

Evaluating Economic Damages In Personal Injury

by

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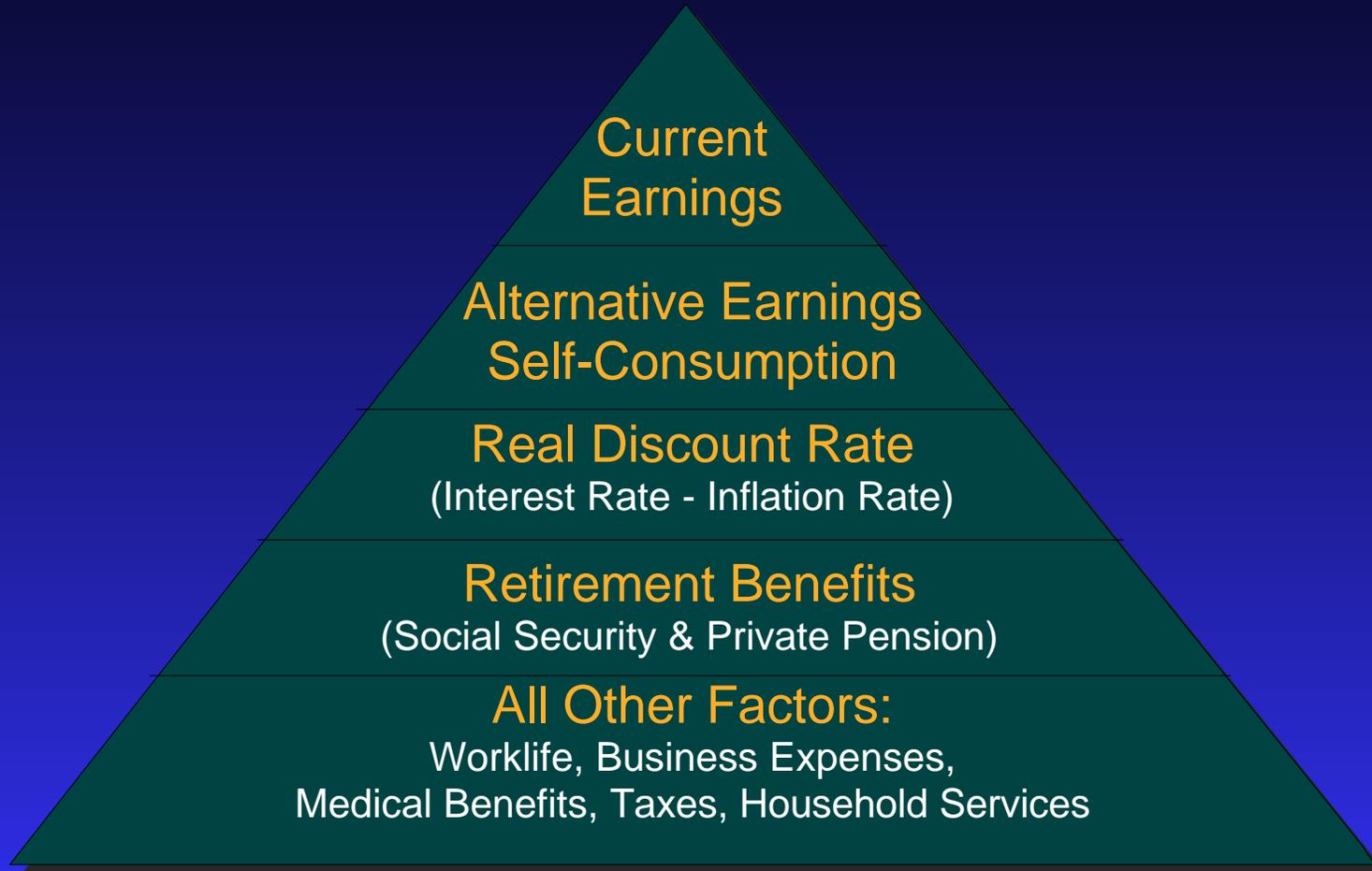
The dominant methodology for computing economic loss in personal injury cases is the "human capital" approach, also known as the "lost economic output" method.

**Lost Economic Output =
Present Value [Market Losses
+ Non-Market Losses]**

**Loss = [Output Before - Output After]
+ Additional Costs**

This is a "before and after" method

Damages Hierarchy



Market Output

Salary

Fringe Benefits

- Legally Required (8.9%)
 - ✓ Social Security
 - ✓ Disability & Survivors
 - ✓ Medicare/Medicaid
 - ✓ Unemployment Compensation
 - ✓ Workers Compensation

Fringe Benefits (continued)

- Agreed Upon (18.0%)
 - ✓ Insurance
 - ✓ Pension
 - ✓ Other
- Rest Periods (2.2%)
- Time Not Worked (9.7%)
- Discounts, Education, etc... (1.9%)

Total Benefits Payments Equal 40.7% of Wages

To project what plaintiff would have earned absent the injury, the economist must calculate, estimate or assume three critical factors:


Degree
of
"Certainty"

