

ECONOMIC REPORT

Critique of Plaintiff's Economic Report

Prepared by

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Economic Report of Dr. Thomas Monday, Defendant's Economist

I have been retained as an economist to help prepare the defendants representing Edward Taylor Hard and M.C. Davola, to take the deposition of Dr. Hann and to examine Dr. Hann at trial. The following is my critique of Dr. Hann's report concerning the value of the economic loss to Bruno Summers' estate. In my opinion, Bruno Summers' earnings capability was much lower than estimated in Dr. Hann's report and the loss in value of the business is also much lower than estimated by Dr. Hann. Further, I believe that the estimate of the value of lost non-market services is overstated and the value of fringe benefits is incorrect. I believe that the loss in the value to the estate is approximately \$1,094,412.

The loss to the estate of Mr. Summers contains two major components: loss of earnings and loss of the value of the business. Dr. Hann appears to have utilized commonly accepted methods in estimating the present value of the earnings loss to the estate of Bruno Summers. However, I believe that Dr. Hann used an inappropriate method for valuing the loss in value of the business owned by the estate of Mr. Summers. Further, I find that the facts in this case do not support many of the assumptions used by Dr. Hann in preparing his report. Alternative assumptions consistent with the facts lead to substantially reduced estimates of the losses.

I have reviewed eight factors used by Dr. Hann:

1. The length of Mr. Summers' worklife
2. The allocation of cash flow from the business between (1) earnings from the labor of Mr. Summers in his business and (2) a return to capital invested in the business
3. The real interest rate used in discounting future earnings
4. The annual increase in real wages
5. Fringe benefits
6. The assumed amount of future consumption by Mr. Summers
7. The valuation of non-market services provided by Mr. Summers and lost by the estate
8. The market valuation of the business

1. Worklife estimate

Dr. Hann relies on Mrs. Summers' statements that Mr. Summers would work until age 67. However there are several events that may have affected Mr. Summers' actual work life, including the probability of injuries due to accidents, disease, declining health, unexpected layoffs, or simply a choice to retire early. Intentions stated at age 30 may not reflect actual behavior as one ages. It is an error to use a worklife expectancy that is not adjusted for these probabilities that potentially can affect anyone. In this case, Mr. Summers' medical reports indicate serious liver disease. If the doctors indicate that this disease has reduced Mr. Summers' life expectancy, it may also have reduced his worklife. Second, Mr. Summers' survivalist hobbies and neo-Nazi activities are high risk activities. If these increase the probability of injury or death above that of the average individual, they would reduce his expected worklife.

Statistical tables exist that do incorporate the impact of the probabilities of unexpected causes for withdrawal from the workforce. Based on a commonly used table, 30-year-old men with a high school education and currently active in the labor force, experience a worklife expectancy of 28.26 years to age 58.26. [1]

2) Future earnings

Dr. Hann estimated base income for Mr. Summers at \$60,000 per year, an amount equal to the taxable income for the health club business owned and managed by Mr. Summers. However, Mr. Summers had invested over \$150,000 of capital in the business. Consequently Mr. Summers' earnings reported in his tax returns represented two things, 1) earnings for his services as the manager of the clubs and 2) a return on the capital invested in the business, which will continue after his death. The value of his services as the manager can be determined by looking at the wages paid to comparable managers who are not owners. The manager hired to replace Mr. Summers is paid \$45,000 per year. A survey of health club managers shows that average wages are about \$42,000 per year. I have estimated the value of Mr. Summers' earnings as manager of the club at \$45,000 per year. His earnings on his invested capital is \$15,000 per year. (This is consistent with assuming that the \$150,000 he has invested earns 10% per year.)

I have adjusted his earnings for 5% inflation over the past two years, the probability of future unemployment estimated at 3.5% per year and 18% for the impacts of the age earnings cycle. The adjusted estimate of base income is \$53,804 per year.

3. Discount rate for earnings

Dr. Hann uses data for the last 50 years to estimate past and future inflation, interest rates, and wage rate growth. From this data, he calculates a 2.2 real interest rate for discounting and a .9% real wage growth rate. However, I believe that recent economic events more closely reflect conditions that will exist in the future over Mr. Summers' work life. If we use a 20-year time horizon, we find that the average real interest rate was 2.7% and the real wage rate growth was .5%. The higher discount rate and lower wage growth rate both act to reduce the present value of future earnings losses. The present value of future earnings is estimated at \$1,179,129.

4. Fringe benefits

Dr. Hann adds 14.4 % of Mr. Summers' wages to the loss to account for the value of fringe benefits provided by his business in the form of his personal health care and pension contributions. However, health care benefits would have been consumed by Mr. Summers during his work life. In addition, Dr. Hann assumes that Mr. Summer's post-retirement consumption is funded by the pension plan. Since both of these fringe benefits would have been consumed by Mr. Summers, they are not a net loss for the estate.

