trial technique

Working with a Forensic Economist

By W. Russell Corker

Trial attorneys must be masters of many skills, including proving and defending against damage claims. Besides being well versed in medical matters, they are also required to provide expert testimony in the proof of damages, and thus must have at least a working knowledge of the science of forensic economics. Understanding this subject and its terminology and methods will give the attorney the confidence to use economists and examine them more effectively.

Like many other social sciences, economics first crept into the everyday awareness of society in the early 1800s. As individual and national wealth increased, some people developed expertise in various ways of handling money, and economics evolved as the science concerned with the production and consumption of goods and services. In 1824, the first school of economics opened at the University of London, in what was then the center of the financial world. From that time forward, economic principles rapidly found their way into the judicial system, and ultimately forensic economists began appearing as witnesses at trial. Today's economic expert is usually well grounded in labor economics, knowledgeable about statistical forecasting, and fully aware of prevailing market conditions.

Attorneys who handle personal injury cases must work with forensic economist experts more frequently than ever before. The forensic economist has become a highly effective means of communicating technical and possibly intimidating information to a jury. Additionally, in an age when juries are looking for scientific certainty, the methods used are relatively objective and grounded in scientific methodology, and the statements of forensic economists have gained greater credibility. Many attorneys have considered the cross-examination of a forensic economist to be futile. Until recently, defendants rarely put on their own economists, fearing that they would be establishing a floor for damages and thereby helping the plaintiff's case. More often than not, the expert was used only as a consultant to help with critiquing the plaintiff's economist's report and suggesting areas of cross-examination. Because he or she would not be a witness at trial, it became increasingly common to see the defendant's expert sitting at trial during the testimony of the plaintiff's expert.

Contrary to what attorneys often believe, many areas involving economic opinions are subject to challenge. No scientific method can predict the future with certainty, and since predictions are involved in all cases where an economist testifies, differences of opinion between experts are common. This does not mean that there are not agreed-upon scientific methods, only that the best of them cannot always predict what will happen. The most obvious example is the current economic situation in which inflation is virtually nonexistent, the lowest rate in 40 years, while the growth rate is very vigorous, defying traditional economic theory which predicts that a strong economy will produce an increase in interest rates and inflation.

This suggests that, even working with the same set of facts, forensic economists using different but acceptable methods of calculation and differing assumptions can come to different conclusions. Economists who testify predominantly for one side or the other frequently use methods that reflect their biases. It is incumbent on the attorney to appreciate this and develop an appropriate line of questioning. It is also necessary to understand that forensic economics is dynamic, and changes affecting calculations may occur on a daily basis. For example, the yield of the benchmark federal bond maturing in 30 years just topped 5.57 percent as of this writing. It began the year at 5.09 percent. Several years ago, it was over 6 percnet, and several years before that, 7 percent. Calculations based on such a range of investment returns, when projected over long periods of time, can lead to significantly different results.

Trends

One of the basic concepts that runs through all economic predictions is the importance of predicting trends, the "prevailing and persisting relationship between two different things that contain a statistical relationship."[1] The two items relevant in litigation are time, measured in years, and wages, medical costs, or items at issue in the litigation. The concept of the trend permits creation of an equation that lets us make decisions today that will account for some future contingency, such as lost wages over time. Depending on which time frame the forensic economist uses, the results will be substantially different. Economists can make very convincing arguments to support their choice of a certain time frame for specific calculations.

There is no agreement among economists on the correct number of years to use in predicting a trend on which calculations will be based. Some forensic economists will go back the same number of years for which a future calculation is going to be made (for example, if a prediction is to cover the next 20 years, they will go 20 years back in time and calculate an average). Others use the period after World War II to avoid economic aberrations caused by the Depression and two world wars, and they calculate an average rate of growth, or inflation, or any other relevant trend. Where someone has at least a 10-year work history in the same job or a similar one, this is probably the most accurate means of predicting that person's employment trend, but averages between the various methods may also be used.

Growth Rate

Another area often debated by opposing economists is the method by which the growth rate of wages is calculated. Since the end of the Depression in 1933, earnings for the average nonsupervisory manufacturing employee have increased yearly, according to U.S. Department of Labor statistics. The growth rate in earnings can be determined in several ways. The higher the rate used, the more advantageous to the plaintiff, since it results in a higher present value award. If the plaintiff has held the same job for many years, the historical data can be used to determine the rate. If not, the Department of Labor's publication *Employment and Earnings* gives salaries for many job categories.

