25th Annual
Fall Conference
October 8, 2008

GASB 45

An Actuarial Perspective

Milliman

Contents

GASB 45

1. Summary Of Inputs

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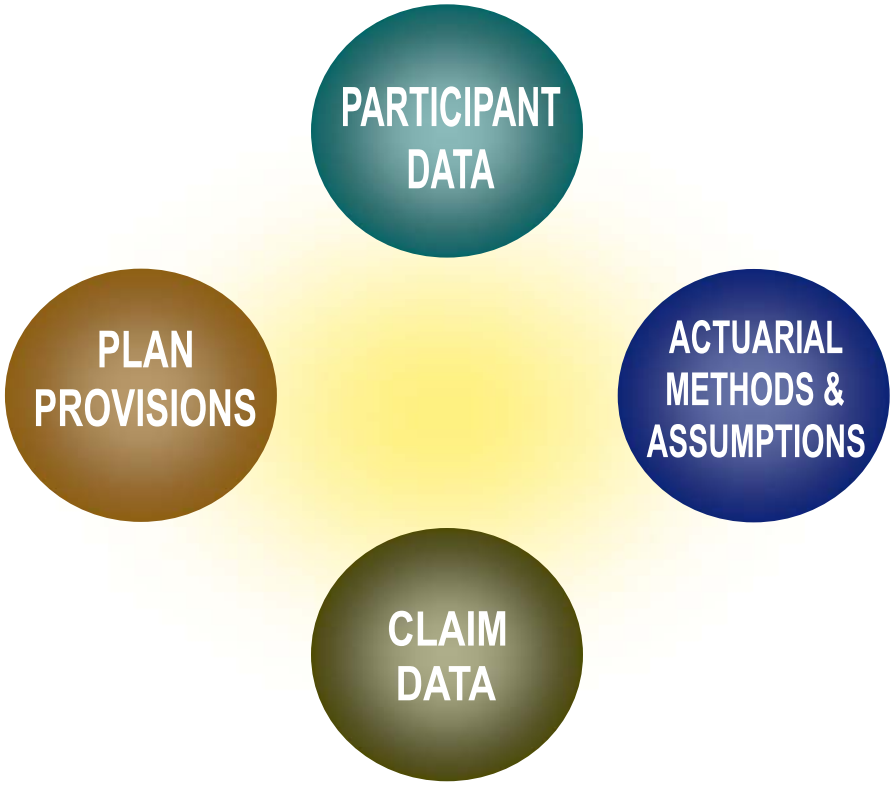
Primary Inputs



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2. Assumptions

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Key Assumptions

E C O N O M I C

Discount rate, salary increases

D E M O G R A P H I C

Mortality, retirement, termination, disability, participant election, spousal coverage

M E D I C A L

Trends, claims

Economic Assumptions

Discount rate:

4% per annum, compounded annually, if not funded

6% to 8% per annum, compounded annually, if funded

(Approximate 15% to 20% change in liabilities for 100 basis point change)

Salary increase:

3% to 5% per annum
(used for life insurance and with amortization of unfunded actuarial liability)

Demographic Assumptions

- Retirement age, termination rates, and disability rates typically same as pension valuation
- Mortality rates: Same as pension valuation or other current mortality table; e.g., RP2000 Combined Mortality Table for respective gender
- X% of active employees currently electing medical coverage are assumed to elect retiree medical coverage; X% of active employees not currently electing medical coverage are assumed to not elect retiree medical coverage
- X% of spouses that will elect coverage

Key Medical Assumptions

Claim costs in future years equal the starting claim costs adjusted for the assumed ongoing cost trends. Such trends are based on the health care cost trend rate adjusted for impact of plan design, cost containment features and Medicare coordination.

Healthcare Cost Trend Rates		
Duration	Pre-65	Post-65
1	9.00%	9.00%
2	8.50%	8.50%
3	8.00%	8.00%
4	7.50%	7.50%
5	7.00%	7.00%
6	6.50%	6.50%
7	6.25%	6.25%
8	6.00%	6.00%
9	5.75%	5.75%
10+	5.50%	5.50%

2 Assumptions

2007 Retiree Claim Costs*					
Age	**Male**	**Female**	**Age**	**Male**	**Female**
45	$3,571	$3,024	66	$2,983	$3,193
46	$3,674	$3,161	67	$3,045	$3,266
47	$3,777	$3,299	68	$3,112	$3,346
48	$3,950	$3,499	69	$3,179	$3,426
49	$4,122	$3,700	70	$3,246	$3,506
50	$4,295	$3,901	71	$3,314	$3,586
51	$4,467	$4,102	72	$3,381	$3,667
52	$4,640	$4,302	73	$3,425	$3,731
53	$4,832	$4,580	74	$3,470	$3,795
54	$5,024	$4,858	75	$3,514	$3,859
55	$5,217	$5,137	76	$3,559	$3,923
56	$5,409	$5,415	77	$3,603	$3,987
57	$5,601	$5,693	78	$3,656	$4,028
58	$5,849	$6,003	79	$3,708	$4,068
59	$6,096	$6,314	80	$3,760	$4,109
60	$6,344	$6,625	81	$3,812	$4,149
61	$6,591	$6,936	82	$3,864	$4,190
62	$6,839	$7,247	83	$3,874	$4,210
63	$6,994	$7,430	84	$3,884	$4,231
64	**$7,149**	**$7,614**	85	$3,894	$4,251
65	**$2,921**	**$3,119**	86	$3,904	$4,271

* The medical experience data (claims and enrollment) is relied upon as provided by the client

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3. Funding Methods

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Funding Methods

- Six methods allowed
- Methods commonly used
  - Unit Credit (most common)
  - Entry age
- Others
  - Frozen entry age
  - Attained age
  - Frozen attained age
  - Aggregate
- Amortization of unfunded actuarial liability may be level dollar or level percentage of projected payroll

Funding Methods

- Under each method the value of the benefit (or premiums) at retirement age is equal.
- The difference in methods is the funding pattern; i.e., each method produces a different normal cost and accrued liability.
- For an ongoing plan that has new entrants, Unit Credit typically produces the lowest cost.

