

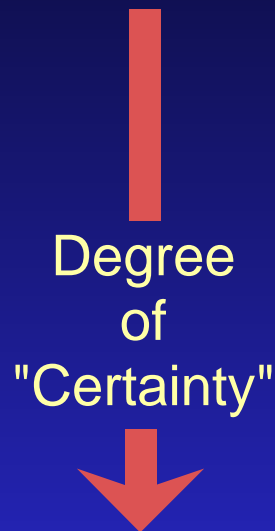
Damages Estimates in Railroad FELA Cases

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FELA Damages Hierarchy



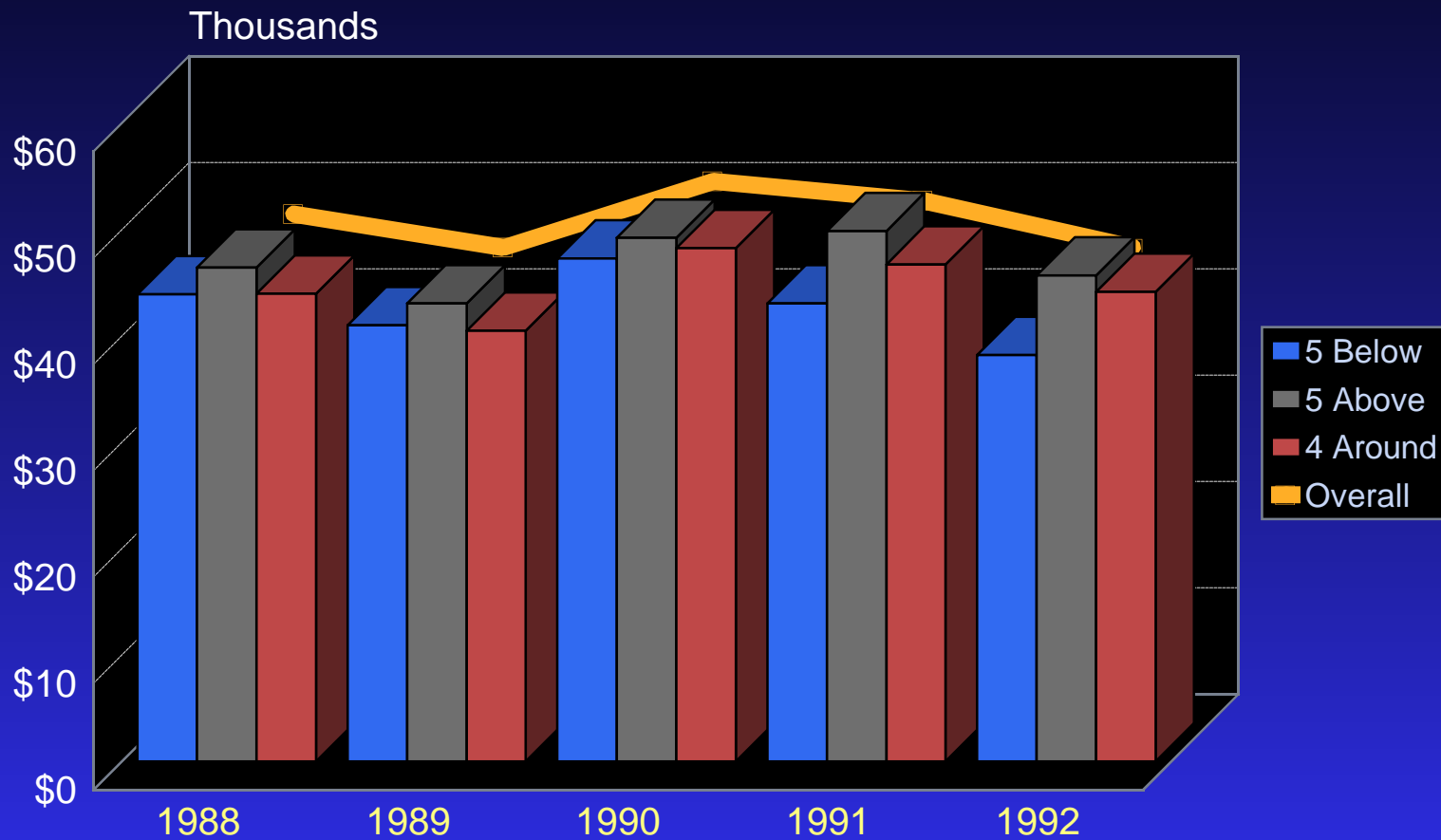
To project what plaintiff would have earned as a railroad employee, the economist must calculate, estimate or assume three critical factors:


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

Earnings of Similar Workers

Seniority Basis -- From Payroll Records



Nominal Dollars As Reported

Estimating Pre-Accident Earnings Base

Railroader earnings are based on the number of standard days worked and the pay rate per standard day. One-time payments are also common in the railroad industry. The number that the economist needs is the average number of standard days worked in a year.