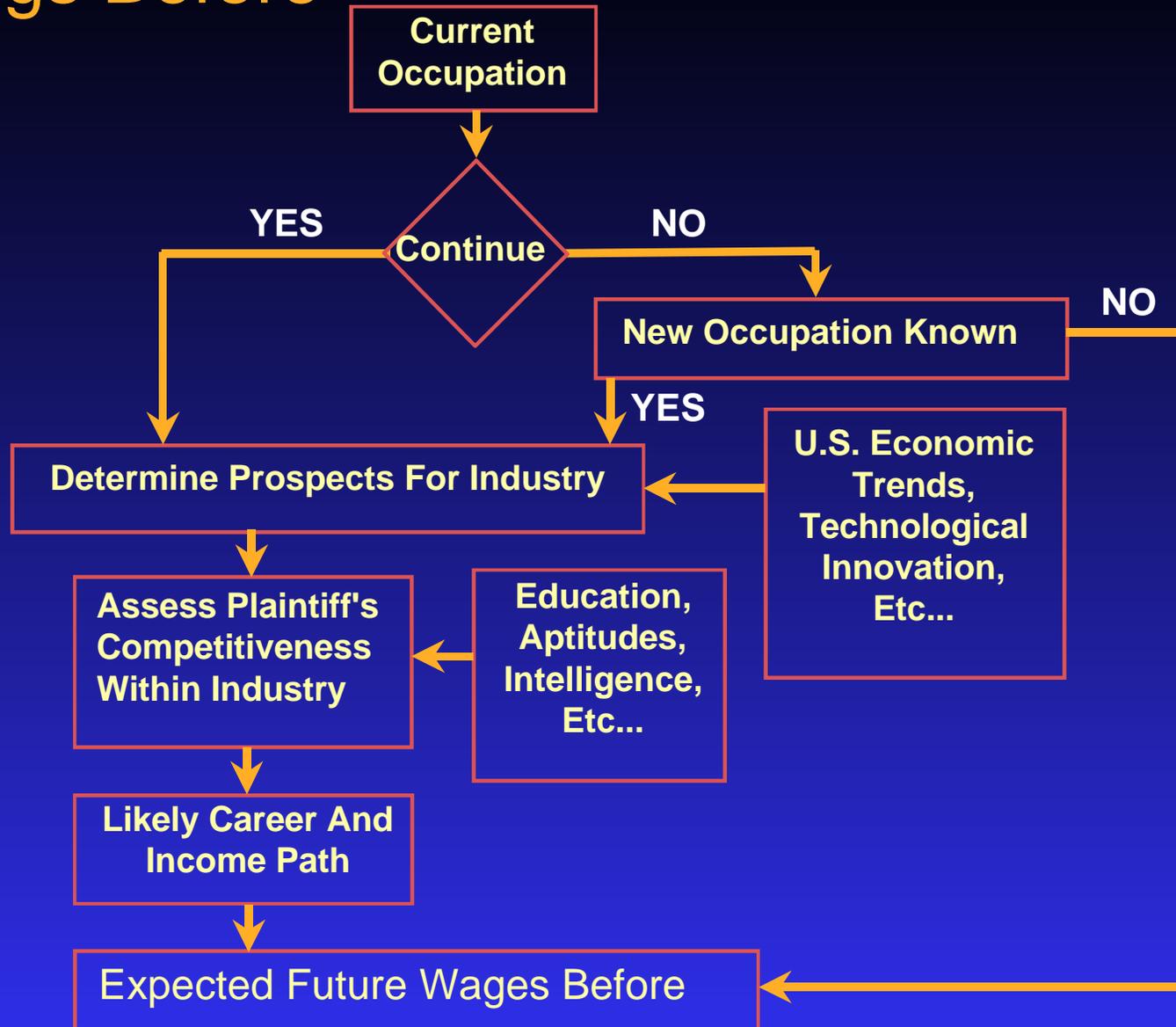

- What plaintiff was earning prior to accident
- At what rate earnings would have escalated between time of injury and trial date
- At what rate wages will grow in the future

Salary

To estimate the "before" in our model of economic loss, we must first determine:

- What was the occupation of the plaintiff at the time of injury?
- Was it likely or unlikely that the plaintiff would remain in that occupation?
- What are the economic prospects for that occupation in the short and long run?
- What were the prospects for the plaintiff within the occupation prior to injury?

Earnings Before



Economic Assumptions of Personal Injury Economists

Forecasts of personal injury economists are typically at odds with those of professional forecasters and reality.

Expert	Real Earnings Growth Rate	Real Discount Rate	Net Discount Rate	Fringe Benefits
Cox	1.81%	1.85%	0.04%	7.65%
Gamboa, Berla, Vogenthaler	"can't predict the future in terms of... wage growth and real rates of interest"		0.00%	22.00%
Goldstein	3.29%	1.64%	(1.62%)	\$ amount of health insurance
Linke			0 - 1%	21.00%
Rosen/Burke	1.50%	2.50%	1.00%	34.00%
Skurski	0.56%	1.68%	1.11%	18.6% - 28.6%
Smith	0.69%	1.97%	1.27%	28.75%
Viscusi			0 - 2%	\$ amount of health insurance
Imputed from DRI, Blue Chip	0.43%	3.20%	2.76%	

Estimating Lost Earnings to Time of Trial

Method	Procedure	Comment
CPI Adjustment	Multiply base year earnings by cumulative change in CPI	Preserves purchasing power -- Right answer to the wrong question
Industry Wage Growth	Multiply base year by average change in weekly earnings of all workers in the industry	Averages across crafts, seniority groups, managers and hourly workers
Seniority Approach	Use average earnings of similar workers above and below	Captures changes in contract, overtime and other factors -- Data not always available
Escalation Per Labor Contract	Increase for contractual wage escalation and any lump-sum payments	Assumes plaintiff would have remained in same craft

