimates, based upon the trend rate of annual wage growth, but would maintain the same relative relationship with annual wages in percentage terms.

The "best case" in fringe benefit data collection for a specific individual exists when the employer has provided the employee with a computer-generated benefits statement. Many computer software companies sell the expertise and software necessary for other companies to provide these statements to their employees, and several larger companies have developed the annual statements in-house. The statements detail annual employer contributions to each category of the fringe benefits provided to that particular employee and show the total employer contributions to fringe benefits for the year. This total, placed over wage earnings in the year, provides the desired percentage figure for the economic expert to use. The economist does need to ensure that a value for paid vacation, sick leave, holidays, or other paid leave time has not been included.

In a less than helpful situation, neither the attorney nor his client will be able to provide the exact employer contribution to a particular fringe benefit category, either as a dollar amount or as a percentage of wages. In the least, the economic expert should be provided with those categories of fringe benefits to



which the employer contributed. If no work record exists, as in the case of a minor child, assumptions must even be made regarding the categories of fringe benefits to which an employer would contribute. In either case, a survey of average employer contributions to various fringe benefit categories must be utilized.

Until the early eighties, one such survey was produced by the U. S. Bureau of Labor Statistics. It was sometimes considered to be the "official," annual survey, and it disaggregated employer percentage payments by fringe benefit categories. The economic expert was merely required to choose the categories of fringe benefits which he or she felt to be relevant for a particular case and convert the percentage-of-total-compensation figures to percentage-of-wage figures. Unfortunately, budget cuts in the early eighties forced the federal government to drop this useful statistical series.

Therefore, the annual survey of employer contributions to various fringe benefit categories, published by the U. S. Chamber of Commerce, is the best available source of current data. Some results of the latest 1988 survey are reproduced in Table 3. Employer contributions to fringe benefits are expressed as percentages of payroll so that percentages can be directly taken from each relevant category and applied to wage loss estimates for each year.

Assume that a projection of fringe benefit loss was to be made for a person, such as a minor child, with no employment "track record." As discussed in §4.4 below, the economist would update the 6.1 percent FICA contribution in Table 3 at least to the 7.51 percent employer contribution level for 1989, and the economist should ignore payments for time not worked in categories 5 and 6. This would produce a figure of 26.71 percent of wages as expected contributions to fringe benefits under the "all companies" column in Table 3.

It should be emphasized again that the 26.71 percent figure can only be used when the LPE reductions, discussed in Chapter 3, have been applied to the wage loss estimates. Fringe benefit categories relating to the risk of unemployment, sickness, and disability can be properly considered, because the wage estimates have been lowered by the probabilities that unemployment, sickness, and disability may lower expected wage earnings in any year. Double-counting does not result. On the other hand, loss estimates made *without* LPE reductions should *not* add these categories in the fringe benefit percentage, or double-counting will result. This would reduce the "all companies" fringe benefit contribution to 22.41 percent of wages for average workers. The economist must guard against this double-counting problem even when fringe benefit loss estimates are based upon individualized benefits statements or other data specific to a past employer.

As mentioned, the annual U.S. Chamber of Commerce study now provides tables equivalent to Table 3 for hourly workers and for salaried workers. For 1987, the adjusted fringe benefit figure, which is analogous to the 26.71 percent figure derived from Table 3, was 30.0 percent for hourly employees and 26.51 percent for salaried employees.<sup>3</sup> In projecting fringe benefit levels for a deceased minor child, the economist need not assume him or her to have been hourly paid or salaried and should use the less specific table. However, specific percentages from

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<sup>3</sup> *Id.*, Tables 4b and 4c are source tables.