Unit Credit

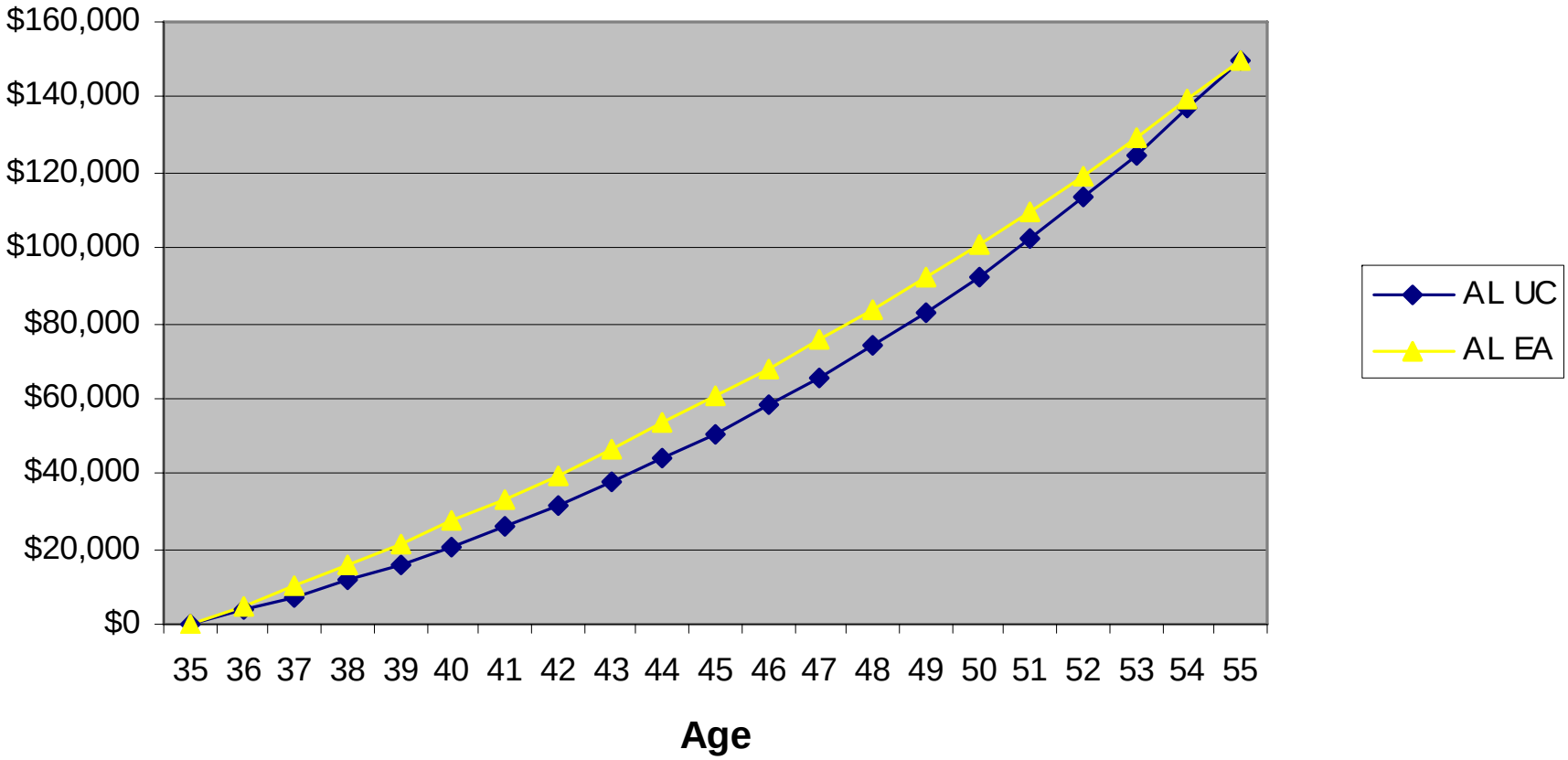
- Actuarial Accrued Liability is the present value of accrued benefits.
- Normal Cost is the amount of benefit that is estimated to accrue in the next year; i.e., the difference between the actuarial accrued liability at year-end and Actuarial Accrued Liability at the beginning of the year (where the beginning of year value is increased with interest to the end of year).

Entry Age

- Normal Cost is the annual level amount that will accumulate to the benefit needed at retirement.
- The Actuarial Accrued Liability is simply the present value of all prior normal costs.

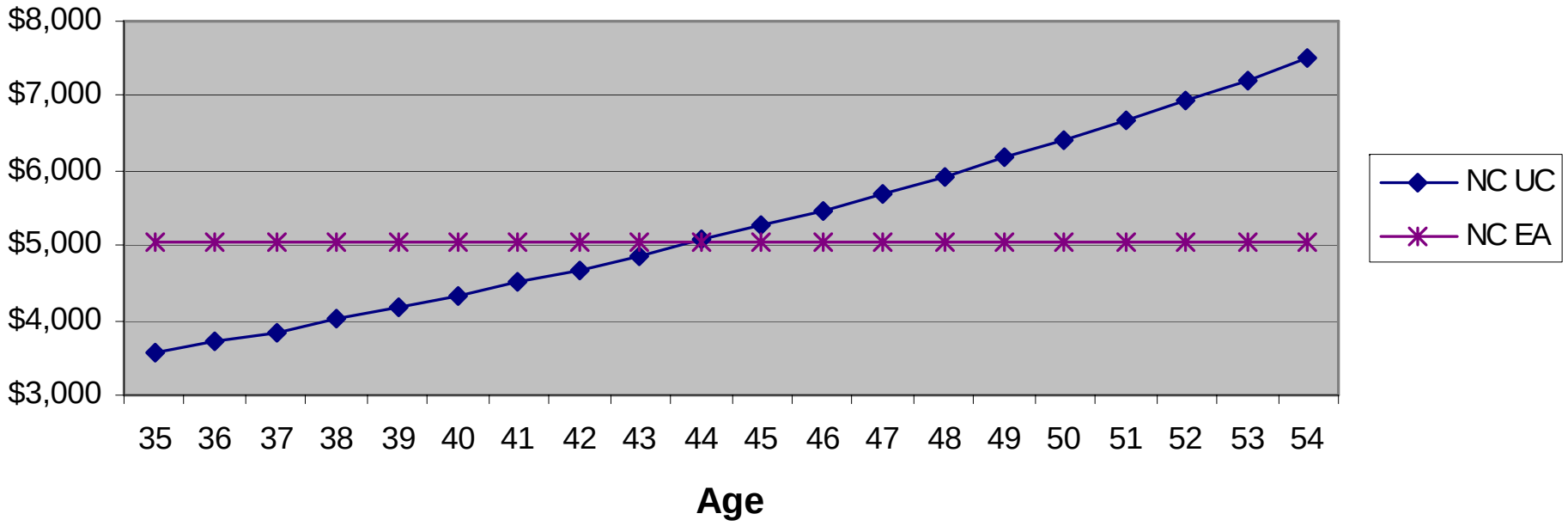
Unit Credit *vs.* Entry Age

(Accrued Liability)



Unit Credit *vs.* Entry Age

(Normal Cost)



Level Dollar *vs.* Level % Of Pay

(7% Discount / 4% Salary Increases)
(Amortization of $10 Million Unfunded)

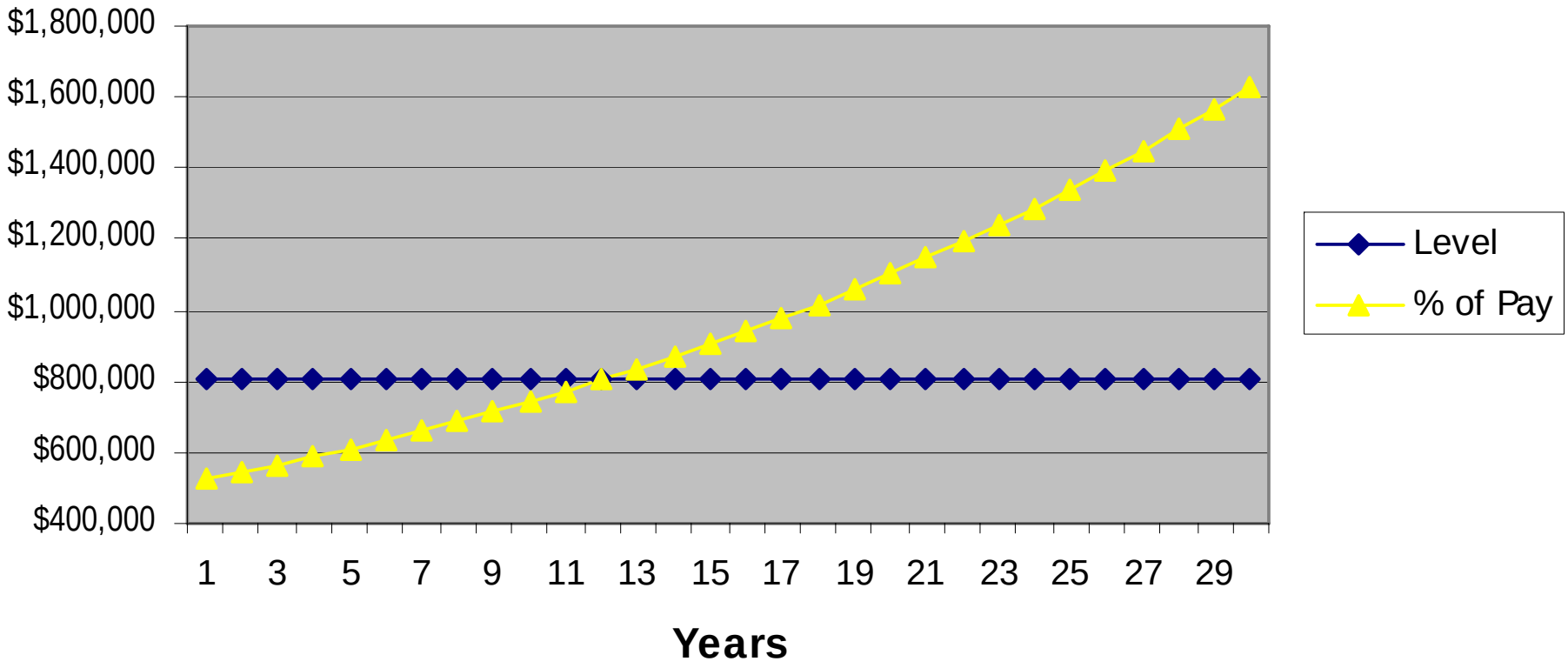


Illustration Of Valuation Methodology

Simplified Example For Active Employee*	
Age at hire:	27
Current age:	42
Assumed retirement age:	52
Assumed age at death:	81
Assumed pre-65 annual claims:	$5,000
Assumed post-65 annual claims:	$3,750