Estimating Future Wage Growth

Method	Procedure	Comment
Long-run Economy-wide	Use historical or forecast rate of growth in wages of all workers	In the long-run growth rates will equilibrate -- in shorter term not true
Historical Industry Growth	Typically uses growth of average weekly earnings of all workers	Does not consider effect of technological change, etc...
Offset Method (Growth in Real Wages Equals Real Interest Rate)	Lost earnings is the product of base year earnings and worklife -- Earnings growth equal to rate of interest	No empirical validity to theory. Most proponents cannot explain theory without degenerating into "Econobabble"
Projected Growth	Use forecast	The most economically defensible method

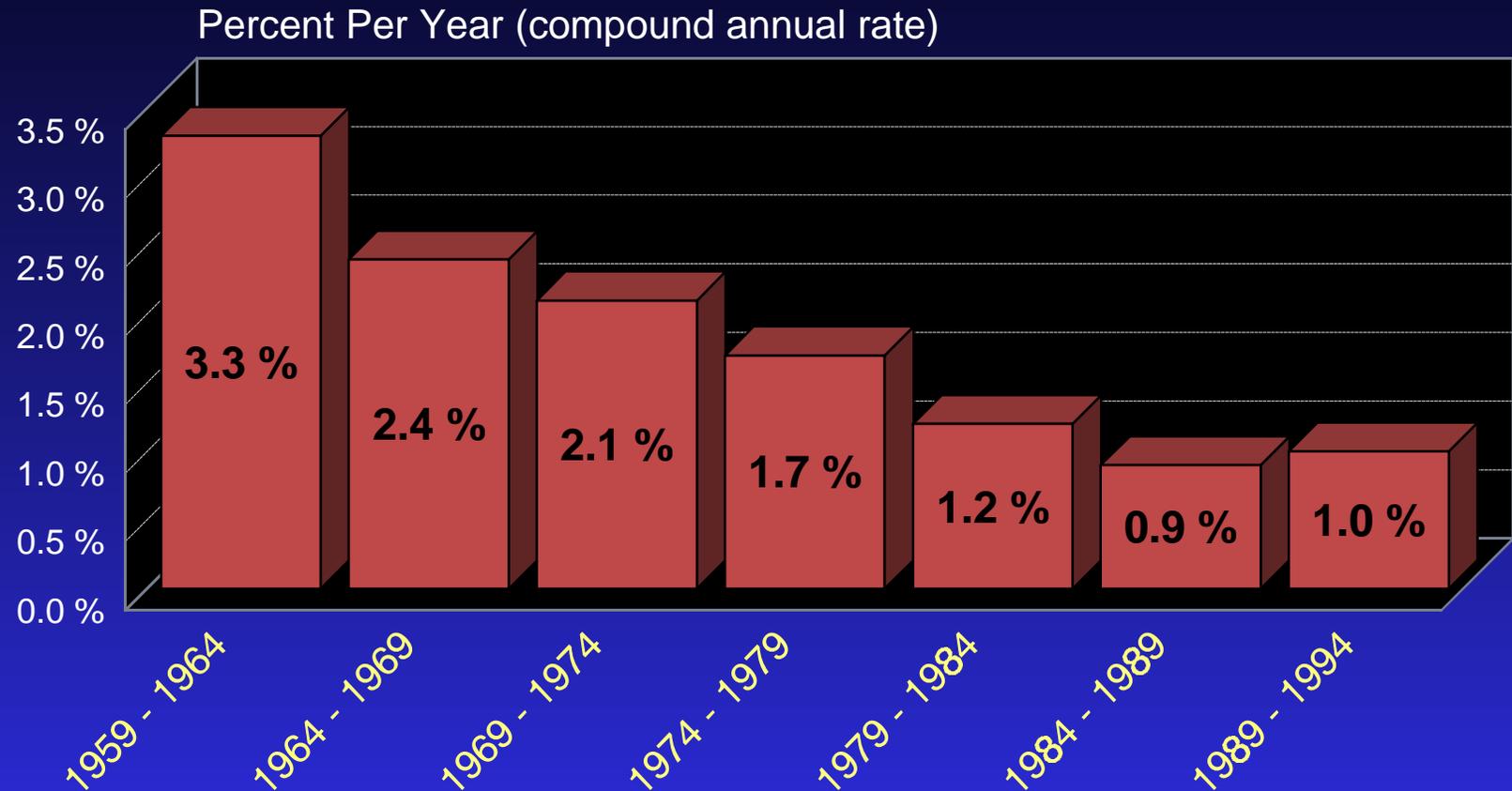
Key Point:

In the long-run, real wages cannot grow faster than productivity growth, and productivity growth depends on the savings rate. If the U.S. continues to spend more than it saves, productivity and real wages must fall.