**TABLE 3**  
**EMPLOYEE BENEFITS, BY TYPE OF BENEFIT:**  
**ALL EMPLOYEES, 1987**

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Type of benefit	Total, all companies	Total, all manufacturing	Total, all non-manufacturing
Total employee benefits as percent of payroll _____	39.0%	40.3%	38.0%
1. Legally required payments (employers' share only) _____	9.0	8.8	9.2
a. Old-Age, Survivors, Disability, and Health Insurance (employer FICA taxes) and Railroad Retirement Tax _____	6.1	6.7	5.7
b. Unemployment compensation _____	0.8	1.1	0.6
c. Workers' compensation (including estimated cost of self-insured) _____	1.1	1.0	1.1
d. State sickness benefits insurance and other _____	1.0	...	1.7
2. Retirement and saving plan payments (employers' share only) _____	6.6	7.1	6.3
a. Defined benefit pension plan contributions _____	2.5	3.3	2.0
b. Defined contribution plan payments (401K type) _____	0.8	1.0	0.7
c. Profit sharing _____	0.8	1.5	0.3
d. Stock bonus and employee stock ownership plans (ESOP) _____	0.2	0.2	0.2
e. Pension plan premiums (net) under insurance and annuity contracts (insured and trusted) _____	1.6	0.3	2.6
f. Administrative and other cost _____	0.7	0.8	0.6
3. Life insurance and death benefits (employers' share only) _____	0.6	0.7	0.5
4. Medical and medically-related benefit payments (employers' share only) _____	8.0	9.9	6.6
a. Hospital, surgical, medical, and major medical insurance premiums (net) _____	5.7	6.2	5.4
b. Retiree (payments for retired employees) hospital, surgical, medical, and major medical insurance premiums (net) _____	0.7	1.3	0.3
c. Short-term disability, sickness or accident insurance company plan or insured plan) _____	0.5	0.9	0.2
d. Long-term disability or wage continuation (insured, self-administered, or trust) _____	0.2	0.1	0.2
e. Dental insurance premiums _____	0.5	0.8	0.3
f. Other (vision care, physical and mental fitness benefits for former employees) _____	0.4	0.6	0.2
5. Paid rest periods, coffee breaks, lunch periods, wash-up time, travel time, clothes-change time, get ready time, etc. _____	2.7	1.4	3.7
6. Payments for time not worked _____	11.0	10.9	11.0
a. Payment for or in lieu of vacations _____	5.7	5.7	5.8
b. Payment for or in lieu of holidays _____	3.3	3.7	3.0
c. Sick leave pay _____	1.4	0.8	1.8
d. Parental leave (maternity and paternity leave payments) _____	0.3	0.2	0.3
e. Other _____	0.3	0.5	0.2
7. Miscellaneous benefit payments _____	1.1	1.6	0.8
a. Discounts on goods and services purchased from company by employees _____	0.1	0.1	0.2
b. Employee meals furnished by company _____	0.1	0.1	0.1
c. Employee education expenditures _____	0.2	0.2	0.1
d. Child care _____	...	...	...
e. Other _____	0.7	1.2	0.4
Total employee benefits as cents per payroll hour _____	512.6¢	572.7¢	475.1¢
Total employee benefits as dollars per year per employee _____	\$10,708	\$12,284	\$9,765

...Less than 0.05%

SOURCE: Research Center, Economic Policy Division, U.S. Chamber of Commerce, EMPLOYEE BENEFITS 1989 EDITION (Washington, D.C., 1988), Table 17, p. 33.



distinct fringe benefit categories in these tables are often used when specific employer contributions only for that category cannot be obtained. If the deceased or injured worker has been paid on an hourly basis, the fringe benefit percentage for one or more fringe categories can now be taken from a more specific table.

Partial disability cases, where an injured party is still working but in a less remunerative vocation, may offer an additional complication. Some employer fringe benefit contributions, such as social security, are paid as a percentage of wages up to a relatively high annual wage earnings maximum. Fringe benefit loss is clearly this percentage of the difference between pre-injury and post-injury earning capacity in wages, as long as the pre-injury wages are less than the maximum contribution base. Other employer contributions, such as those to workers' and unemployment compensation, are a percentage up to a relatively low wage earnings base. The employer may already be contributing the maximum amount, even given the lower wage earnings of the injured person. No loss would occur in these categories. For other categories, loss would occur if no contribution, or a lesser contribution, was being made for a fringe category where some contribution, or a higher contribution, was made in the pre-injury employment. Of course, it is possible that some post-injury fringes, such as medical insurance coverage, are now better than before, and the loss must be reduced (the overall fringe percentage lowered) to the extent that this is true.