- Total pre-65 payments: 13 x $5,000 = $65,000
- Total post-65 payments: 16 x $3,750 = $60,000
- Total value of future benefits: $125,000
- Actuarial accrued liability: $125,000 x 15/25 = $75,000
- Normal Cost: $125,000 x 1/25 = $5,000

* To simplify this example, we have ignored, among other things, interest discounting AND medical inflation. In general, those two items have the opposite effect on actuarial accrued liability.

Illustration Of Valuation Methodology

Simplified Example For Retired Employee*	
Age at hire:	N/A
Current age:	65
Assumed retirement age:	N/A
Assumed age at death:	81
Assumed pre-65 annual claims:	N/A
Assumed post-65 annual claims:	$3,750

- Total pre-65 payments: $0
- Total post-65 payments: 16 x $3,750 = $60,000
- Total value of future benefits: $60,000
- Actuarial accrued liability: $60,000

* To simplify this example, we have ignored, among other things, interest discounting AND medical inflation. In general, those two items have the opposite effect on actuarial accrued liability.

GASB 45

4. Implicit Rate Subsidies

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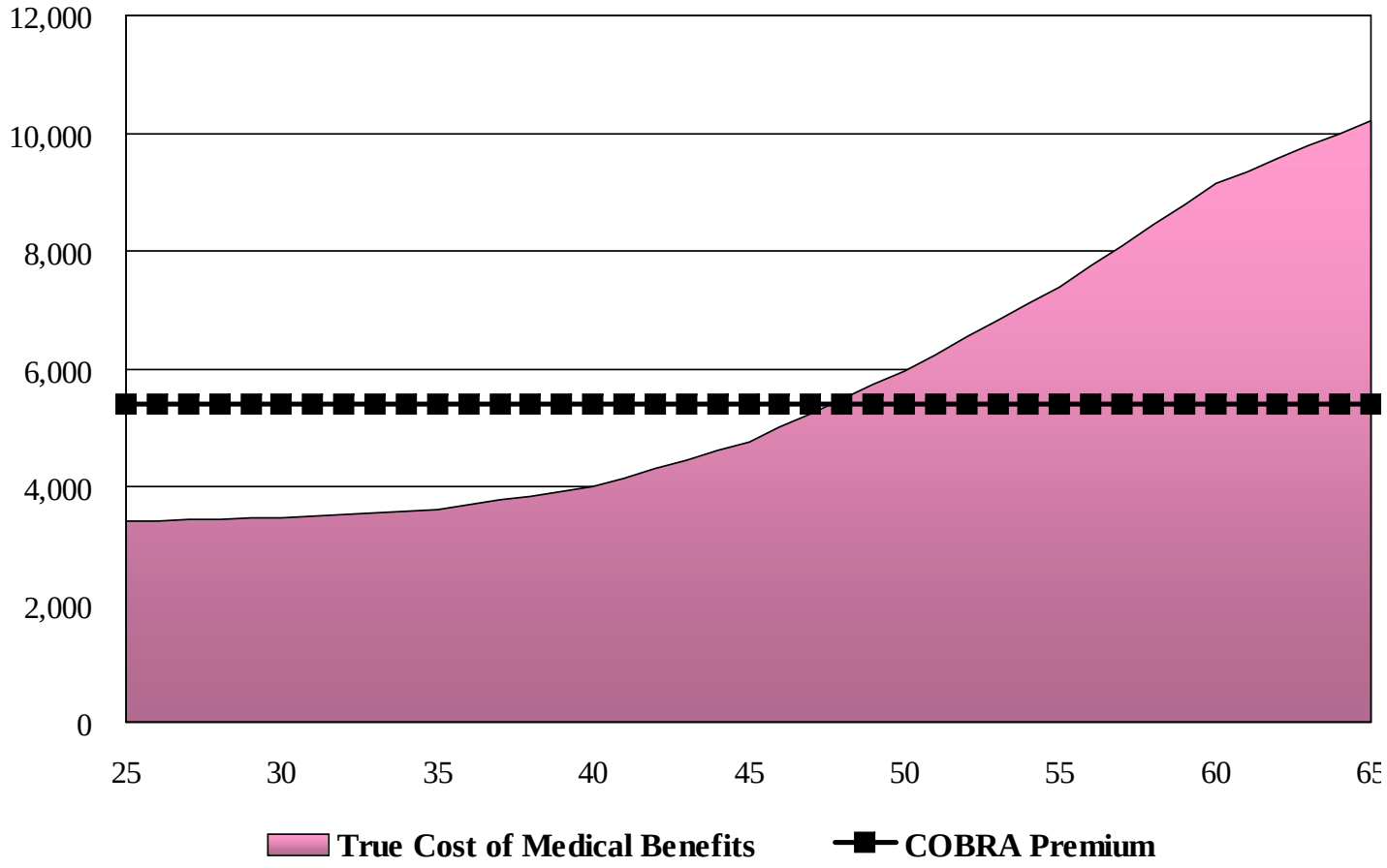
The Implicit Rate Subsidy



The Implicit Rate Subsidy

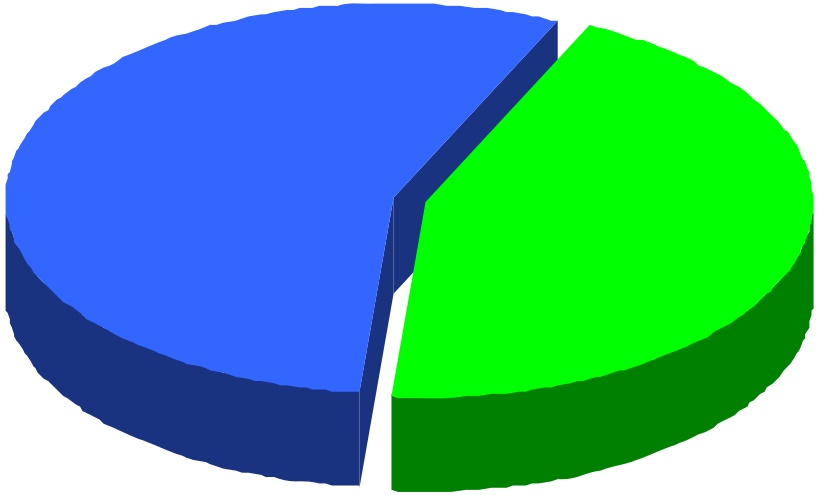
- The difference between the true cost and the COBRA premium is the **Implicit Rate Subsidy**.
- If retirees or dependents have access to medical benefits but “pay their own way” via a COBRA premium, they are most likely paying far less than the true cost of their benefits, and the employer has a reportable liability.
- If retirees or dependents pay a percentage of the COBRA premium, the employer’s liability includes the rest of the COBRA premium plus the Implicit Rate Subsidy.

The Implicit Rate Subsidy

E X A M P L E :

The total cost of benefits for a 62-year old retiree is $14,000.