To compute standard days from wages:

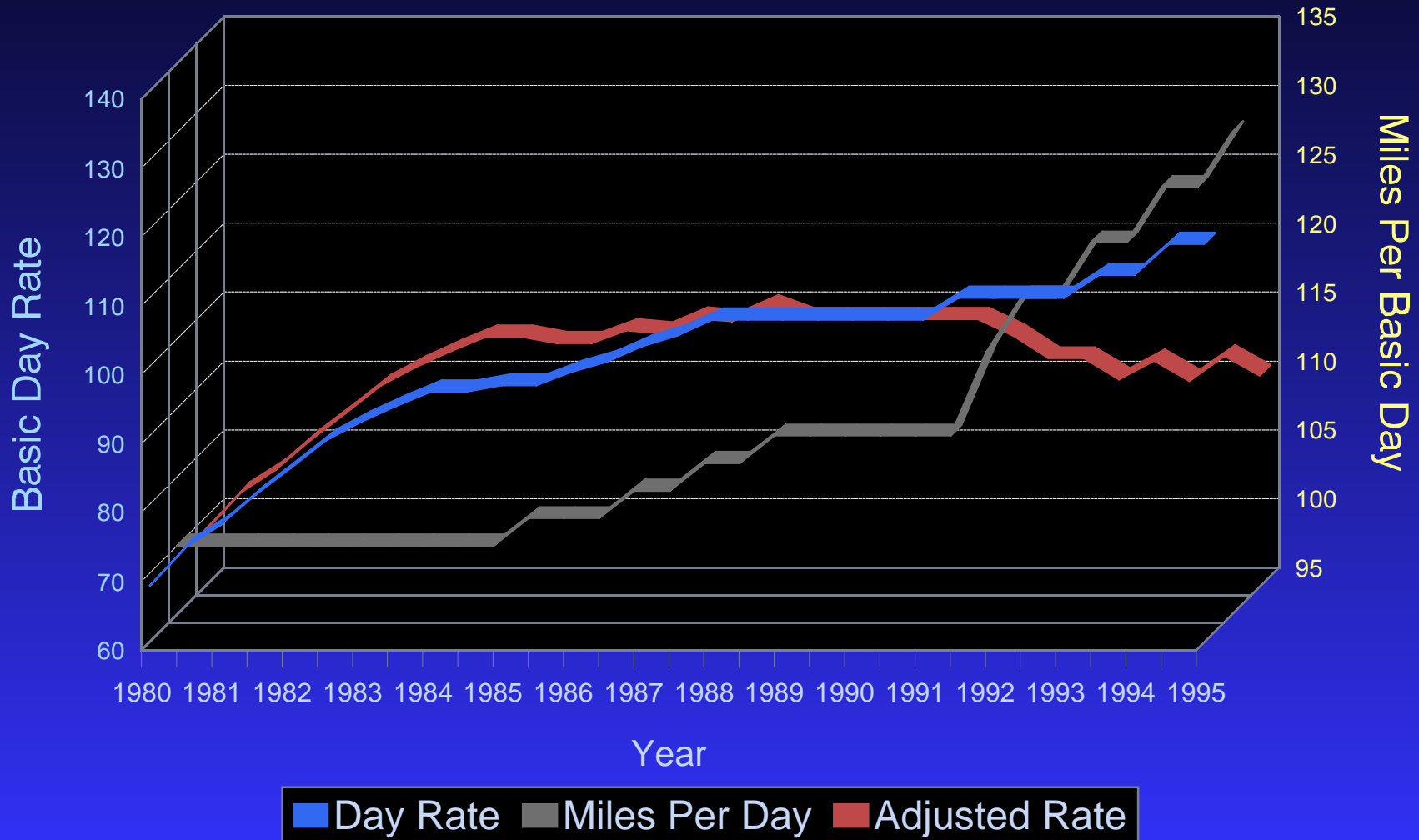
$$\begin{aligned} & \text{Reported Railroad Wages} \\ - & \text{Non-Recurring Payments} \\ \hline & \text{Bases Wages} \\ \div & \text{Standard Day Rate} \\ \hline = & \text{Standard Days Paid} \end{aligned}$$

Why this is important:

- For almost a hundred years the standard day was 100 miles.
- In 1982 it went to 102 miles, in 1986 to 104 miles, in 1987 to 106 miles, and in mid-1987 the standard day went to 108 miles. Under the current contract, the standard day will rise to 130 miles by 1996.
- In recent years, and in the future under the current labor agreement, basic day wages and basic day length go up at the same rate. Therefore, wages have been flat since 1987 and will remain flat through 1996. In real dollar terms, railroad wages have fallen.

Conductors' Standard Day & Wage Scale

Burlington Northern Railroad



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Conductors' Earnings

Ward Estimate v. Union Contract



Conductors' Earnings

Ward Estimate v. Union Contract



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 class 1 railroad workers	Averages across crafts, seniority groups, through-freight, yard and other employees
Crew Roster	Use average earnings of crew members above and below	Captures changes in routes, contract, overtime and other factors -- Data not always available
Escalation Per Contract	Decrease for changes in standard day, increase for wage escalation and add one-time payments	Assumes plaintiff would have traveled same route (# of miles) at contract level pay rate

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 Class 1 railroad workers	Per Contract wages will not increase through 1996 -- Longer term it is unlikely railroad workers will do better than average
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 RRB or other forecast for railroad workers	The most economically defensible method