**And the future does
not look bright . . .**

Labor Productivity Growth

(Non-Farm Business Sector)

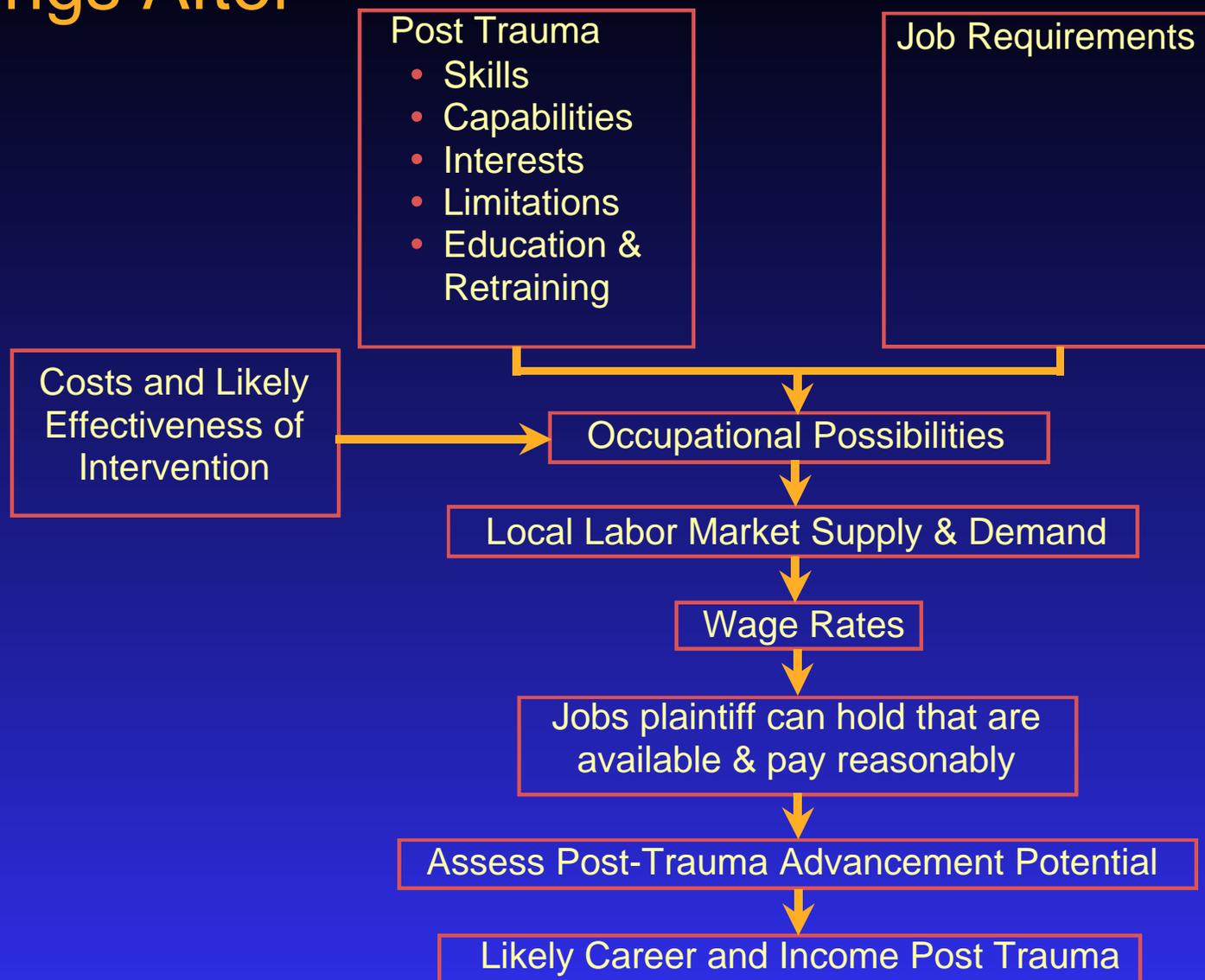


Labor productivity is equal to output per hour worked.

Source: Bureau of Labor Statistics

An analysis of the plaintiff's prospects post trauma is performed in a similar fashion considering the limitations imposed by the injury and the costs and potential benefits of additional education, job training, work hardening, etc...

Earnings After



Alternative Earnings:

- It is imperative to use a voc-rehab specialist to provide foundation for the economist
- Adults can usually do better than Mc Jobs
- There is a difference between being vocationally disabled and generally disabled. An injury that precludes being a conductor does not necessarily impact performance, worklife, etc. of a hand packer (improper use of SSA studies by Vocational Economics and others)
- Retraining options and costs should be carefully evaluated
- ADA must be considered

Issues In Estimating Future Wages

- ✓ Post Trauma Worklife
 - SSA studies are misleading
 - Career chosen should be one which minimizes effect of disability on performance
 - Problem of double dipping
- ✓ Specialized Worklife Tables
- ✓ Age/Earnings Profiles Using P-60 Data
 - Does not separate time and experience effects
 - Recent experience is at odds with historical (see: Men at Work) experience
- ✓ Effect of Technology
- ✓ Unemployment Rate/Workforce Participation
- ✓ Changes In Productivity And Real Wages

Fringe Benefits

Simply using a percentage of salary as fringe benefits is not only inaccurate, it ignores reality:

- Social Security benefits are received in the future not while working
- All government retirement programs are skewed
- The relationship between amounts paid in and benefits received is not one for one in defined benefit plans, particularly when plan is underfunded
- Some benefits (e.g. medical insurance) are not related to salary level

The proper treatment of benefits is to look at each one individually to determine if it is lost partially or fully and then to price the loss

Social Security

On a net basis, disability seldom causes any loss in this government benefit. The more typical situation is an economic "gain."