The retiree pays the COBRA premium of **$10,000**



The rest (**$4,000**) is the Implicit Rate Subsidy

GASB45 valuations must reflect the Implicit Rate Subsidy.

The Implicit Rate Subsidy

THE LITMUS TEST:

If you remove all of the retirees from your benefits plan,
will your COBRA premium change?

If the answer is “yes”,
then you have an Implicit Rate Subsidy situation.

The Implicit Rate Subsidy

Suppose a plan sponsor ONLY provides

access to benefits;

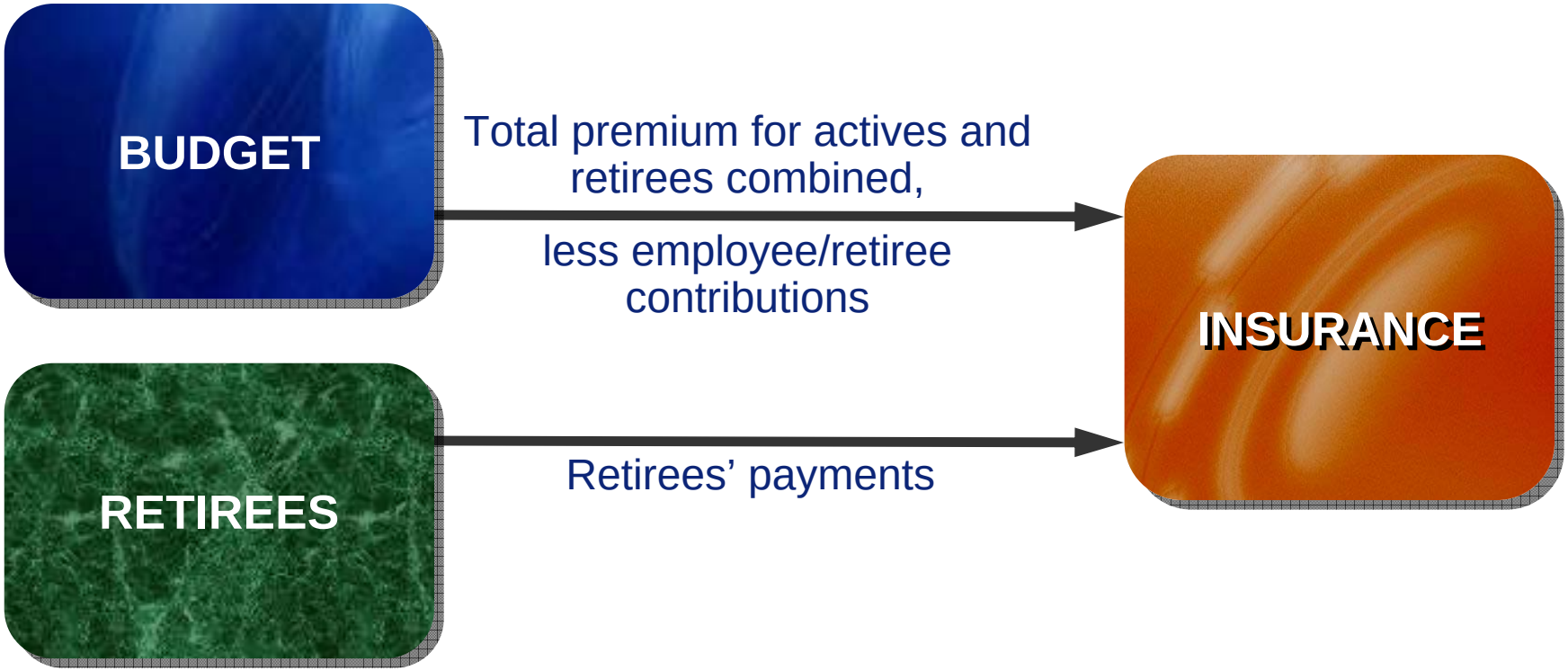
that is, retirees pay 100% of the premium?

What does the OPEB trust pay?

The Implicit Rate Subsidy

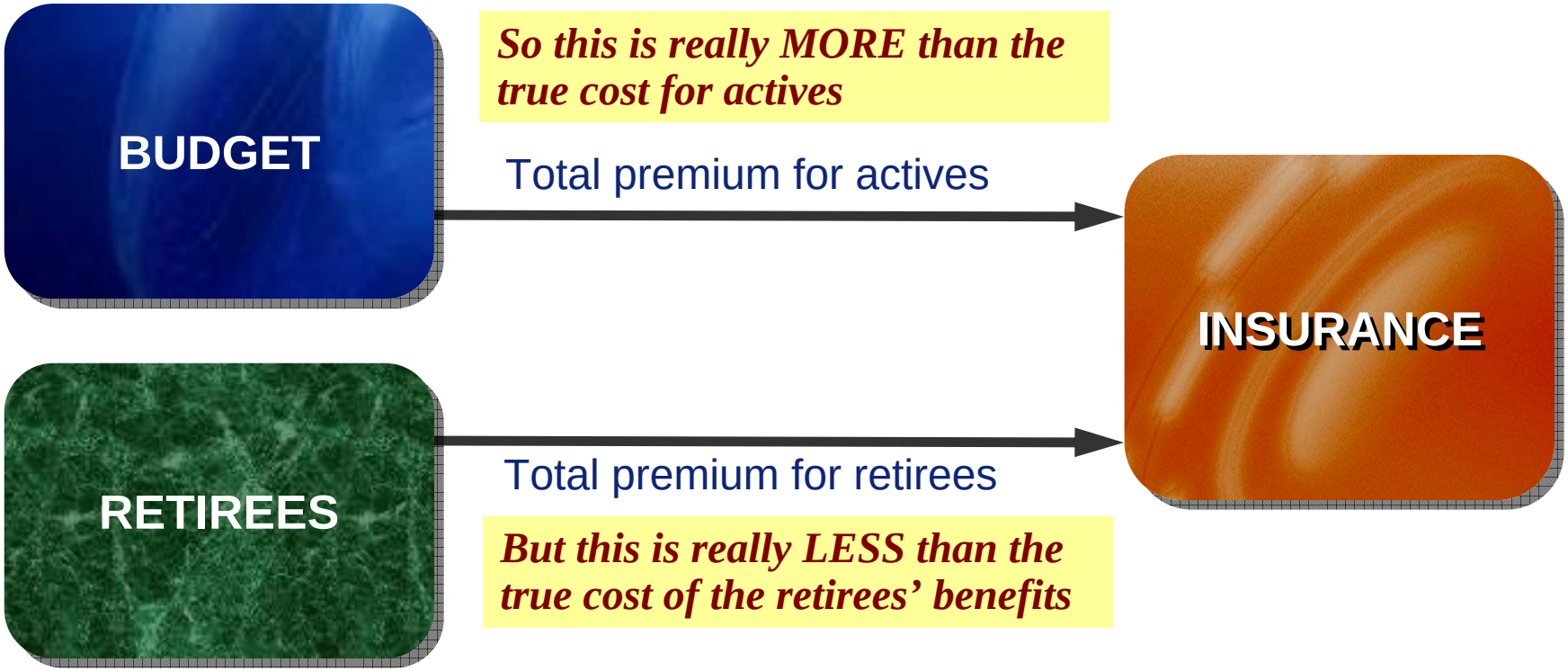
The Implicit Rate Subsidy

With no OPEB trust, here's how retiree medical costs are paid for . . .



The Implicit Rate Subsidy

And if retirees pay 100% of the premium . . .