If a long period of years is used, inflation, growth rates, and other economic factors will naturally be taken into account. The historical growth rate of most jobs ranges from 4.0 percent to 6.0 percent, but many specific jobs have different rates. For instance, the federal minimum wage has had a historical growth rate since its inception in 1938 of over 5.0 percent per year, growing from 25 cents an hour to its current level of $5.15. Sometimes, use of a high growth rate to calculate the plaintiff's salary 30 years from now will result in an almost unbelievable figure. For example, someone making $30,000 now, with a 5.5 percent growth rate, will be making about $150,000 in 30 years, a stretch many jurors may not be willing to make. Some experts will remove inflation from the equation entirely, resulting in a small growth rate, but if the same process is used for the discount rate, there is no real effect. Remember, unlike an interest rate which can be locked in for a period of years, trends in the growth rate of wages can never be predicted with certainty.

An economist's report should always be reviewed to determine what method of calculating the growth rate was used and whether it is the most accurate one under the circumstances.

There are many methods of making this calculation, and different methods are used by different economists in different situations. Accordingly, an economist's report should always be reviewed to determine what method of calculating the growth rate was used and whether it is the most accurate one under the circumstances. Some forensic economists use an offset method, and consequently, the growth rate is unimportant. Because the offset method, particularly when interest rates are high, usually results in a higher present value than is necessary to compensate the plaintiff, defendants can effectively cross-examine on this issue, preferably through the testimony of their own expert. (See more on the offset method later in this article.) Additionally, most economists feel that greater weight should be given to the most recent trends, rather than very old trends. Some forensic economists use a weighted method of calculation. Again, this is an area that should be discussed with your expert, who may very well come up with different calculations based upon a different method.

Interest Rates

One of the most important elements in any evaluation, and one that can radically affect the present value, is the interest rate, since a slight change in percentages can often leading to differences of many hundreds of thousands of dollars over a long enough period of time. A difference of one percentage point can also result in very large reductions in present value. It is for this reason that interest rates must be scrutinized carefully. The plaintiff, seeking to increase the present value of the award, may attempt to use a low interest rate, since more money today will be required to cover the economic loss over time. Anything that is good for the plaintiff is necessarily bad for the defendant, whose expert frequently will use a higher interest rate.

If the opponent's expert has used a biased interest rate, there are several ways to attack the testimony. Perhaps the easiest, and certainly by far the safest course, is to merely establish which method was used to make the calculations. It frequently does little good to attack the details of the calculation, since the expert can probably make a convincing argument. After the witness is off the stand, your own expert can critique the method and explain to the jury why a different method is appropriate. Obtaining prior transcripts is essential when cross-examining a forensic economist. Unlike medical testimony where the "method" used is rarely an issue, in forensic economics, method is essential. An expert would be hard-pressed to explain away why he or she used a low rate of interest when testifying for a plaintiff and a higher one when testifying for the defense.

Interest rates reflect almost daily assessments of risk, forecasts of inflation, and the supply of and demand for funds. The market value of a federal bond, the standard investment in personal injury cases, reacts to changes in risks and inflationary predictions. An expert's report, prepared well in advance, may need significant recalculation by the time of the trial.

The discount rate has changed significantly in the last 10 years, from 7.5 percent, even 8 percent, accepted by courts in 1990 to the current 5.5 percent range. This yield is the rate used to determine the present value of a future loss. Most economists have recognized the 30-year federal bond as the benchmark that provides the best balance of safety and yield. Some forensic economists, though, will use short- and intermediate-term government securities, as well as triple-tax-free municipal bonds to lower the yield and thereby revise the present value. Accordingly, the plaintiff's economist may use a short maturity, which has a lower interest rate and yield, while the defendant's economist would want to use the 30-year bond rates, which tend to require less money up front to fund and therefore lower the verdict.

Since experts often disagree on the appropriate inflation and interest rates to be used, it is essential that all attorneys be able to recognize the rate used and its strengths and weaknesses.

It is always important to keep in mind that the yield on a government bond, bill, or note is not stagnant but varies with its sale at auction, subject to the daily fluctuations of supply and demand. Therefore, the economist who uses as a discount rate the current yield, or interest, at the time of trial will probably be using a different discount rate than one who goes back over time and computes an average rate.

Discount Rate

The discount rate is the value used in discounting future income streams to their present value. It is the directional opposite of interest rates as it relates to determining the present value of a sum of money and what it will be at a certain future date. Since experts often disagree on the appropriate inflation and interest rates to be used, it is essential that all attorneys be able to recognize the rate used and its strengths and weaknesses. The lower the discount rate, the less money is earned from the verdict, resulting in a higher present-value verdict for the plaintiff.

If a "net discount" rate is used, these debates become less significant. Usually, the inflation and the interest rates are within two to three points of each other. Some economists use 3 percent as the discount rate, and a modest growth rate of 1 percent, based on a belief that interest rates and inflation rates often move in tandem; as inflation increases, interest rates usually rise as well.