- Disability converts to old age at age 66
- Reduction in future benefit more than offset by reduction in payroll tax
- Claiming as an element of loss may open the door to consideration of collateral sources
- If person is disabled and can claim these benefits, how can they be an element of loss
- Loss of or reduction in survivors' benefit, if any, is typically very small, particularly in two-income households

Medicare

- Benefits are totally unrelated to income - it is cost/needs based
- If anything, the more one makes the less one receives from Medicare
- Under current and proposed tax plans, it is an "income tax" element

Unemployment Compensation

- FUTA/SUI are collected on only the first \$7,000 - \$10,000 of income
- Should be included if worklife tables or probability of unemployment are used -- otherwise not
- Usually a very small element
- Rate may be different before and after because of differing industry layoff practices
- No loss if capable of alternative employment

Workers' Compensation

- Only an element of "loss" if worklife tables or workforce participation rate used
- For a disabled worker collecting under system, must consider the implication of a second injury fund
- Before and after rates may be significantly different, especially if going from a high risk to a low risk industry/employer

Health Insurance

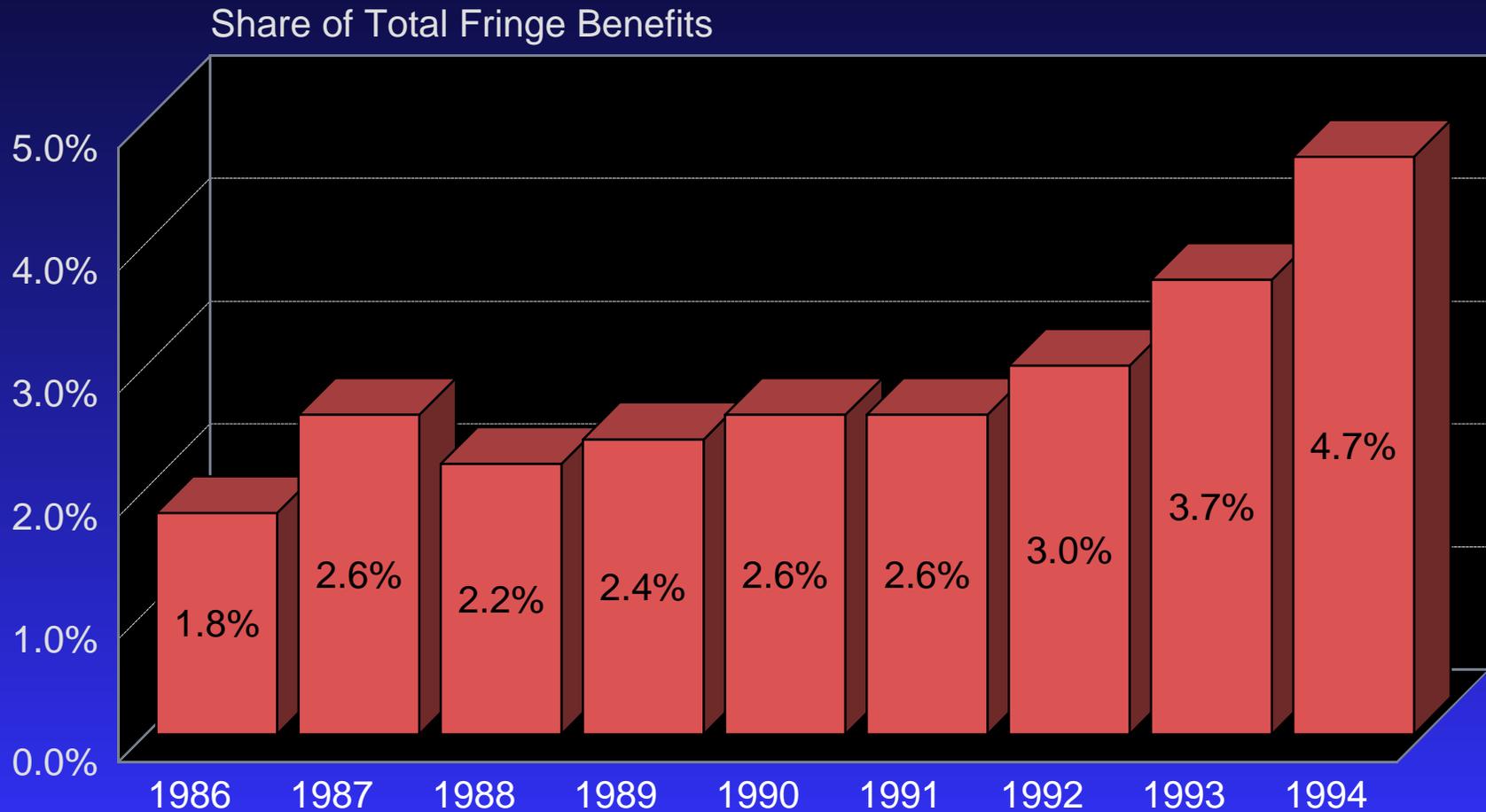
- The overwhelming majority of American workers are covered by health insurance
- Statistics reported by BLS under-estimate extent of coverage because they do not consider:
 - Unemployment effects
 - Two wage earner family effect
- Differences between good and average plans tend to be in copay and employer-paid family coverage
- Must avoid double-count between health insurance and elements of life-care plan

Pension & Insurance

- Defined contribution - amount received by employee is equal to employer contribution.
- Defined benefit - amount received by an employee is unrelated to the employer contribution with respect to that particular employee. May coordinate with Social Security.
- Large majority of large and medium-sized employers have employer-paid pension plans with average contribution of about 6% of wages.