Annual Growth in Real Earnings

Weekly Wage Basis



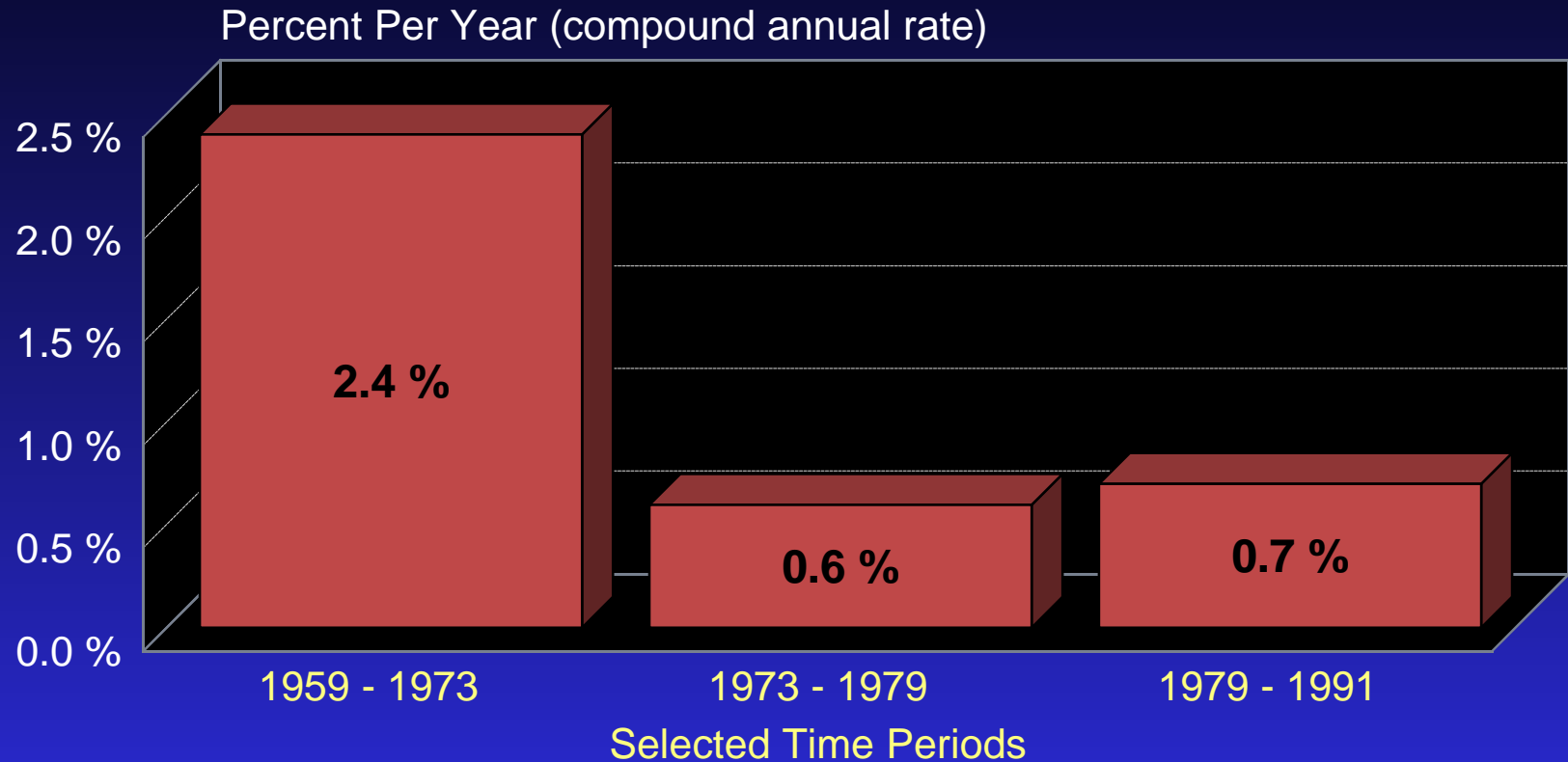
Key Point:

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

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 (Ward Approach)
- 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 Ward & Vogenthaler)
- Retraining options and costs should be carefully evaluated
- ADA must be considered
- Alternative job with the railroad can greatly reduce loss

Self Consumption:

- Can use Census or Agriculture Department budget studies, econometric studies or a judgmental combination of all of these.
- Self consumption is the percent of total family income, not own wages, consumed by decedent. Adjustment is done by reducing loss by the product of self consumption percentage and total family income. We have never seen a plaintiff's expert do this correctly.
- Should carefully research the family through deposition. Did decedent have expensive hobbies, tastes, etc.? How many children in home and their educational plans? Was spouse employed steadily?

Retirement Benefits

Every attorney working in FELA should be familiar with certain key documents relating to wages and fringe benefits:

- Seventeenth Actuarial Valuation US RRB, August 1988
- Eighteenth Actuarial Valuation US RRB, August 1991
- Report to the President by Emergency Board 219, August 1991
- Circular No. 786-20 (UTU) and "Implementing Documents," November 11, 1991
- Crew Consist Agreements
- Robert Weatherbee article in The Chronicle (Vol. 75, No. 5 Sept/Oct 1990)
- Railroad Employees' Work Life Expectancies, William M. Mercer, Inc. (Charles Sherfey, FSA, CLU in Chicago Office puts them together)

Tier 1

- Tier 1 is Social Security with a few wrinkles, nothing more.
 - A disabled worker will receive a Tier 1 benefit which is inflation-indexed and converts to a retirement benefit at age 65 -- Injury causes little or no loss of Tier 1 if worker does not go back to work.
 - If the worker goes back to work outside of railroading, the Tier 1 rolls into Social Security. The ultimate retirement benefit will be less if alternative employment pays less -- but typically not much less. Social Security (Tier 1) is not actuarially "fair" -- There is a wealth transfer.
- Tier 1 is a tax and should be deducted from earnings, not the employer's share added. The "Economist From Another Dimension" approach does not square with the reality we all know -- You pay social security taxes when you work and collect benefits upon retirement.