#### **4.4 Issues Within Major Fringe Benefit Categories**

The first fringe benefit category is that of legally-required employer payments. Herein are employer contributions for social security (FICA), unemployment compensation, and workers' compensation. A first issue is whether or not the employer of the deceased or injured employee was actually covered by each of these programs and was therefore contributing to them. For example, public entities were able, until 1983, to opt out of the social security system, and several states and cities did so. Otherwise, mandatory social security coverage is almost universally required of U.S. employers for their employees. Most U.S. employees are also covered by both workers' compensation and unemployment compensation, although coverage standards vary and employees working for very small employers, for example, may not be covered.

Employer social security contributions are by far the largest element of legally-required payments. The social security system is more formally known as the Old Age, Survivors, Disability, and Health Insurance (OASDHI) system. It has grown over the years in coverage, benefit levels, and costs.

When the system began working in 1937, employer contributions were 1.0 percent of an annual maximum of \$3,000 of wages. The comparable figures were 3.0 percent on \$4,800 by 1960, 4.8 percent on \$7,800 by 1970, and 6.13 percent on \$25,900 by 1980. By 1989, the employer tax had risen to 7.51 percent on maximum annual wages of \$48,000. Increasing contribution rates and maximum wage bases had been legislated beyond the end of the century.<sup>4</sup> Thus, a conservative approach

<sup>4</sup> Social Security Administration. SOCIAL SECURITY BULLETIN, ANNUAL STATISTICAL SUPPLEMENT, 1988 (Washington, D.C.: U.S. Government Printing Office, 1988), p. 13. The employer contribution rate increases to 7.65 percent in 1990 and thereafter.



to this element of fringe benefit loss would be to project 7.51 percent of wages into the future. Some economists have taken a weighted average of the future percentage contributions already specified by federal law. It can be argued that even this approach is conservative, as many economists believe that the social security system, to remain solvent, will need further boosts in both contribution rates and wage base maxima.

Whatever percentage rate is used, another adjustment must be made if the projected annual wage earnings of the plaintiff are greater than the current or projected maximum earnings for required employer contributions. The maximum dollar contribution for an employer, which was 7.51 percent of \$48,000 or \$3,605 in 1989, would be the numerator of a fraction and the anticipated wage earnings would be the denominator. The percentage equivalent to this fraction would be used for the social security fringe benefit, and, in 1989 for example, it would necessarily be less than 7.51 percent.

It is possible to project the Old Age Insurance (retirement pension) portion of lost OASDHI benefits as the present value of the likely stream of benefits upon retirement, rather than as a percentage contribution into the OASDHI trust funds. Such a technique is complicated and rarely used. It requires an assumption about a retirement date, and it is difficult to separate the pension portion of OASDHI protection from the overall coverage. Certainly, fringe benefits losses cannot be projected as both percentage contributions into a plan during working life and also as a stream of benefits upon retirement. This would clearly double-count the particular category of fringe benefits loss.

Unemployment and workers' compensation protect against separate risks but are treated the same for loss estimation purposes. The costs (premiums) of both programs are employer-paid and, normally, the percentage of payroll which the employer must pay is based on his past experience in unemployment claims and on-the-job accidents. Since actual or projected wage earnings of a plaintiff are normally above the maximum annual wage base to which this percentage is applied, calculation of the effective percentage follows the same procedure described for social security above.

The second major fringe benefit category, appearing in almost all surveys and studies, is pay for time not worked. Examples are paid vacation, paid holidays, paid sick leave, and paid rest periods. As can be seen from survey results in Tables 1 and 3, payments for time not worked are more than one-third of the total value of fringe benefits. However, for the purposes of estimating lost earning capacity in employer-provided fringe benefits, this category of fringe benefits is *not* considered. If an employee is paid \$30,000 in annual wages or salary, all elements of paid time off are already included in this \$30,000. To also add these items as lost earning capacity in fringe benefits would clearly constitute double-counting, and the double-counted value could be substantial.

Interestingly, in working with defense attorneys, we sometimes find plaintiff economists including pay for time not worked in the overall fringe benefit percentage. This is generally due to carelessness. In fact, some defense attorneys will be sure to include this element of fringe benefits in the data supplied to the plaintiff economist in the hope of inducing this embarrassing mistake.