Retiree Benefits

As the workforce continues to age, an increasing share of fringe benefits are being paid to workers who have already retired.



Other Benefits

- Union-related benefits must be carefully examined
- Union dues are a cost which should be netted against lost income
- Life insurance can be priced or computed actuarially from the life tables

Rest Periods & Time Not Worked

- If there is a reduction in vacations, holidays, etc. in the "after" period, these should be priced as a differential at the daily/weekly pay rate. Otherwise they should be ignored.

The important economic issue regarding the discount rate is the "real interest rate" implicitly or explicitly chosen.

Some useful relationships:

Real Rate = Interest Rate - Inflation Rate

Net Discount Rate = Interest Rate - Growth Rate in Wages

Growth Rate in Wages = Inflation Rate + Rate of Increase
in Real

Wages

Rate of Increase in Real Wages = f(Productivity Growth)

Productivity Growth = f(Investment Rate)

Investment = f(Savings Rate)

The measurement of the real rate is sensitive to a great many factors, but the most important are:

- Interest rate used
- Whether forecast or historical averages are used
- If historical averages are used, the averaging period

In general:

- Long Bond rates produce higher rates
- Forecast real rates are higher than historical averages
- Very long and relatively short averaging periods produce higher real rates
- "Pure Play" real rate instruments (British and Canadian indexed issues) produce the highest real rates

Vocational Economics openly uses the offset method.
Others approach it more obliquely.

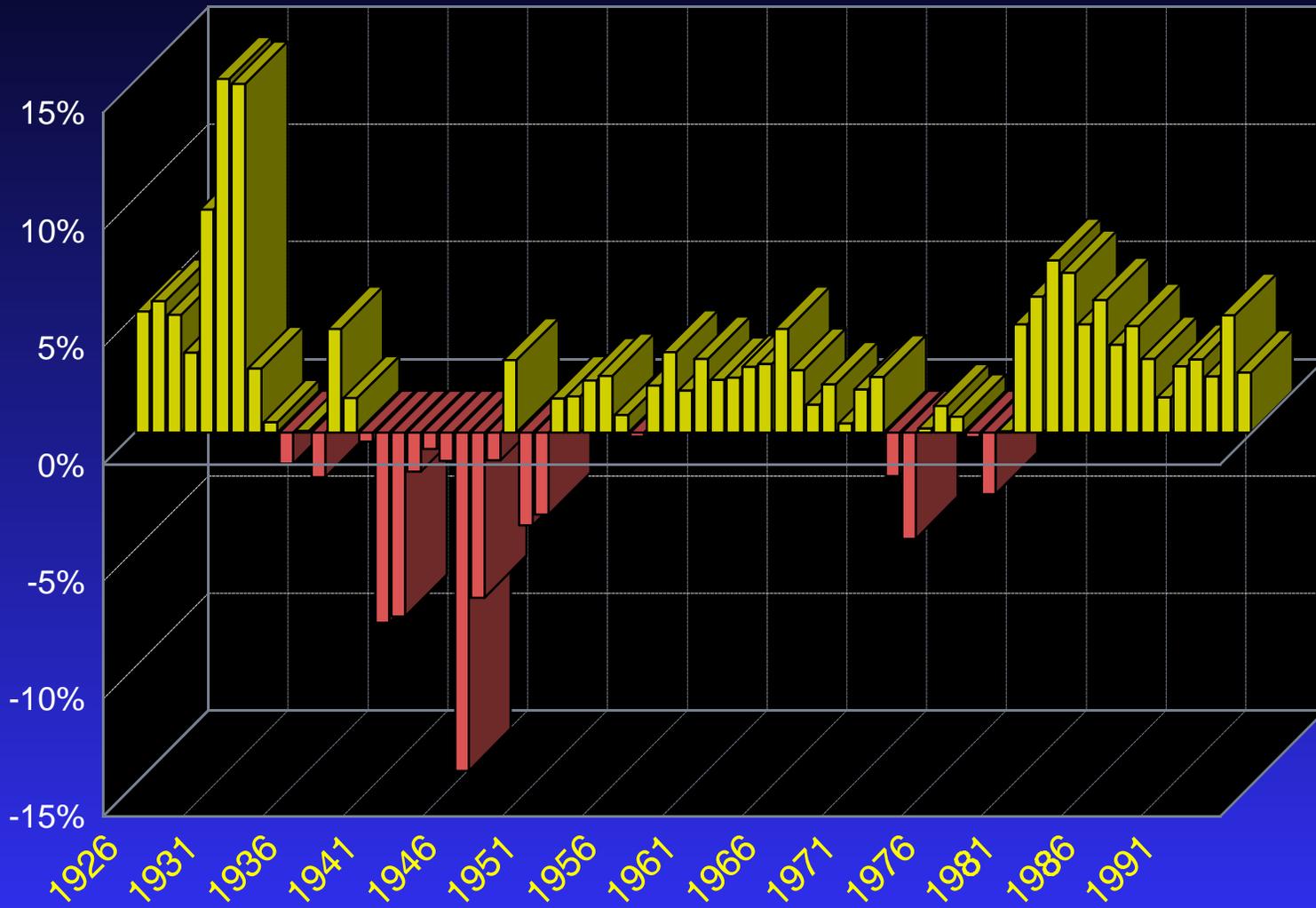
Discount Rate of	6.33 %
Geometrically divided by	5.05 %
Yields a real interest rate of	1.22 %
Divided by growth in real earnings of	1.11 %
Yields a net discount rate of	0.11%
	0 %