If the maturity date of a security matches the date at which a loss will occur, a more accurate calculation can be made. Also, by using zero coupon bonds, which pay no interest but mature at a higher value than the purchase price (and thus can be purchased at a discounted price), many of these problems can be avoided. There is no consideration given for changes in the inflation rate, since the rate has been locked in at purchase. This will also result in a lower present value.

Rate of Inflation

It is critical to ascertain what method the expert used to determine the rate of inflation, and what rate of inflation is being predicted for 30 years from now. Inflation affects the cost of goods and services in the future. Some experts use understandable examples, such as the actual increase in the price of a car that cost $7,000 in 1970 and would have cost about $21,000 in 1997 if the rate of inflation were 4 percent.

Offset

The offset method is based on the principle that the growth rate of wages is the same as that of interest rates. This method can be used only when, in fact, the growth rate in a particular job equals the currently available interest yields. A variation of this is the "differential" method, based on the difference between the growth rate and the interest rate. Keep in mind that for the most part, a person's growth in wages is tied into not only inflation but also such things as promotions, increased experience, and productivity, so an offset method may be inaccurate.

Present Value and Time Value

Present-value calculations must ultimately be made on all past and future streams of earnings, as well as on all costs and expenses involved in the case. In some states, the calculation is made at trial, and in others in supplementary post-trial proceedings. Money can be invested in interest-bearing securities and, consequently, will earn money over time (time value). The present value represents the amount that would be needed today if the plaintiff were to be paid all of his or her future income and it were invested at currently available rates or historical averages. During the time period in question, an amount equal to what the plaintiff would have earned will be withdrawn from the fund, so that at the end of the designated period, the fund is exhausted. Any interest earned on the investment is likewise reinvested at the then-current rates.

Average Person

A prediction based on a 20-year work history certainly would sound more convincing to a jury than one that relies on studies and government statistics. Forensic economists must frequently rely on work-life expectancy tables, life expectancy tables, average household services value studies, and other information pertaining to large groups of people. On the other hand, a particular job category may have a historical growth rate of 5 percent, though the plaintiff's actual growth rate over time has been considerably less. Obtaining the plaintiff's W-2 forms and tax returns can be effective in discounting this average-person method.

Assumptions

Many predictions made by forensic economists assume certain facts, often supplied by the plaintiff's attorney before trial. These assumptions often can be attacked with relative impunity. If the expert assumes certain facts in making predictions, rather than verifying them, a jury that disbelieves or discounts those assumptions may shape its conclusions accordingly. For instance, while many calculations factor in the cost of help that a disabled person may have to hire to perform certain household services, many jurors feel that the person, with more time on his or her hands, is likely to perform most of those services without help. Plaintiffs must think seriously before including items like this in the calculation, weighing them against a common-sense evaluation. Often, noneconomic areas are assumed in formulating opinions, such as a plaintiff's good health. But social habits like smoking, or another medical condition, may lead to a strong argument that there is a diminished work-life or life expectancy.

Work-Life Expectancy

Determining how long a person will continue to work is always subject to debate. The study most frequently relied on by forensic economists is *Work Life Estimates: Effects of Race and Education*, Bulletin 2254, U.S. Department of Labor. Tables based on this study compute the number of full years a person would have been expected to work from the time of his or her injury. These tables consider that a person may be out of the workforce for a time, such as for childbearing or other non-permanent reasons like company layoffs or a minor injury. Therefore, the work-life expectancy from the time of injury probably will not coincide with the date the person is expected to actually retire, which should be somewhat later. Some economists calculating work-life expectancy will use the traditional age of 65, which may have no application to the facts of the case. Today, with mandatory retirement less prevalent, some people work longer, while a very large percentage of the population is taking advantage of early retirement.

Personal Consumption

Typically used as a deduction in a wrongful death action, a person's actual personal consumption may be different from the data in one of the recognized studies. The most-relied-upon study, made by Earl Cheit for the Institute of Industrial Relations, predicts that 30 percent of the income of a head of household with a spouse but no children is used for personal consumption. Newer studies with different data include the Department of Commerce's "Consumer Expenditure Survey Series."

Know the Core Principles

This article is not intended to be exhaustive on the subject but is intended to highlight the point that many areas in the science of forensic economics are subject to debate. With an understanding of these core principles, economic issues can be dealt with more effectively.

Endnote

[1] Gerald D. Martin, Determining Economic Damages 10-2 (James Publishing 1998).

W. Russell Corker is the senior trial attorney for the firm of Shayne, Dachs, Stanisci, Corker & Sauer in Long Island, New York, where he concentrates in the area of plaintiff's personal injury and medical malpractice litigation.