

The Pension Crisis

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Pension Crisis

Cause:

1. Actuarial + Accounting Practices

Smoothing

Amortization

Discount Rates

Return On Assets (ROA)

2. Asset Allocation Practices

Liabilities Missing

Mean Variance Models

Historical Returns = Future Returns

Smoothing of Assets

	1999	2000	2001	2002	2003	2004
Annual Returns	13.69	-2.50	-5.40	-11.41	20.04	8.92
5 Year Average	20.38	14.15	10.03	3.15	2.88	1.93
Difference	-6.69	-16.65	-15.43	-14.56	17.16	5.99

Observations : **Smoothing of assets is significantly different valuation**
Distorts true economic value (market value)
Last 6 years = - 29.56% difference

Discount Rates

		2002	2003	2004		
Corporate Funds	Moody's Long AA Corporate	6.52%	6.02%	5.66%		
Public Fund	ROA (ASOP) 27)	8.50%	8.50%	8.00%		
Market Rates	10-Year Treasury STRIP	4.34%	4.64%	4.49%		
	15-Year Treasury STRIP	5.09%	5.35%	5.00%		
IRS Contribution	30-Year Treasury (4 yr weighted avg.)	5.30%	4.79%	5.10%		
	Corporate	7.14%	6.54%	6.10%		
Valuation Error Estimate		Discount Rate	- Market Yield	= % Diff	x Duration	= \$ Diff
	Corporate	5.66	4.49	1.17	10	11.7%
		5.66	5.00	0.66	15	9.9%
	Public	8.00	4.49	3.51	10	35.1%
		8.00	5.00	3.00	15	45.0%

Problem : Liability Valuation

Single Discount Rate

Not market interest rates

(ASOP = ROA, IRS = 4 year weighted average)

Present Value calculated annually/triennially

(Months delinquent)

Liability Term Structure not transparent

(Short, Intermediate, Long, Very Long)

Problem : Generic Indexes

Represent the market not client liability schedule

Client liability schedule is unique to each client (snowflakes)

Does **NOT represent clients' true objective**

Solution : Custom Liability Index

Best Represents Client Objective (*funding liabilities*)

Supports Strategic & Tactical Asset Allocation

Benchmark for: Asset Management

Performance Measurement

Risk Management

Pension Deficit

Solution : Buy Time!

- 1. Match Assets to Liabilities = Time needed (Liability Index Fund)**
- 2. Isolate deficit versus longest liabilities**
- 3. Calculate performance = Full Funding**

30% Deficit

Deficit starts after 10th Year

**= Assets outperform Liabilities by
3% annually over 10 years**

Solution : Liability Hedge Fund

Create Synergy of:

- 1. Beta Portfolio = Liability Present Value**
- 2. Alpha Portfolio > Liability Growth**

Transfer Victory (Portable Alpha) to Beta Portfolio

- 3. Beta Portfolio = Liability Future Value**