5. Consumption

The source for the estimate of consumption used by Dr. Hann reports consumption as a fraction of total household income in 20XX-5. However, Dr. Hann calculated consumption as a fraction of only Mr. Summers' earnings. Based on examination of Mr. and Mrs. Summers' income tax statement, I found that Mrs. Summers, while not currently working, does receive \$20,000 per year from a trust fund set up by her parents. Consequently total household income is \$88,804, including \$53,804 in wages from the business, \$15,000 in return on capital from the business and \$20,000 from the trust fund.

Dr. Hann assumes that Mr. Summers' consumption pattern is that of a male living in a household with four people. Using a more current source of data on consumption patterns [2], I find that the average male in households with income of \$88,804 consumes 18.1% of family income, or \$16,074 per year as compared to the \$14,430 estimated by Dr. Hann. The \$16,074 is 29.9% of

Mr. Summers' earnings. The present value of that consumption until Mr. Summers retires is \$352,559. I agree with Dr. Hann that Mr. Summers' consumption after retirement will be provided by his employer's contributions to pension and social security compensation.

6. Non-market services wage rate and self-consumption

Dr. Hann assumes that Mr. Summers contributed the average amount of non-market services to the household or 12.9 hours per week. He assumes that upon retirement, the number of hours would increase to 19.3 hours per week. He values these services at \$25 per hour, the retail cost of buying these services from a professional. There are four reasons why this estimate overstates the loss to the estate. First, the \$25 per hour valuation is the cost of services provided by a professional. It would be reasonable to assume that the amount of time needed for a professional to accomplish these services would be less than the amount of time needed by an amateur, so to price services provided by an amateur at the professional rate will overestimate their value. I have assumed that Mrs. Summers could hire a local helper at the going wage rate for a janitor or maid of about \$12 per hour. [3]

Second, a part of these services, such auto maintenance for a second car, would be services that would have been self-consumed and no longer needed after Mr. Summers' death.

Third, Mrs. Summers has said that Mr. Summers spent most of his time at work or working out and thus had little time to perform household services. To assume that he performed the average amount of household services would appear to overestimate his actual contribution.

Fourth, services provided by Mrs. Summers in support of Mr. Summers, such as shopping, laundry and cooking, will no longer need to be provided. Some deduction for estimated self-consumption of total household services should be made. Although no studies directly address this issue, it would be reasonable to assume that self-consumption of total household services is the same percentage as the percentage of consumption of family income, or 18.1%. Using the same source as Dr. Hann, total household non-market services provided by both Mr. and Mrs. Summers is estimated at 44.9 hours per week if Mr. Summers is working and 51.3 hours per week if he is retired. If 18.1% of those hours (8.1 hours per week while working and 10.3 hours while retired) are consumed by Mr. Summers, the net loss is (12.9 – 8.1) or 4.8 hours per week while he is working and (19.3 – 9.3) or 10.0 hours per week if he is retired. Using these reasonable assumptions, annual losses are \$2,995 per year (4.8*\$12*52) while working and \$6,240 while retired. I assume that the value of these services increases at the rate of wage rate growth of .5% per year. They are discounted at 2.7% per year. The present value of the net loss in services to the household is estimated at \$117,843.

7. Loss in value of the business

Recently Universal Gyms has made a revised cash offer for the clubs to Mrs. Summers for the amount of \$50,000, including assumption of the outstanding debt of \$100,000. The original offer to purchase of \$300,000 did not include assumption of debt of \$100,000. The new offer has a value of \$150,000, so, if we accept these offers as representing the value of the business at the time of the offers, the net loss in value of the business is \$150,000.

Summary

The loss to Mr. Summers' estate is substantially less than estimated by Dr. Hann. If we use assumptions that are based on the facts in this case, the losses are estimated at \$1,094,412.

Summary of Losses to the Estate of Bruno Summers

Earnings	\$1,179,129
Less: Consumption, 29.9%	-\$ 352,559
Value of Lost Household Services	\$ 117,843
<u>Reduced Value of the Business</u>	<u>\$ 150,000</u>
Present Value of the Loss to the Estate	\$1,094,412

Data Sources:

[1] Skoog, Gary R., and James E. Ciecka, "The Markov (Increment-Decrement) Model of Labor Force Activity: Extended Tables of Central Tendency, Variation and Probability Intervals," The Journal of Legal Economics, Spring/Summer, 20XX-4.

[2] Bureau of Labor Statistics, Consumer Expenditure Survey, Table 37. Consumer units of two persons by income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, (20XX – 3) – (20XX-2).
<http://www.bls.gov/cex/home.htm>

[3] Washington State Employment Security Department, Occupational Employment and Wages Survey, 20XX, mean wage for Janitors and Porters.
<http://www.workforceexplorer.com/cgi/dataanalysis/?PAGEID=4&SUBID=146>