A third category of fringe benefits is health and accident insurance. Health plans are now offered in a variety of ways, from traditional insurance plans with monthly premiums to dues-like contributions to a Health Maintenance Organization (HMO). Premiums or HMO contributions may be all employer-paid; can be, but rarely are, all employee-paid; and are frequently split in some way between the employer and employee. Under the market theory of fringe benefit loss, it is the dollar amount of annual employer contributions into the plan which is converted to a percentage of annual wages to represent this element of fringe loss. Using this same percentage for all future years of work-life expectancy is, again, conservative. Health care inflation in general, and the percentage of wages which employers have spent on health care plans had been rising until recent years. This percentage figure did decline from 1986 to 1987, however, as employees have been asked to increase their relative shares of health care costs.<sup>5</sup>

It is also important to realize that, using a replacement theory of fringe benefit loss, the estimate for this category of fringe benefits could significantly differ from an estimate based upon a market theory. Assume that before an alleged wrongful death, the worker had family coverage under the group health insurance plan of his or her company, with the employee paying 40 percent of the monthly premium and the employer paying 60 percent. Under the market theory, loss would be the value of this 60 percent employer contribution. However, after the death of the breadwinner, assume that the family had to pay 100 percent of the premium for a separately purchased and comparable health plan at higher than group rates. Under a replacement theory of loss, the increase in premium costs above the old 40 percent payment would be the measure of economic loss. On the other hand, if the spouse was also working and simply switched the family to her or his plan after the death, with comparable coverage at no greater costs, there would seem to be no economic loss in this fringe category under a replacement theory. This same issue of possible divergence in loss estimates depending on the theory employed could arise for life insurance and, potentially, other fringe categories.

Group life insurance is commonly provided by U.S. employers for their employees. Typically, the employer will pay all of the premium for a basic face amount of group life insurance, split the premium for an additional face amount, and allow the employee to purchase some further face amount at group rates. Under a market theory, the economist must find a dollar value of the employer's contribution to the plan and convert this to a percentage of wage earnings.<sup>6</sup>

A fifth, and often substantial, category of fringe benefits which may be provided is a private pension plan which supplements the Old Age Insurance (OAI) of the social security system. In many of the fringe benefit categories already discussed, both the employer and employee contributions into the fringe category and the benefit levels derived are clearly defined, although these definitions can vary over

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<sup>5</sup> U.S. Chamber of Commerce, *supra*, p. 8.

<sup>6</sup> Internal Revenue Service regulations now affect company and employee tax deductions for life insurance face amounts and/or contribution amounts above a certain level, which can complicate the calculations when income tax effects must be considered. See Robert M. McCaffery, *EMPLOYEE BENEFIT PROGRAMS: A TOTAL COMPENSATION PERSPECTIVE* (Boston, Massachusetts: PWS-Kent Publishing, 1988) pp. 95 and 156.



time. Pension plans, on the other hand, are generally divided into either defined contribution plans or defined benefit plans, and the approach to a loss estimate may differ depending upon which of the two types of plans is under scrutiny.

Under a defined contribution plan, the employer commits himself to pay a defined contribution into the pension plan, generally as a percentage of the salary of the employee. No pension benefit is specified or guaranteed. Rather, the lump sum or annuity available at retirement will depend upon the effectiveness of the investments made with the defined contributions. The loss estimate under this type of plan is straightforward and follows the market theory. The percentage-of-salary employer contribution is the percentage used for this element of fringe loss in estimating both past and future loss.

In a defined benefit plan, the employer defines and guarantees a certain benefit level upon retirement. The guarantee is now a strong one, because of the fiduciary and other requirements of the Employee Retirement Income Security Act (ERISA) of 1974. Defined benefits may be specified in several ways, but a typical formula benefit might set annual pension income at 1 percent of the average of the highest three years of annual wages times the number of years with the company.

It is possible to estimate loss under this type of plan by having the employer estimate the cost per employee of average company contributions into such a plan. This cost would then be converted to a percentage of wages. Alternatively, loss can be estimated as the post-retirement difference between the formula benefit if the plaintiff had worked until normal retirement age versus that of a deceased or injured party whose wage accumulations and years of service with the company have ended. Such a calculation requires that wages be projected to retirement, so that the average of the three highest years of salary may be found.<sup>7</sup> The "high" benefit stream is thus derived, assuming that the worker had not been killed or injured. The "low" benefit stream is based upon the existing average and the existing years of service, and economic loss is the present value of the difference between the "high" and "low" streams of income.