(Approximately an offset)

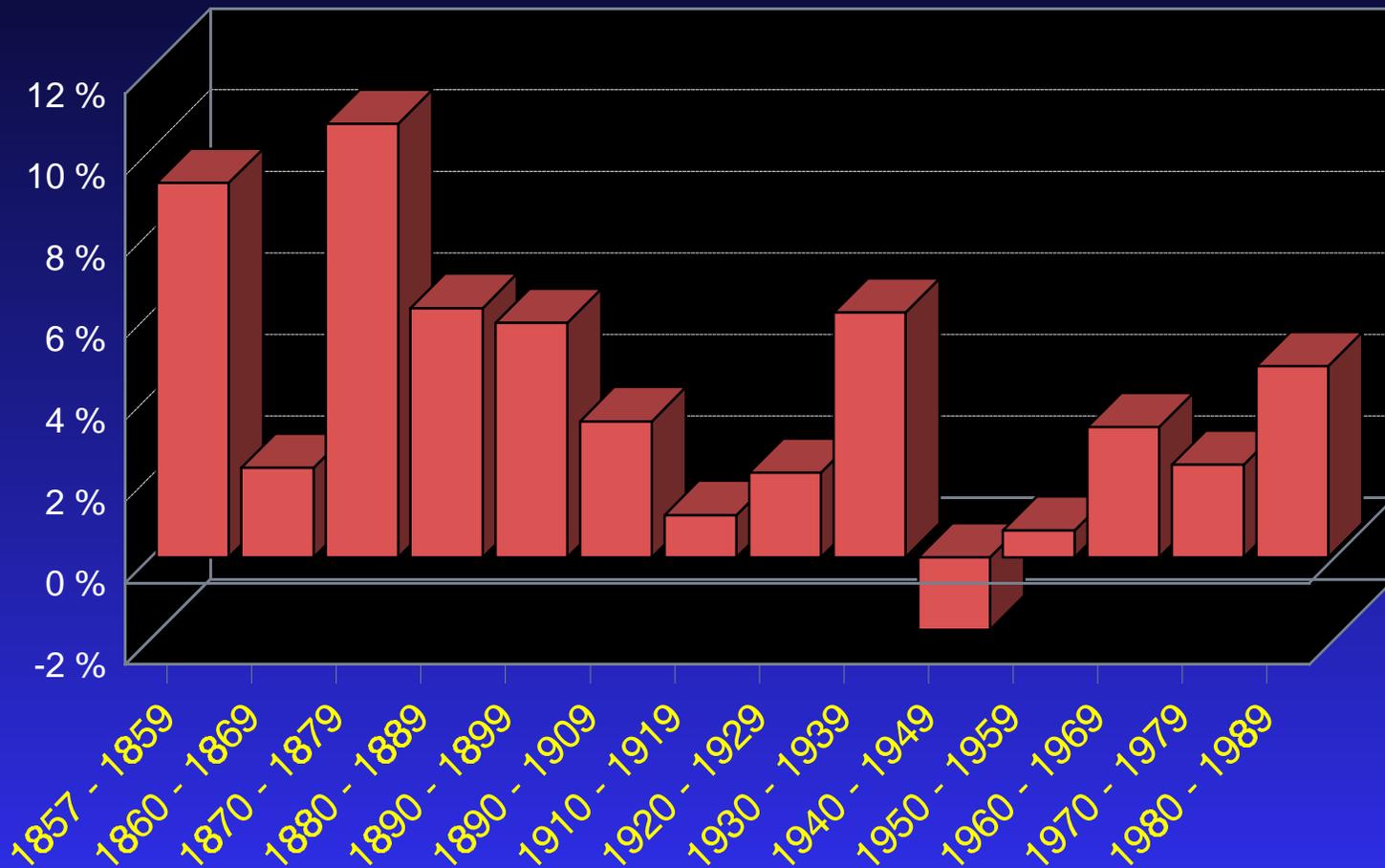
Real Interest Rates

Yield on Intermediate Treasuries, Less Inflation



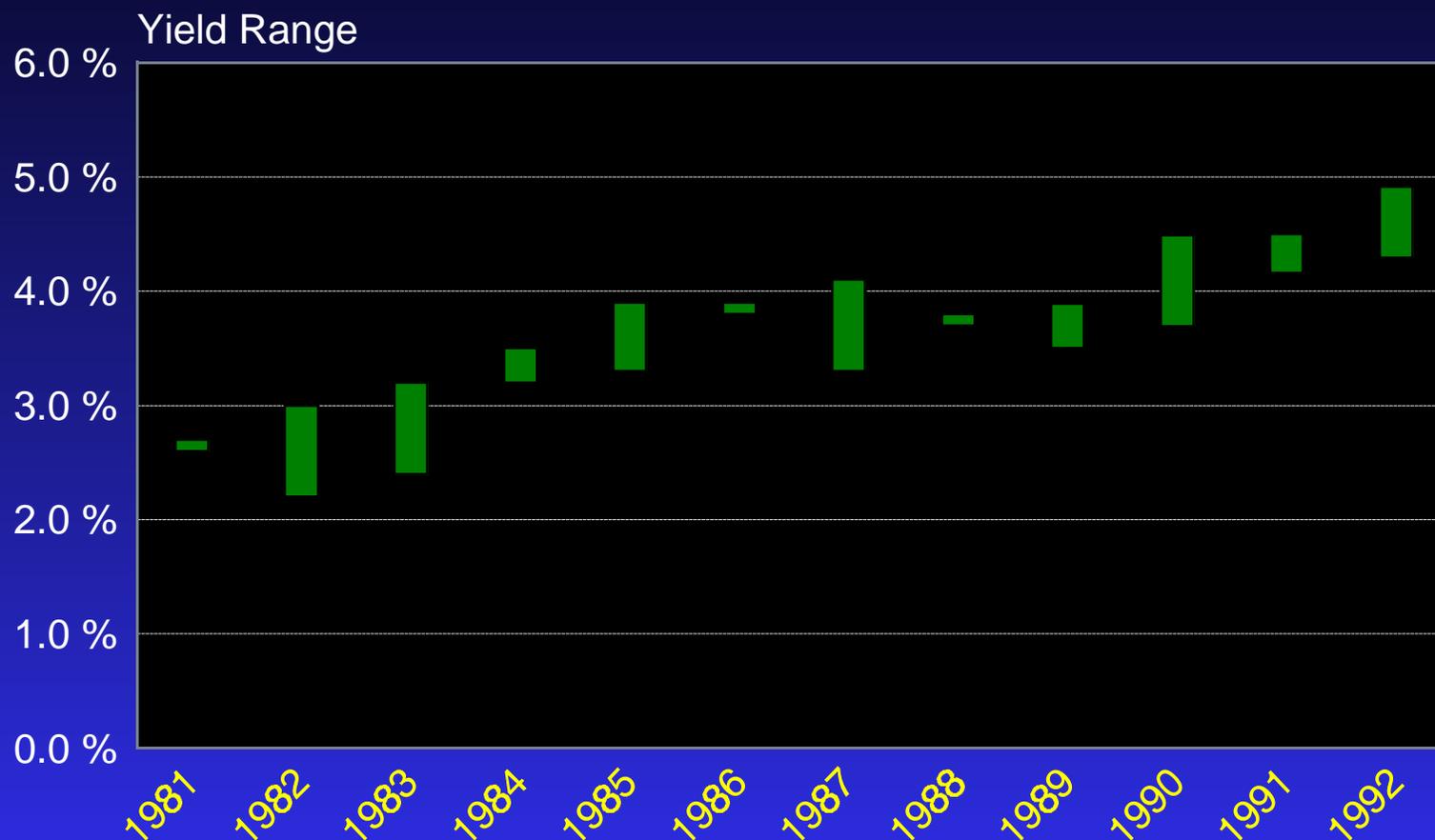
Estimated Real Interest Rates

(United States Since 1857)



Yields on British Indexed Gilts

2's of 2006



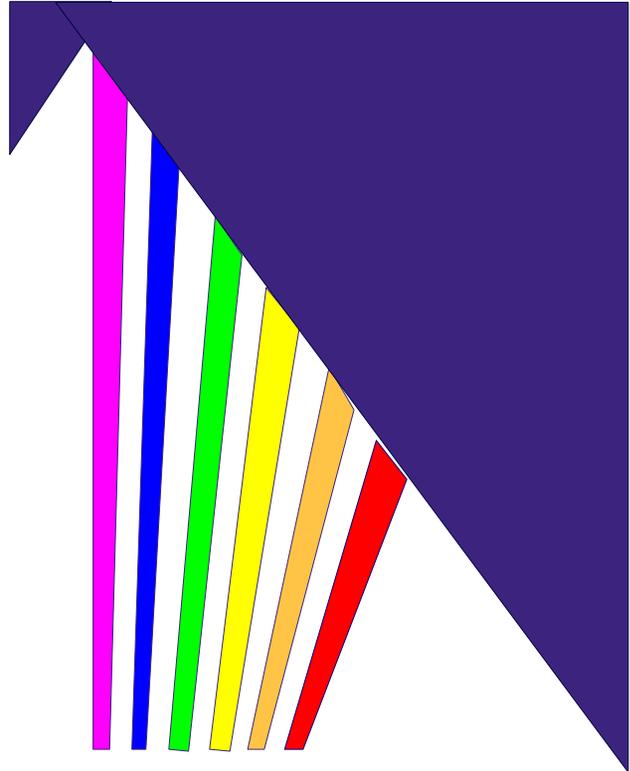
Household Services

- Men are pigs -- We simply don't do much around the house and study after study shows this.
- Significant household service is especially doubtful for those with long commutes or who frequently stay away overnight.
- Just because someone is injured, it does not follow that their HHS are reduced significantly.
- Loss is reduced by available time if no longer employable.
- Wage rate used should reflect that we do not perform HHS chores with professional aplomb.
- This is a large dollar item.

The vocational rehab expert is well-equipped to assist in evaluating this element of economic loss yet seldom becomes involved.

HHS are jobs and physical injury limits them. The questions to answer are which jobs and why. That is your job and it would be nice if you would do it.

Please put all books and papers under your chair. Have only a blank piece of paper in front of you. Keep your eyes on your own paper . . .



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