Tier 1 (continued)

- The "Earnings Capacity" argument is just econobabble because the labor market is not perfectly competitive. The real question is: Is the plaintiff's expert trying to punish the defendant or make the plaintiff whole? What other explanation can there be for including non-existent losses?
- Tier 1 benefits are not guaranteed. They have been changed many times in the past (vested dual benefits, 30/60, etc.) and will change again in the future because the Social Security System will go bankrupt.

Tier 1 (continued)

- Correct treatment of Tier 1 makes a tremendous difference. Future benefits net of future taxes paid by the employee typically net to a few thousand dollars.
- There is a "phantom tax" effect on Tier 1 & 2 benefits using the plaintiffs' approach.
- Article in most recent issue of John Ward's journal points out why his method is incorrect.

Tier 2

Tier 2 is the railroad equivalent of a private pension plan. The employee pays 4.9% and the employer a 16.1% tax.

- Only 7% of the 21% payroll tax is used to fund current workers' future pensions. The remainder is to close the funding gap on current retirees.
- Tier 2 is not fully indexed for inflation.
- Employee is vested in Tier 2 so it is not all lost upon injury.

Tier 2 (continued)

- One proposal to close the Tier 2 funding gap was a tax on railroad freight revenues -- Would the plaintiffs' economists still consider the cost an element of loss had this option been exercised? Their own logic would suggest that in this case there would be no loss since it would not be an element of "earnings capacity."
- Approximately 85% of companies have employer paid pension plans, so there should be an offset (at 4.27% of earnings).

Selecting The Discount Rate

Since FELA damages are computed on an after-tax basis, two approaches to discounting are possible, and proper:

- Discount after-tax lost cash flow or income to present value at a tax-free rate of return (eg. municipal bond rate).
- Use an iteration model which computes after-tax return on a before/after basis. In this case a taxable bond rate is used.

Either approach is acceptable and they generally yield similar results. FELA damages must be done on nominal, not real, dollars or nonsensical results will be obtained (eg. negative discount rates).

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

Vogenthaler openly uses the offset method.
Ward approaches 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%
	\approx 0 %

(Approximately an offset)

Developing the Discount Rate:

	<u>Rate</u>		<u>Weight</u>		<u>Weighted Rate</u>	
3-Year T-Bond Spot	=	6.40%	*	2	=	12.80%
1960-1991 Average	=	7.34%	*	1	=	7.34%
						<hr/>
				Total:		20.14%
						<hr/>
				Weighted-Average	=	6.71%
				Inflation	=	5.05%
						<hr/>
				Interest Rate	=	1.58%

Developing the Discount Rate:

(Ward Model Today)

	<u>Rate</u>		<u>Weight</u>		<u>Weighted Rate</u>
3-Year T-Bond Spot	= 4.70%	*	2	=	9.40%
1960-1991 Average	= 7.34%	*	1	=	7.34%
				Total:	<hr/> 16.74%
				Weighted-Average	= 5.58%
				Inflation	= 5.05%
					<hr/>
				Interest Rate	= 0.50%

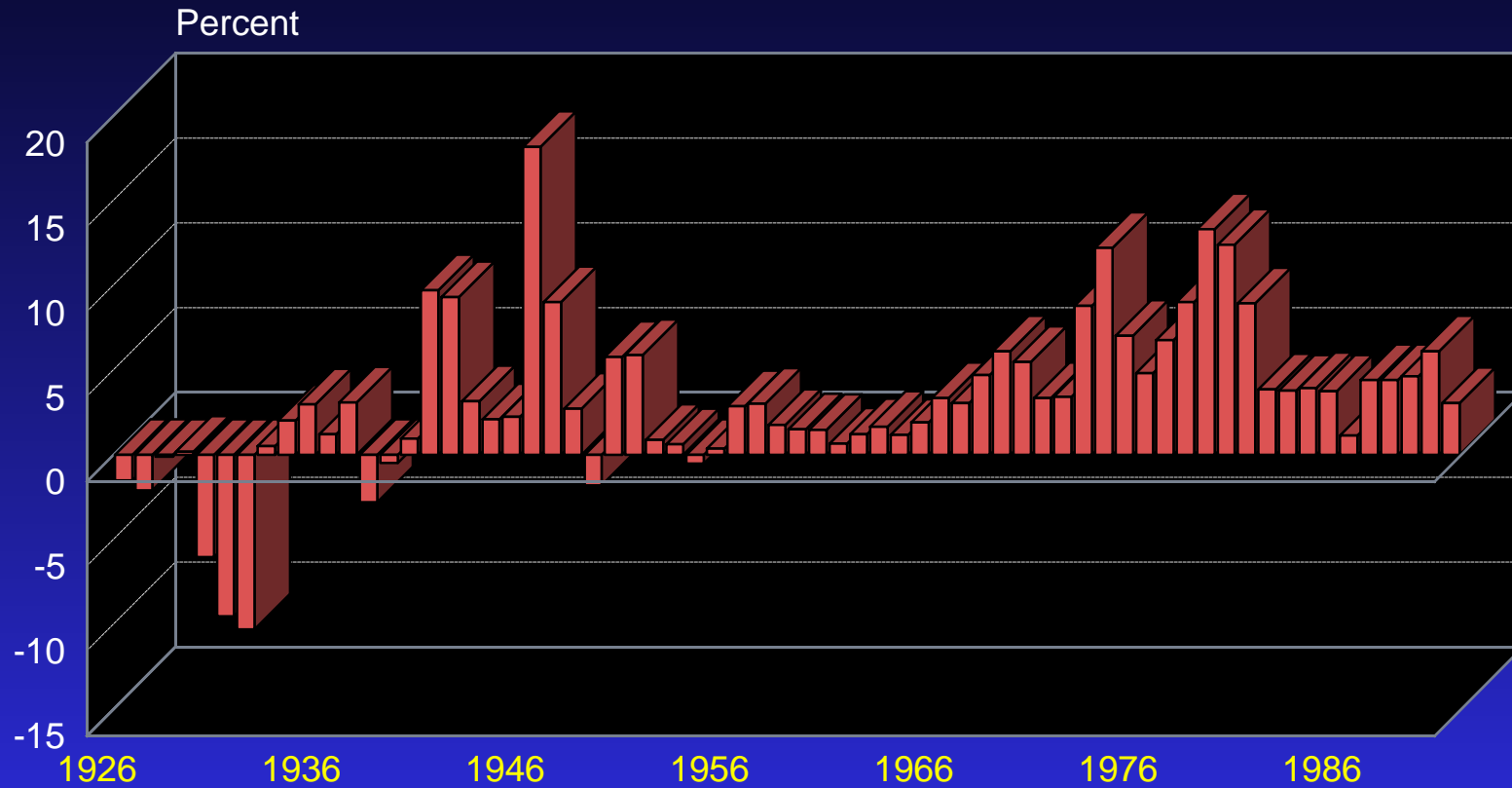
Developing the Discount Rate:

(Another Way: First Subtract, Then Average)

	<u>Spot</u>	<u>1960-1991 Average</u>	
T-Bonds	= 4.70%	7.34%	
Inflation	= 5.05%	5.05%	
	-0.33%	<u>2.18%</u>	
Weight	= 2	<u>1</u>	
Weighted-Average	= -0.66%	+ 2.18%	= 1.52%
			(<u>divided by 3</u>)
		Interest Rate	= 0.50%

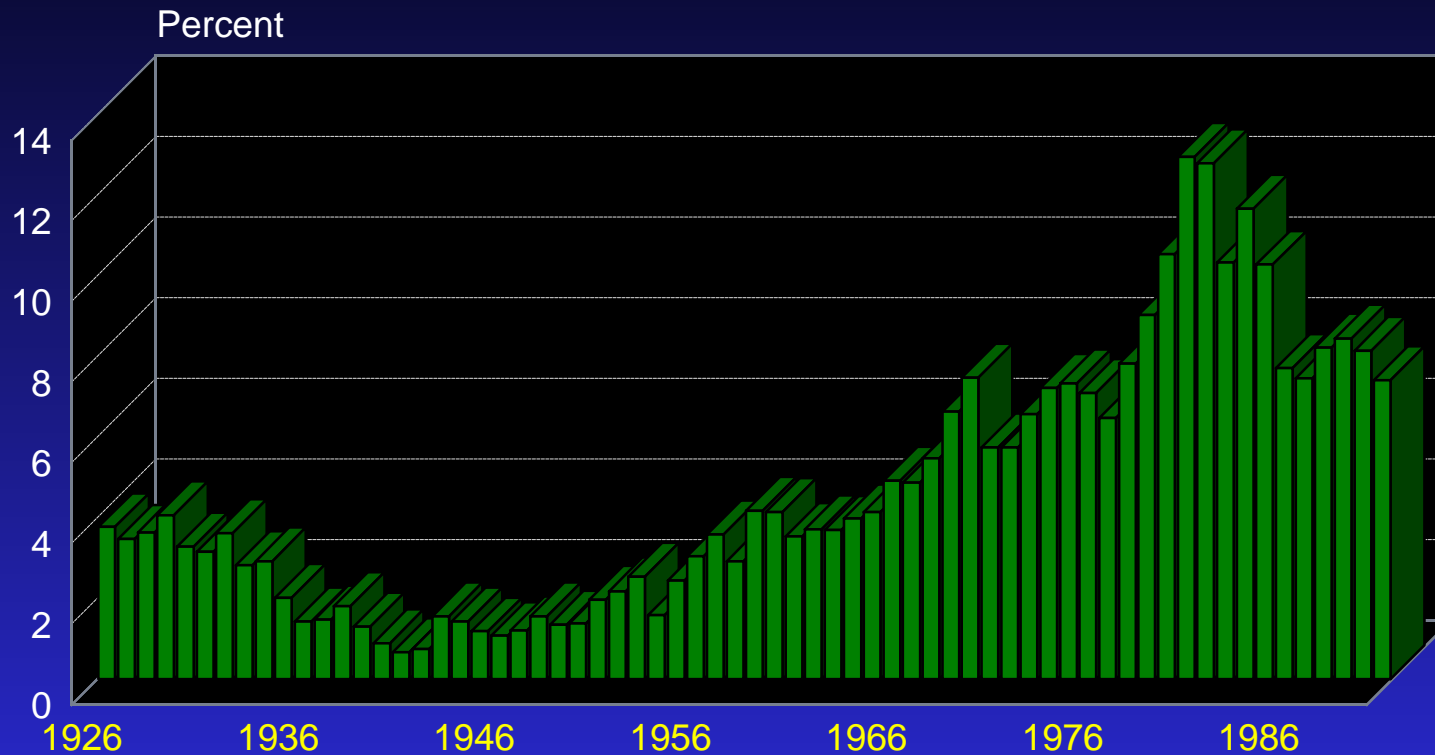
Inflation Rate

(Consumer Price Index)