However, if both the employer and the employee contribute to the defined benefit plan, only the employer's share of post-retirement benefits is to be considered under a market theory of loss. The same would be true of Old Age Insurance (OAI) social security benefits if one were also to compute this loss as the difference between two post-retirement streams of income. Under a replacement theory of loss, one might find the cost to a plaintiff of purchasing an annuity which would restore the level of post-retirement income that would have otherwise been reached. This cost would be the measure of loss.<sup>8</sup>

It is difficult, *a priori*, to know which of the above approaches will generate a higher or lower estimate. Where the pension plan seems to be a good one in regard to benefit levels, the economic expert may be asked to make estimates using

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<sup>7</sup> Annual wage earnings may be projected at nominal (actual) rates of wage growth if discounting occurs using nominal interest rates, or at real rates of wage growth if discounting occurs using real interest rates.

<sup>8</sup> See Robert R. Trout, "Valuing Illiquid Pension Benefits," JOURNAL OF FORENSIC ECONOMICS (May 1988), pp. 25-32.



more than one of the approaches discussed above and to discuss the alternative loss values.

One other issue which may be highlighted by the defense is vesting, which means the percentage of total retirement benefits which the employee actually "owns", or is guaranteed, at any given time. Under the original ERISA standards of 1974, an employee must be 100 percent vested in a private pension plan after 10 years of service, but employers have several methods to approach this 100 percent vesting level. Under the perfectly legal "cliff vesting" method, the employee may be zero percent vested throughout the first 10 years of service and then jump immediately to the 100 percent level when the 10-year mark is reached. If the deceased or injured party had only worked for the employer providing this type of benefit for a few months or years, and particularly if the deceased/injured party had a history of job-hopping, the defense may claim that no pension benefit would ever have been vested and, therefore, that no economic loss exists in this fringe category.

The argument for disregarding a lost pension because the employee was not 100 percent vested at death or injury is less persuasive today. Under ERISA amendments made as part of the Tax Reform Act of 1986, cliff vesting must occur at only five years, and 100 percent vesting must be ensured after seven years using an alternative standard.<sup>9</sup> Clearly, legal guidelines requiring the vesting of pension benefits have tightened, but, on the other hand, private employers can choose not to offer a pension plan or to terminate an existing plan.

A sixth category of possible, employer-provided fringe benefits is long-term disability insurance designed to supplement the benefit level provided under the Disability Insurance (DI) component of social security. The insurance premium can be employer-paid, employee-paid, or split, and economic loss will be the annual dollar value of any employer contribution, which may be converted to a percentage of annual wage earnings. Ironically, this element of loss may be added to an overall estimate of lost earning capacity when the plaintiff is actually drawing disability benefits from this very plan, plus Disability Insurance benefits from social security, and perhaps workers' compensation benefits as well. While an economist would subtract all such benefits to arrive at a "pure" estimate of net economic loss, the operation of the "collateral source" rule in most jurisdictions prevents this from happening.

In recent years, new types and categories of fringe benefits have emerged. This has greatly increased the complexity of fringe benefits administration for employers and employee groups, and the complexity of fringe benefit loss estimation has similarly increased.<sup>10</sup> One such benefit program was the Individual Retirement Account (IRA), created in 1975. Such accounts allow individuals to tax defer up to \$2,000 of current income until retirement age, but the applicability of this benefit to persons in private pension plans and to higher-income persons has now been significantly restricted. For loss estimation purposes, the economist

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<sup>9</sup> See Amy D. Graham, "How Has Vesting Changed Since Passage of Employee Retirement Income Security Act?" MONTHLY LABOR REVIEW (August 1988), pp. 20-25.

<sup>10</sup> See, e.g., Janet L. Norwood, "Measuring The Cost and Incidence of Employee Benefits," MONTHLY LABOR REVIEW (August 1988), pp. 3-8.



simply needs to ensure that employee earnings placed by him or her into an IRA are counted as part of his or her earning capacity. By definition, such dollars would not show up in earnings figures on an income tax return.