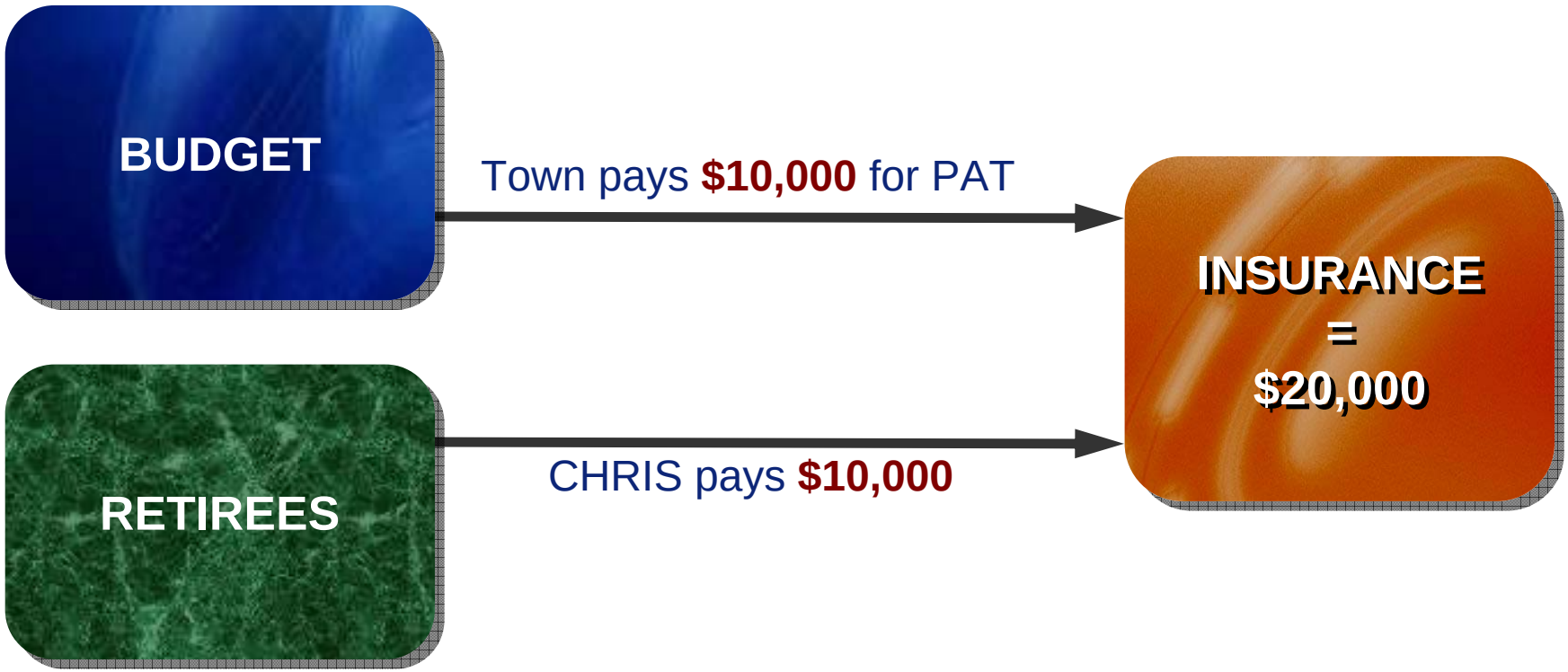


The Implicit Rate Subsidy

E X A M P L E

- Town ABC covers two people for medical benefits.
- PAT is an active employee, and CHRIS is retired.
- The annual premium is **$10,000**, and the total insurance cost for the two of them is **$20,000**.
- CHRIS pays 100% of the premium as a retiree.

The Implicit Rate Subsidy



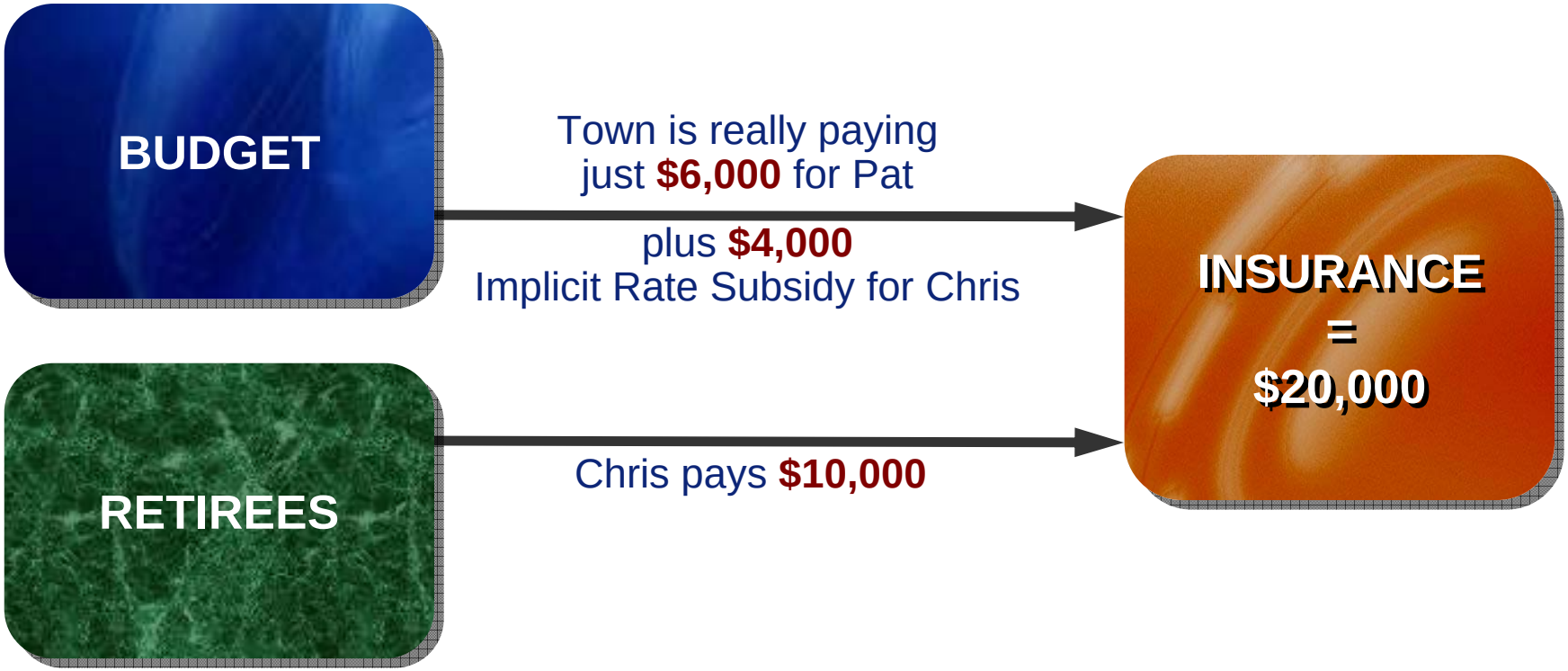
The Implicit Rate Subsidy

But there's an Implicit Rate Subsidy . . .

- The true cost of providing coverage for a retiree of Chris's age is **$14,000**.
- So a true allocation of costs would be **$14,000** for retiree Chris and **$6,000** for active employee Pat.
- The **$4,000** extra for Chris is the Implicit Rate Subsidy.

The Implicit Rate Subsidy

So the real cost allocation is . . .