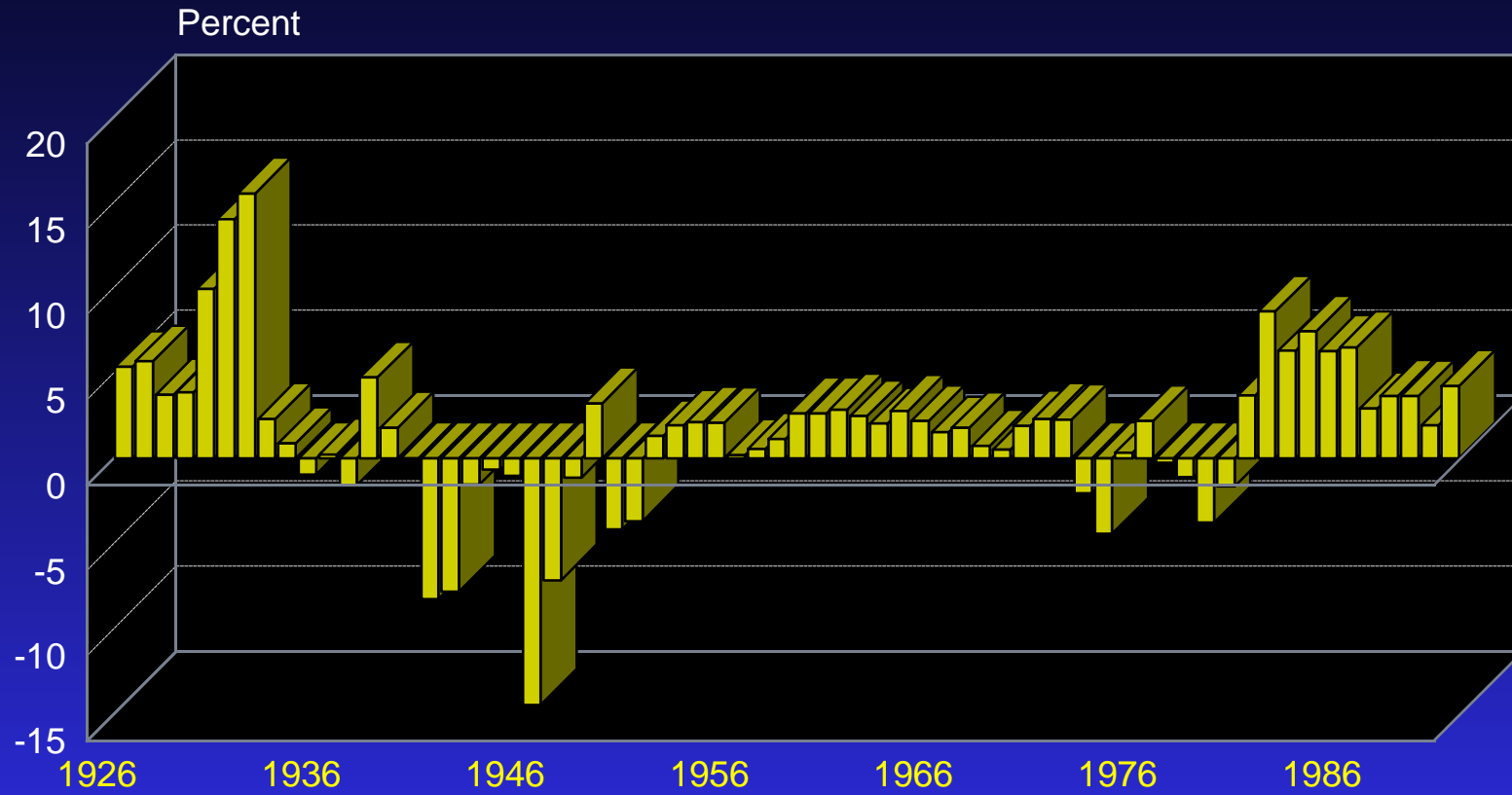
(Source: Ibbotson & Associates)