A similar, and increasingly popular, program is a Salary Reduction Agreement (SRA), which is offered by many employers. Such plans are more formally called IRS Section 401 (k) plans. They allow an employee the option to tax defer some portion of his or her wage/salary income, up to a legally-defined limit of more than \$7,000 annually by 1989. He or she does not pay income taxes on the amount of salary so reduced but will pay income taxes on this amount and any earned interest when he or she retires or otherwise takes his or her money out of the investment fund—and presumably is in a lower tax bracket. Moreover, the employer may contribute to the SRA account of an employee. The point is that the amount of “employee money” being contributed is really wage earning capacity in a given year and the amount of “employer money” going into an SRA is another employer-provided fringe benefit to be measured. As with IRA’s, the total of the amounts are deducted from salary and will not show up as salary earnings on an income tax return. Unless careful, the economic expert may overlook several thousand dollars in earning capacity, and this mistake will be compounded as base year earning capacity is projected into the future.

Many other categories of employer-provided fringe benefits exist, such as dental and eye care plans, child care, legal services, and supplemental unemployment benefits. These categories raise no new issues when the per-employee equivalent of employer costs can be determined and then converted to a percentage of annual wages under a market theory of loss. This can become complicated, for example, when an employer offers free or subsidized child care on site, and this was used by the deceased or injured employee for a child. The economist may shift to a replacement theory for the lost child care. The employer may also offer employee “wellness” programs, including counseling, and this also has a per-employee, or replacement, value.

Further, profit sharing, employee stock ownership, and thrift plans are increasingly popular. The forensic economist may need to determine some past average of employer contributions into such plans. The historical average is especially important in profit sharing plans because of the wide variations from year to year. Average dollar contributions, which may be the difference between purchase and market value for stock ownership plans, can be converted to percentage-of-wages figures.

Relatively new on the benefits horizon are cafeteria benefit plans. These are designed to give employees some choice regarding how fringe benefit dollars are used on their behalf. Under such a plan, the employer might contribute \$1,000 to the “cafeteria bank account” of an employee. During the year, the employee can be reimbursed out of this bank account for expenses incurred for such things as dental care, orthodontics, vision care, child care, legal services, etc. The tax consequences of such plans are still evolving. As with IRA’s and SRA’s, the portion of earning capacity flowing into these newer types of fringe benefits from the employer must not be overlooked.

Finally, some complications in estimating lost earning capacity occur in the



“gray areas” between wage/salary and fringe benefit losses. As one example, employers sometimes use one-time payments, which may be called bonuses, in lieu of base pay increases. This may affect projections of the trend rate of wage growth, and an average of these one-time payments may be considered in fringe benefit losses. Another example is cost-of-living adjustments for retiree pensions, which are made on an *ad hoc* basis by a former employer. These increases are relevant to lost earning capacity, even though they are deferred payments. They must also be offset by the increases which may still be forthcoming to survivors or the totally disabled worker, unless the collateral source rule affects such an offset.

#### 4.5 Necessary Adjustments to Fringe Benefit Estimates

After arriving at an overall percentage of employer contributions to fringe benefits, and applying this percentage to annual wage or salary loss estimates for each year, a dollar amount of fringe benefit loss is derived for each past and each future year of loss. Since the dollar loss is a percentage of wage or salary loss, whatever decisions are made regarding the relationship of wage growth rates *vis-a-vis* interest rates used in discounting to present values will automatically carry over to the loss of fringe benefits estimates. The wage growth rate automatically becomes the fringe benefit growth rate, and the same interest (discount) rates used for each future year in the wage loss estimates should be used in the fringe benefit loss estimates. Thus, the discussion of issues regarding earnings growth rates and interest (discount) rates in Chapter 3 is also relevant to fringe benefit loss.

In addition, the same adjustments made to wage loss estimates for work-life expectancy must also be made to the fringe benefit loss estimates. If one only earns wages or salary at a given age if he is alive, participating in the work force, and actually employed, one only has employer contributions to fringe benefits to exactly the same extent. Thus, the Probability LPE adjustments described in Chapter 3, or some version thereof, also apply. Table 4 is a typical table depicting fringe benefit loss. It assumes employer contributions to fringe benefits of 30 percent of wage earnings per year, which is multiplied by the annual wage loss estimates in Table 8 of Chapter 3. The percentage-of-wages figure for hourly-paid employees, such as Jack Doe, was exactly 30.0 percent in the latest U.S. Chamber of Commerce study. The present value of expected wage-plus-fringe-benefit loss, less personal consumption, is now \$580,804, or \$170,555 more than the wage loss of \$410,249 in Table 11 of Chapter 3.