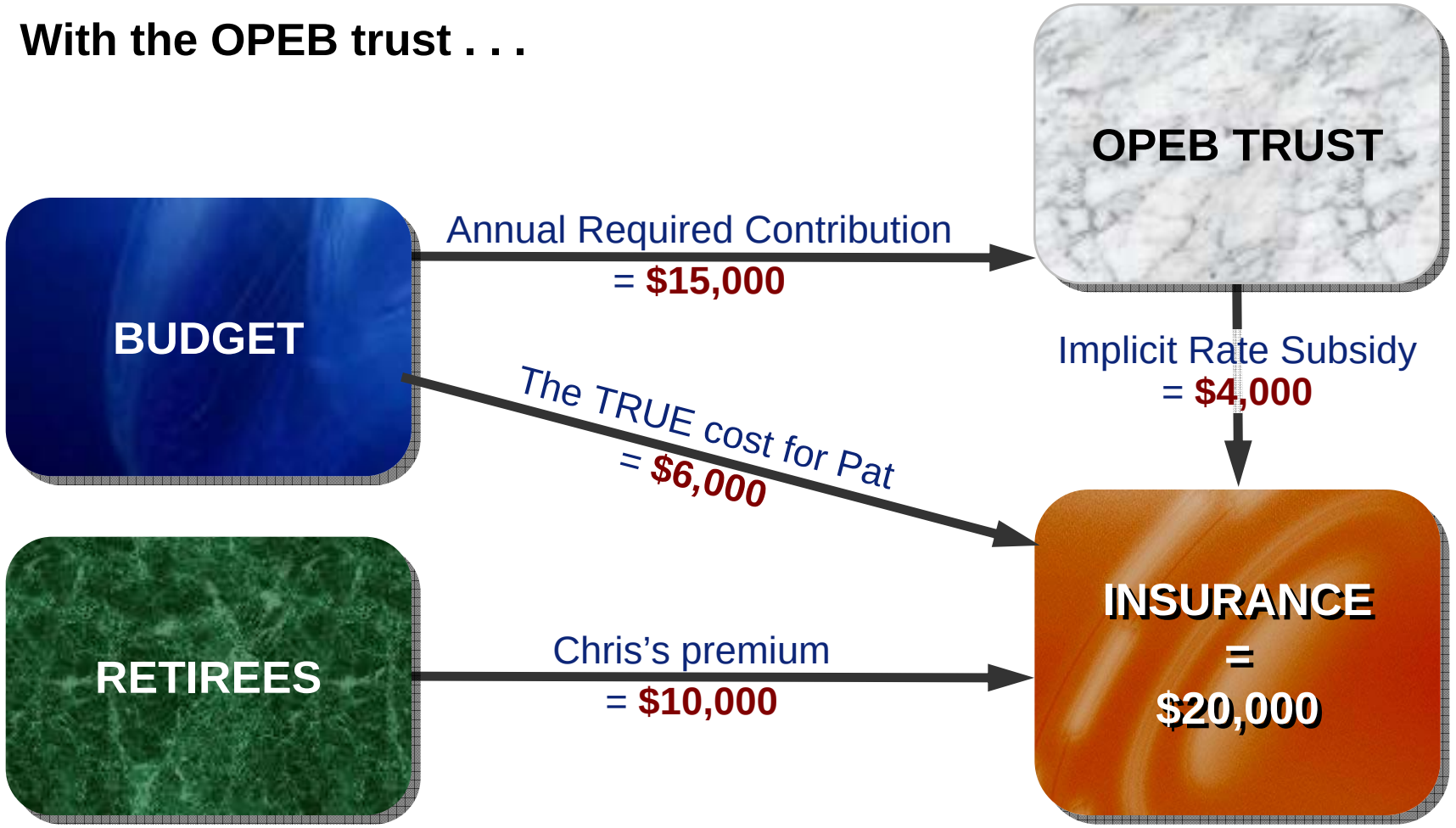
The Implicit Rate Subsidy

And now we have GASB 45 . . .

- Town ABC's Annual Required Contribution per GASB 45 is **$15,000**.
- Town ABC will set up an OPEB trust.
- How much will ABC's budget be affected by GASB 45?
- How much will the OPEB trust pay out?

The Implicit Rate Subsidy

With the OPEB trust . . .



The Implicit Rate Subsidy

Impact of ABC's budget . . .

- Before GASB 45

Annual cost	=	$10,000

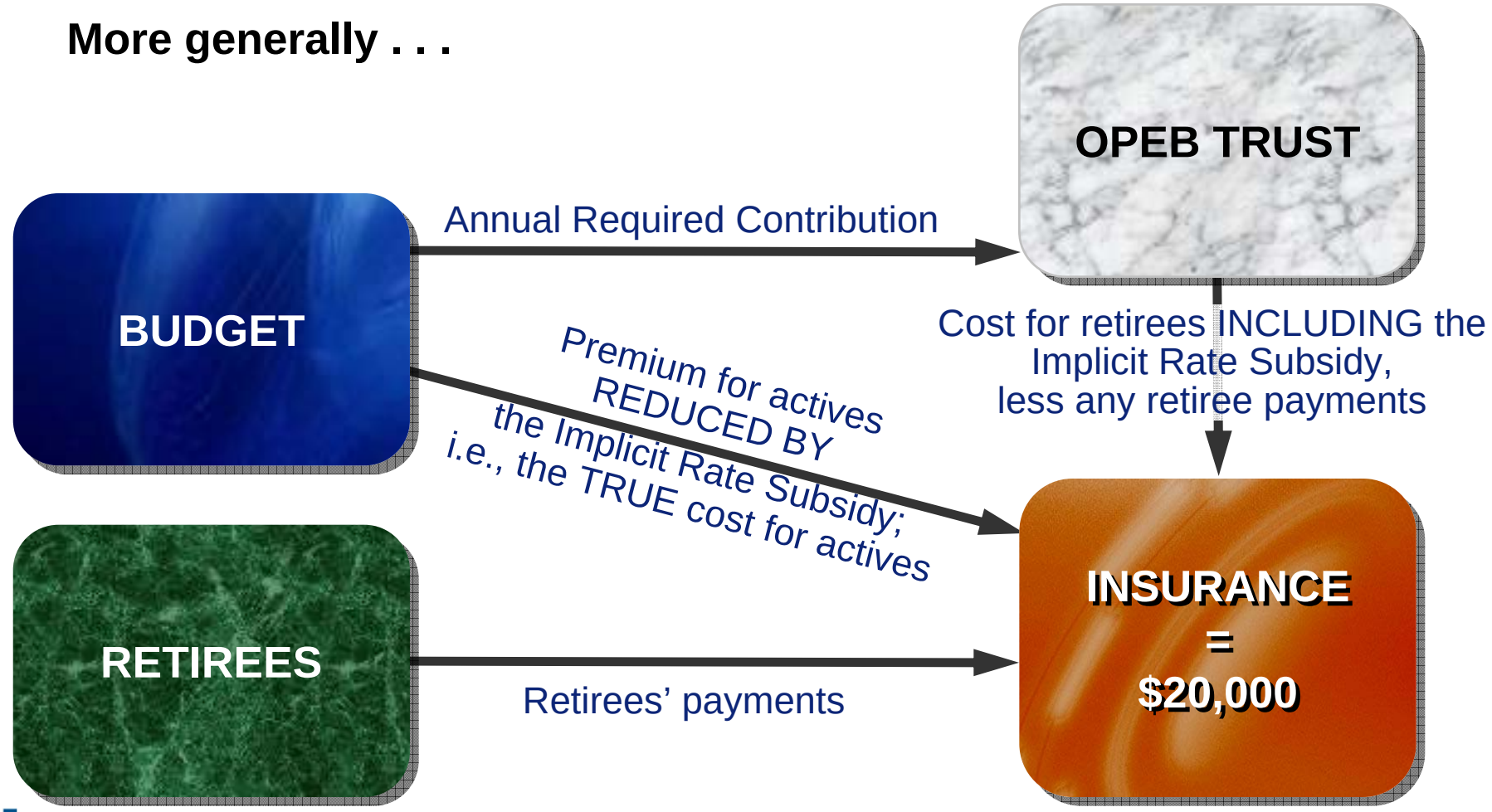
- After GASB 45

ARC paid to OPEB trust	=	$15,000
Active benefit cost	=	6,000
Total annual cost	=	$21,000

- Budget Increase = $11,000

The Implicit Rate Subsidy

More generally . . .