Intermediate-term T-Bond Rates



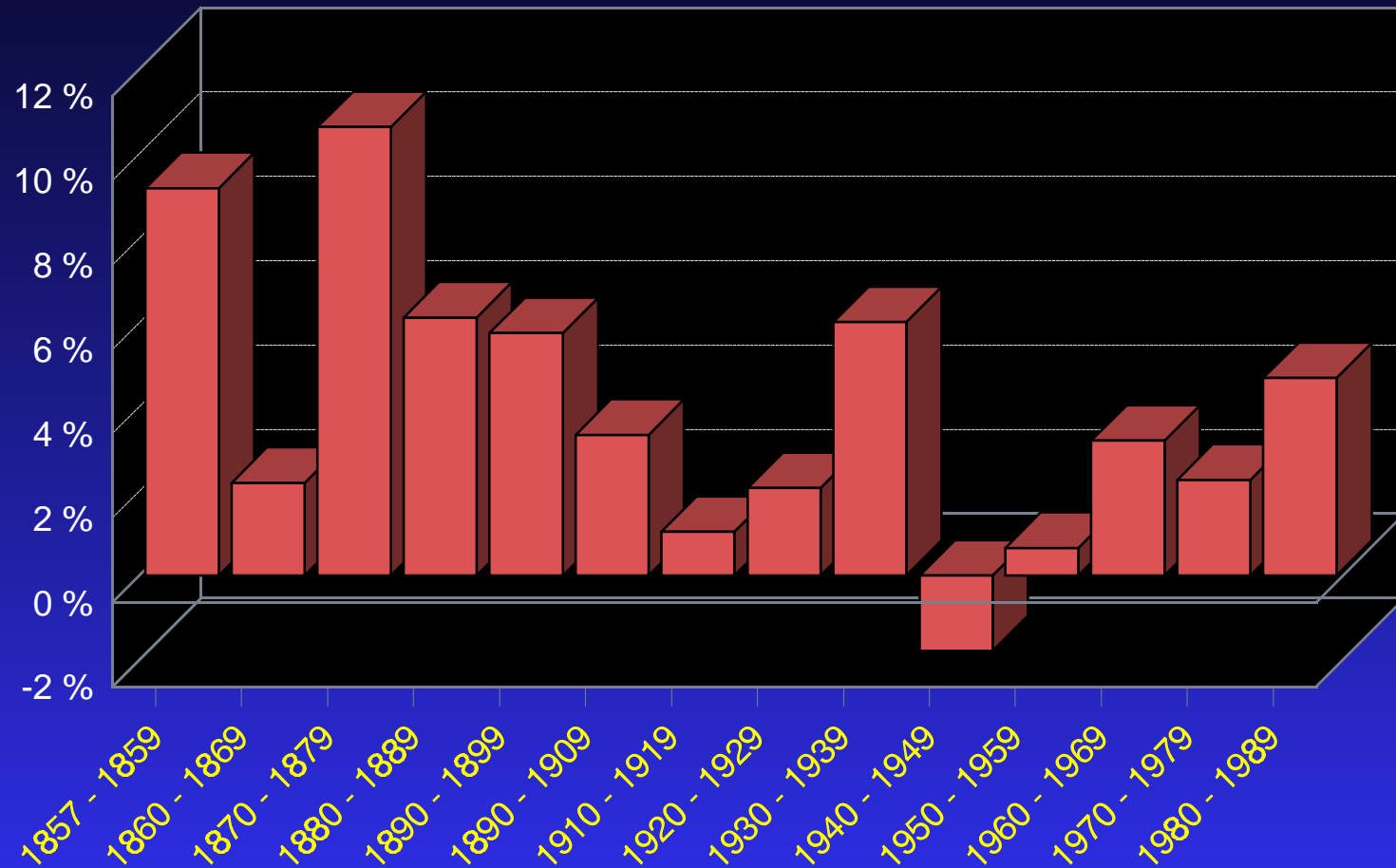
(Source: Ibbotson & Associates)