Personal consumption deductions must be related to fringe benefit loss estimates for wrongful death cases, assuming that applicable law allows consumption deductions from earnings. The deceased worker, had he lived, would have consumed some percentage of retirement income and of other fringe benefit income that partially or fully replaces gaps in earnings. This would include unemployment compensation and disability income for periods of unemployment or time off for injury. One possibility for post-retirement income is to continue a stream of personal consumption deductions from an assumed retirement date through life expectancy, even though earnings projections may have ceased.

Another method is more consistent with the LPE approach to retirement and other work-life probabilities. Personal consumption would be deducted from fringe



**TABLE 4**  
**PRESENT VALUE OF EXPECTED FRINGE BENEFIT LOSS**  
**FOR MR. JACK DOE, AGES 56-75**

Year	Age	Benefits	Discount Factor	Present Value	Work Life Probability	Expected Value	Cumulative
1989	36	\$7,903	1.00000	\$7,903	0.9170	\$7,247	\$7,247
1990	37	9,130	0.96965	8,853	0.9153	8,103	15,350
1991	38	9,248	0.94022	8,695	0.9134	7,942	23,292
1992	39	9,368	0.91169	8,541	0.9114	7,784	31,076
1993	40	9,488	0.88402	8,388	0.9093	7,627	38,703
1994	41	9,611	0.85719	8,238	0.9070	7,472	46,175
1995	42	9,735	0.83117	8,091	0.9045	7,318	53,493
1996	43	9,860	0.80594	7,947	0.9018	7,167	60,660
1997	44	9,988	0.78148	7,805	0.8989	7,016	67,676
1998	45	10,116	0.75777	7,666	0.8854	6,787	74,463
1999	46	10,247	0.73477	7,529	0.8587	6,465	80,928
2000	47	10,379	0.71247	7,395	0.8550	6,323	87,251
2001	48	10,513	0.69084	7,263	0.8511	6,182	93,433
2002	49	10,649	0.66988	7,134	0.8467	6,040	99,473
2003	50	10,786	0.64955	7,006	0.8418	5,898	105,371
2004	51	10,925	0.62983	6,881	0.8365	5,756	111,127
2005	52	11,066	0.61072	6,758	0.8306	5,613	116,740
2006	53	11,209	0.59218	6,638	0.8241	5,470	122,210
2007	54	11,354	0.57421	6,520	0.8169	5,326	127,536
2008	55	11,500	0.55678	6,403	0.7518	4,814	132,350
2009	56	11,648	0.53988	6,289	0.6158	3,873	136,223
2010	57	11,798	0.52350	6,176	0.6086	3,759	139,982
2011	58	11,951	0.50761	6,066	0.6007	3,644	143,626
2012	59	12,105	0.49220	5,958	0.5922	3,528	147,154
2013	60	12,261	0.47726	5,852	0.5830	3,412	150,566
2014	61	12,419	0.46278	5,747	0.5731	3,294	153,860
2015	62	12,579	0.44873	5,645	0.5625	3,175	157,035
2016	63	12,742	0.43512	5,544	0.5512	3,056	160,091
2017	64	12,906	0.42191	5,445	0.5392	2,936	163,027
2018	65	13,073	0.40910	5,348	0.4070	2,177	165,204
2019	66	13,241	0.39669	5,253	0.1311	689	165,893
2020	67	13,412	0.38465	5,159	0.1275	658	166,551
2021	68	13,585	0.37297	5,067	0.1236	626	167,177
2022	69	13,760	0.36165	4,976	0.1196	595	167,772
2023	70	13,938	0.35068	4,888	0.1152	563	168,335
2024	71	14,117	0.34004	4,800	0.1107	531	168,866
2025	72	14,300	0.32972	4,715	0.1059	499	169,365
2026	73	14,484	0.31971	4,631	0.1009	467	169,832
2027	74	14,671	0.31001	4,548	0.0957	435	170,267
2028	75	10,300	0.30342	3,125	0.0920	288	\$170,555
J. DOE		\$170,555					



benefits as the fringe benefit estimates are made each year during the earnings years. Simple hand calculations reduce the dollar amount of employer contributions to fringe benefits each year by the consumption percentage. This means that the 30.0 percent-of-wages figure used in the Jack Doe example (above) for benefits losses would be lowered. The \$580,804 estimate of wage-plus-fringe-benefit losses would decrease to \$533,332. This is a \$47,472, or 8.2 percent, reduction because a deceased Jack Doe would have exclusively consumed part of his fringe benefits. Some forensic economists have not made such reductions, which may be a significant error.