GASB 45

5. Liabilities

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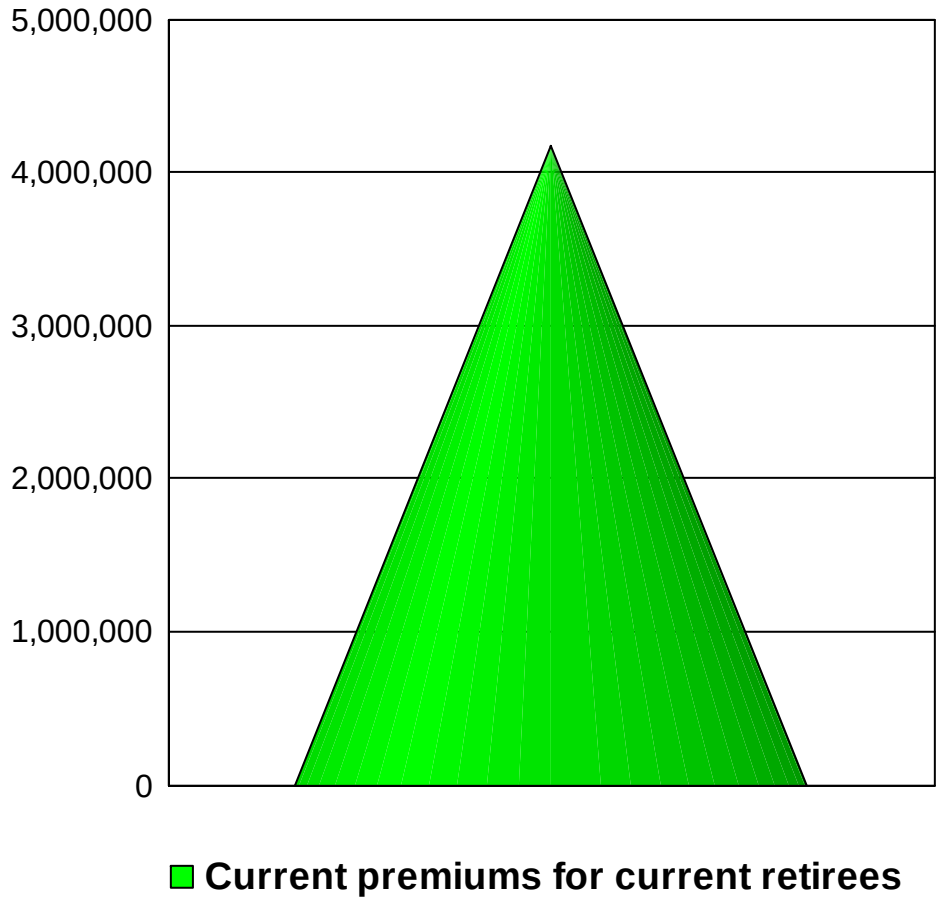
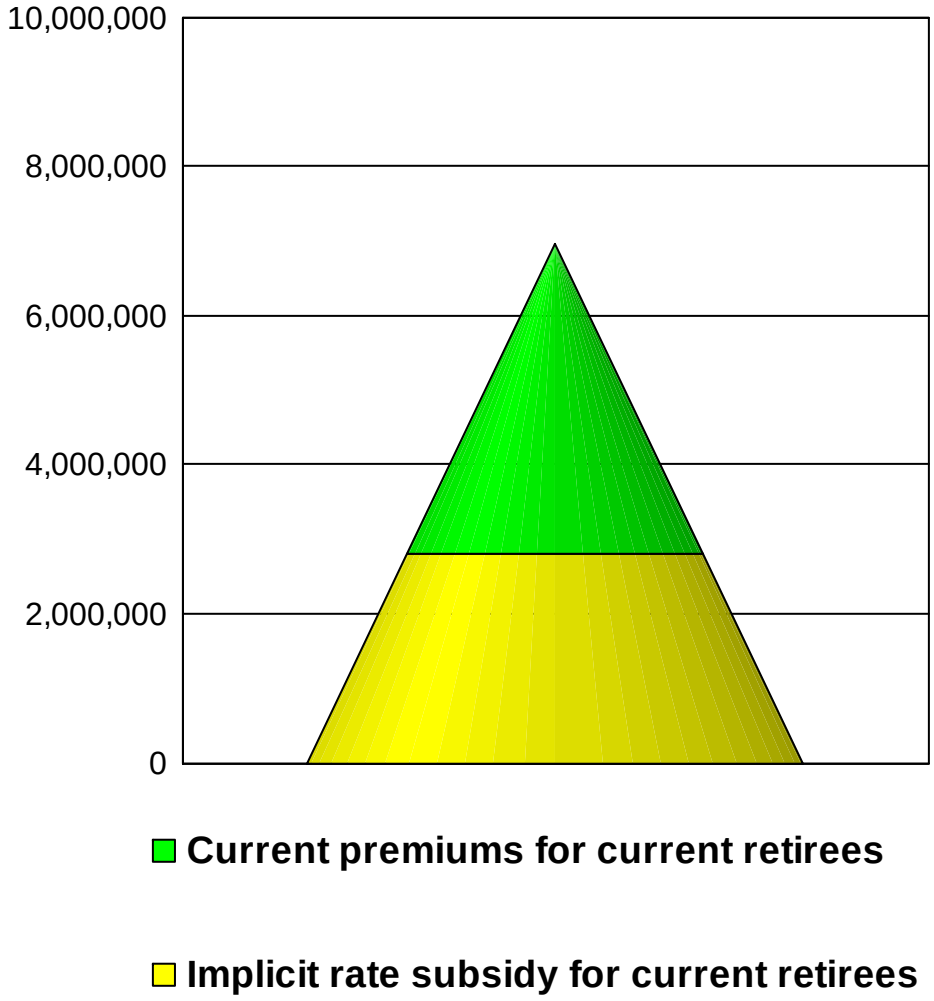
The Numbers

This is how much one municipality is paying in medical premiums each year for its retirees and dependents –
just over **$4 million**.



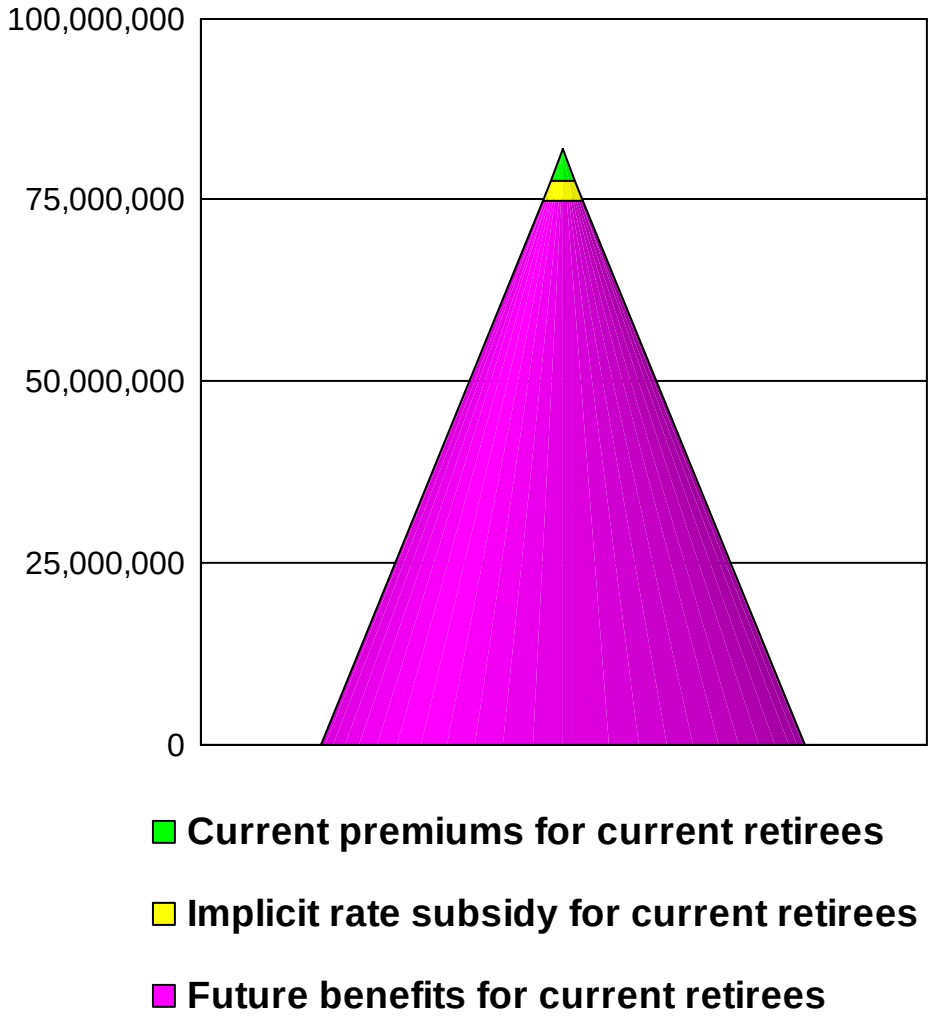
The Numbers

But the municipality also has Implicit Rate Subsidy costs of **$3 million** because the premium only represents 60% of the real economic cost of providing retiree medical benefits.