Real Interest Rates



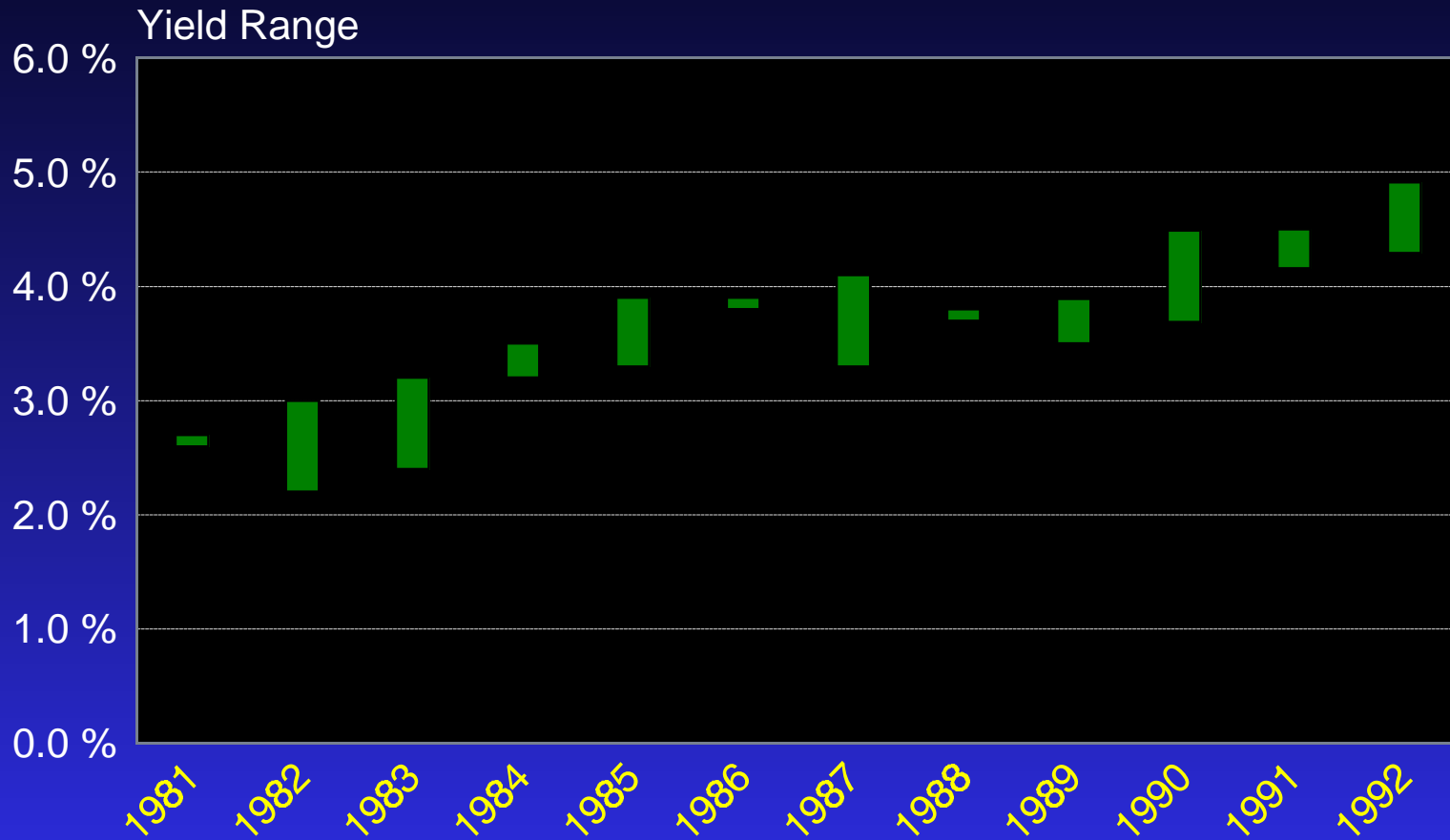
Estimated Real Interest Rates

(United States Since 1857)



Yields on British Indexed Gilts

2's of 2006



Medical Benefits:

The railroad medical/dental plan is a good one but it is not out of line with those offered by other large employers. Like other employers, the railroad industry is aggressively moving to control costs.

- The plan is moving to a preferred provider format
- For those under the indemnity plan: high co-pays and annual out-of-pocket and tighter monitoring are the norm
- Workers are sharing in the cost escalation through up to 50% reductions in contract COLA lump-sum payments

The bottom line is that the GA23000 plan is moving into the mainstream and future cost increases are just as likely to be below the rate of inflation as above it. Furthermore, if the party is employable, it is likely that any new employer will offer comparable benefits.

In 1989, 98% of large and medium sized employers offered health insurance and 60% provided dental insurance.

Life and Worklife Probabilities

- Economic theory suggests that when the value of leisure exceeds the return to work, people choose leisure (ie. work of Noble Laureate Gary Becker).
- Railroad workers gain little from working beyond age 62 (slight increase in Tier 2) if they have over 30 years in. Therefore, the overwhelming majority retire at or before age 62.
- The combined effects of compound interest and mortality probabilities make this a minor factor in terms of dollars of loss (in most cases).

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.
- Wage rate used should reflect that we do not perform HHS chores with professional aplomb.
- This is a large dollar item.

It is critical to gather information on HHS in the depositions of the husband and wife. You might get lucky.

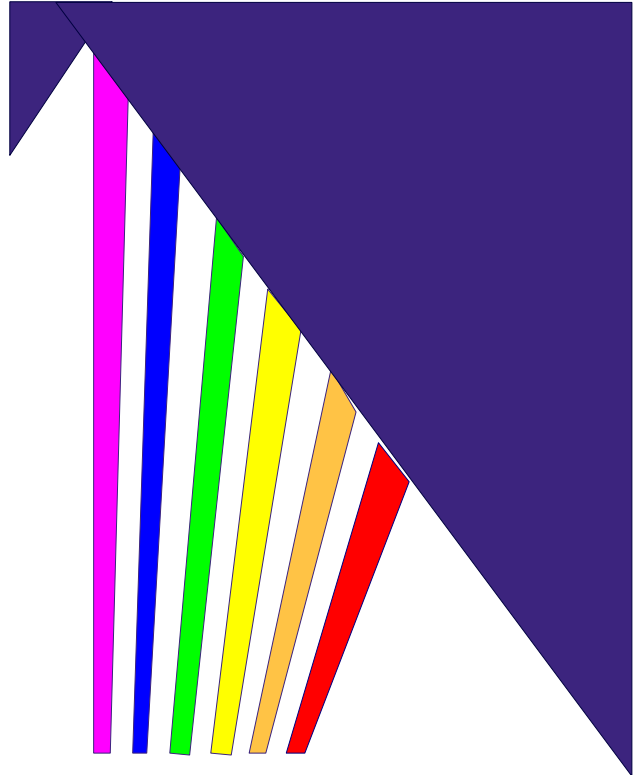
Business Expenses

- Railroad workers have unreimbursed employee business expenses for:
 - Union dues
 - Work clothes
 - Pagers & telephone service
 - Expenses associated with time away from home
- Our experience has been that these expenses will be between \$2,000 and \$4,000 for someone in through-freight service.
- For a 40 year old with a worklife expectancy of 18.1 years, this yields a downward adjustment to damages of approximately \$45,000.

Taxes

- Income tax adjustment does not have a dramatic effect on lost future income (in most cases).
- It does have a significant impact on past loss and Ward refuses to include it as an offset.

**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 . . .**



SPECTRUM

ECONOMICS