Finally, the complicated income tax calculations discussed in Chapter 3 must be applied where the effects of income taxes must be considered. Yet, employer fringe benefit contributions are usually not taxable to the employee, and only the effect of income taxes on the interest earnings necessary to restore lost fringe benefits would be considered.

#### **4.6 Testimony Regarding Fringe Benefit Loss**

The economist for the plaintiff is primarily concerned with obtaining good source data for developing an estimate of the percentage of wage earnings paid in fringe benefits, and this economist does not want to overlook some of the newer categories of fringe benefits. With such a percentage based upon an employer-provided benefits statement, or upon the amount of contributions to each fringe benefit category by a specific employer, the economist for the plaintiff does not worry greatly about the fringe benefit aspect of testimony. This is especially true when the employer-provided fringe benefits, expressed as a percentage of wage earnings, are held constant in relationship to wages. Since this percentage of wage earnings has risen sharply in past decades, lengthy cross-examination on fringe benefits could be counter-productive. Moreover, if the fringe benefit loss estimate is based upon the market theory, the plaintiff economist may be able to point out that loss under the replacement theory would be even greater. In a typical direct examination, we would only spend a few minutes on fringe benefits, simply noting that the percentage of wages used is based upon the actual fringe contributions of the last employer. Commonly, the defense attorney will not ask a single question about fringe benefits in cross-examination. This may largely be a function of lack of knowledge by defense attorneys or their experts in this increasingly complex area.

Indeed, many lines of attack exist for the defense attorney in cross-examination, depending upon the method of estimating fringe benefits employed in any given case. The fringe benefit loss estimate may be made to seem speculative, for example, if based upon national surveys of "average" workers (such as those represented in Tables 1 and 3) rather than on precise information on the last employer's actual contributions to each fringe benefit category. In the case of the death of a minor child or a person not working when killed, we are almost certain that the legally-required fringe benefits would have been paid when and if the person began working. Other substantial benefits can be assumed, but this is nothing more than an assumption.

The defense must also check to ensure that the plaintiff economist has not made a mistake. Did he add into fringe benefit loss a value for paid time off, which would clearly double-count a loss already included in the wage loss estimate? Did



he assume a 100 percent probability of participation and employment at any age and, at the same time, add a fringe benefit loss value for unemployment compensation, workers' compensation, and disability insurance at that age? Yet, how could one draw these types of benefits if working throughout the year? Did the economist use a legally-defined percentage of salary for social security loss, for example, but apply it to anticipated annual wage earnings when these wage earnings were greater than the maximum annual base for the computation of employer contributions? Did the economist fail to deduct likely consumption from fringe benefits in a wrongful death case?

Furthermore, the defense should be especially critical of forecasts that a current year figure for fringe benefits, as a percentage of wages, will increase in future years. As stated earlier, national studies indicate that the percentage of wages paid by employers in fringe benefits has stabilized. Some evidence and arguments exist for the notion that this percentage may actually decline. The "flatter" federal income tax structure decreases the advantage of deferring income to retirement years. Many policy makers would increase government revenues by closing tax "loopholes" involving fringe benefits, and many employers are increasing the employee share of health insurance costs, for example.

#### **4.7 Summary**

In summary, employer payments for fringe benefits are normally the second most important component of loss of earning capacity estimates. Only wage/salary loss is larger in value. Several theoretical bases exist for the inclusion of employer-provided fringe benefits in lost earning capacity estimates, and a fringe benefit loss estimate may vary depending upon the theoretical framework used to make the estimate. Certainly, the topic of fringe benefits is increasingly important as an aspect of economic damages, and it is increasingly complex. The understanding of this area by both plaintiff and defense attorneys needs to improve, and research aimed at forecasting future fringe benefits levels and patterns should be expected to increase.