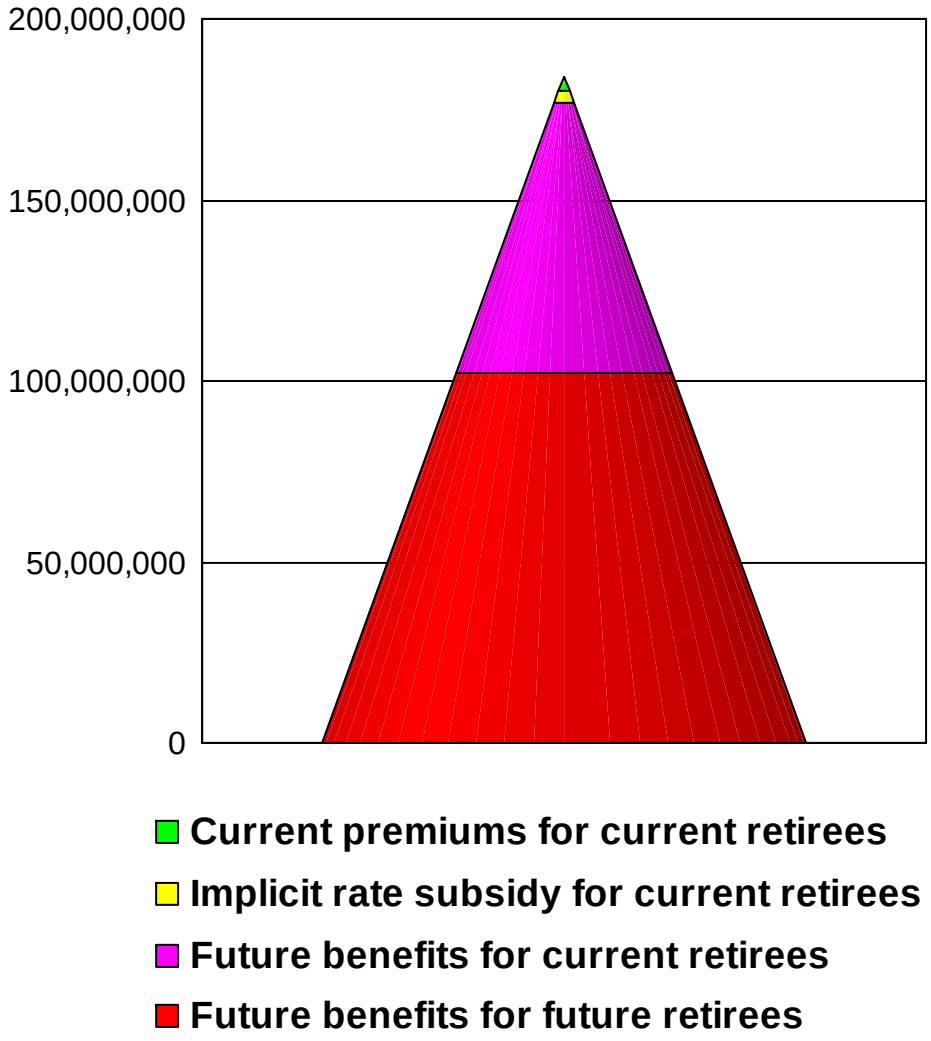
The Numbers

This current annual cost is dwarfed by the liability for future benefits for the same retirees and dependents – **$75 million**.



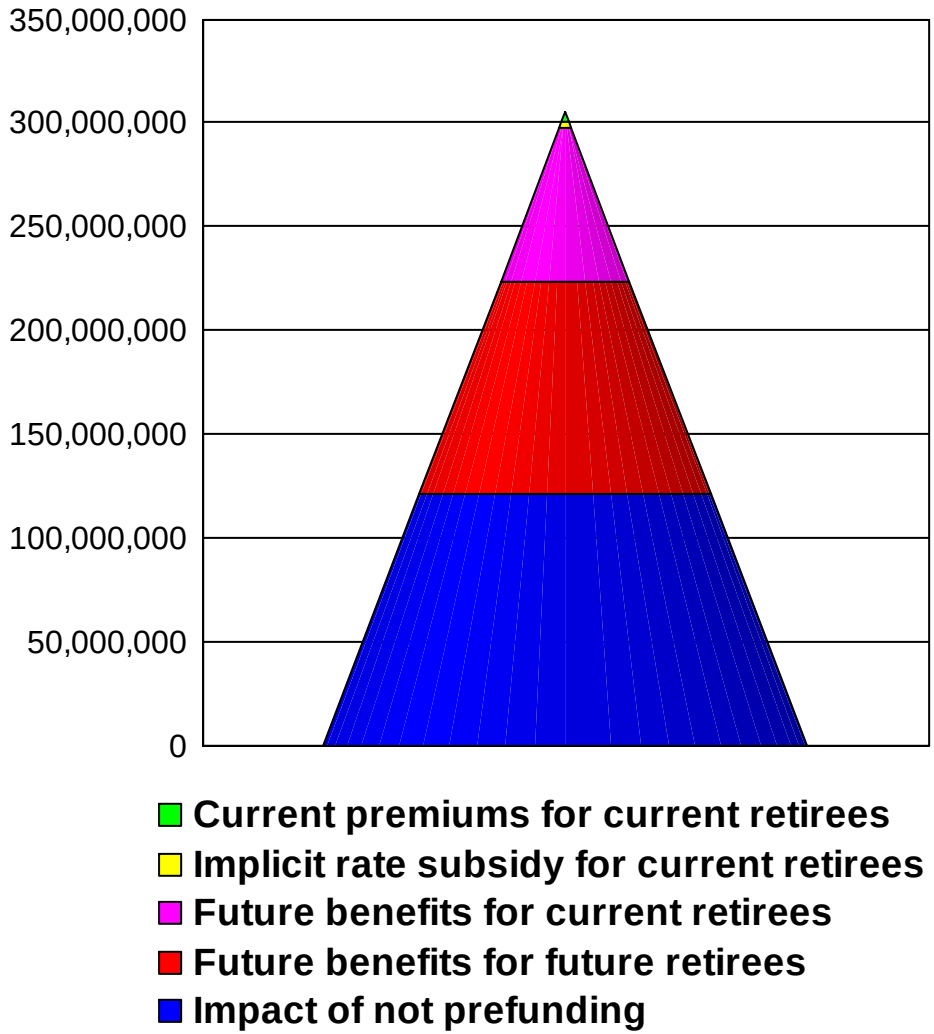
The Numbers

The final piece is the Actuarial Accrued Liability for active employees – **$102 million**.



The Numbers

But if the municipality does not prefund these benefits, the liability grows by another **$120 million** because future investment income will not be available to help pay for the benefits.



6. Sample Results

Comparison

Entity	APBO	ARC	# Members	ARC Per Member
1	398,300,000	41,100,000	5,621	7,309
2	1,100,000,000	117,400,000	9,020	13,016
3	443,400,000	41,900,000	5,986	7,000
4	277,200,000	29,255,000	2,907	10,064
5	60,000,000	9,600,000	708	13,559
6	94,000,000	10,000,000	830	12,048
7	87,900,000	11,200,000	2,440	4,579
8	258,000,000	27,800,000	3,014	9,224