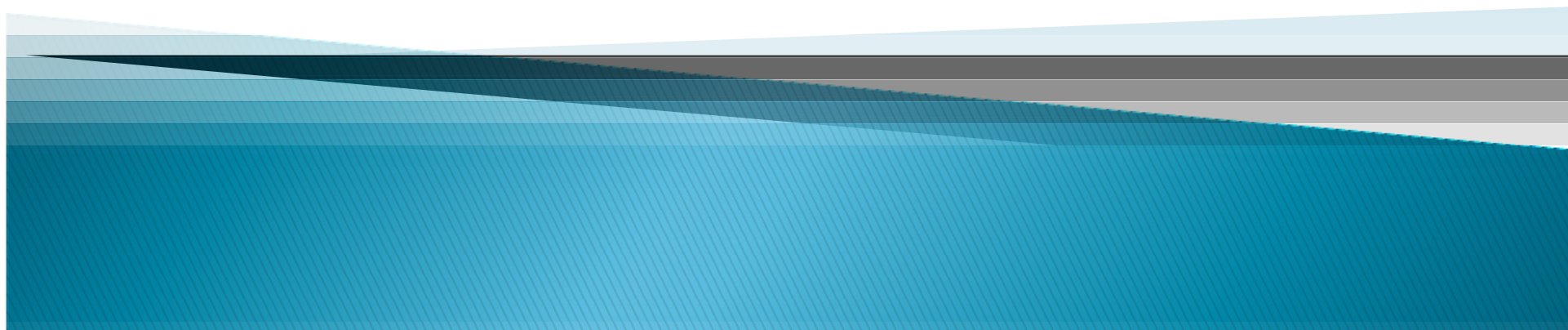




Southern Conference on Teacher Retirement

“So You Really Think you’ll be
Fully Funded in 30 years?”





Speaker

- ▶ Ed Koebel, Principal and Consulting Actuary, Cavanaugh Macdonald Consulting, LLC.
 - Over 15 years of Public Sector Actuarial Experience
 - Consult with many State Teacher Pension Plans
 - Mississippi PERS
 - Kentucky Teachers
 - Colorado PERA

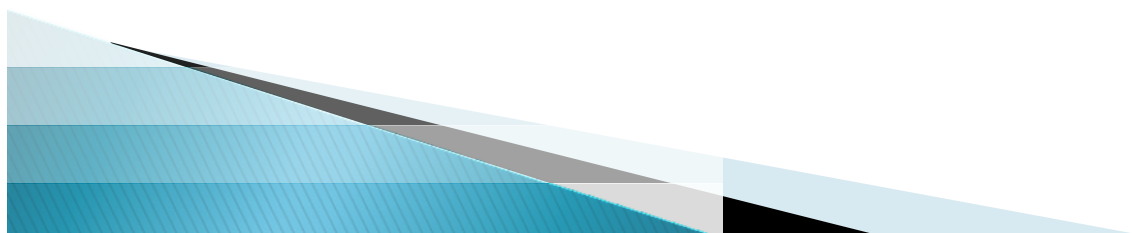
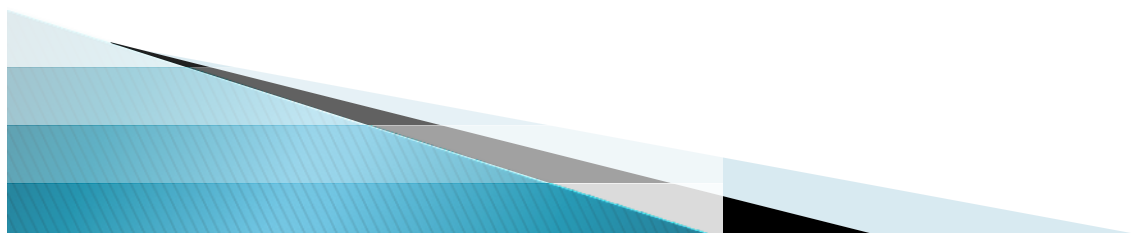




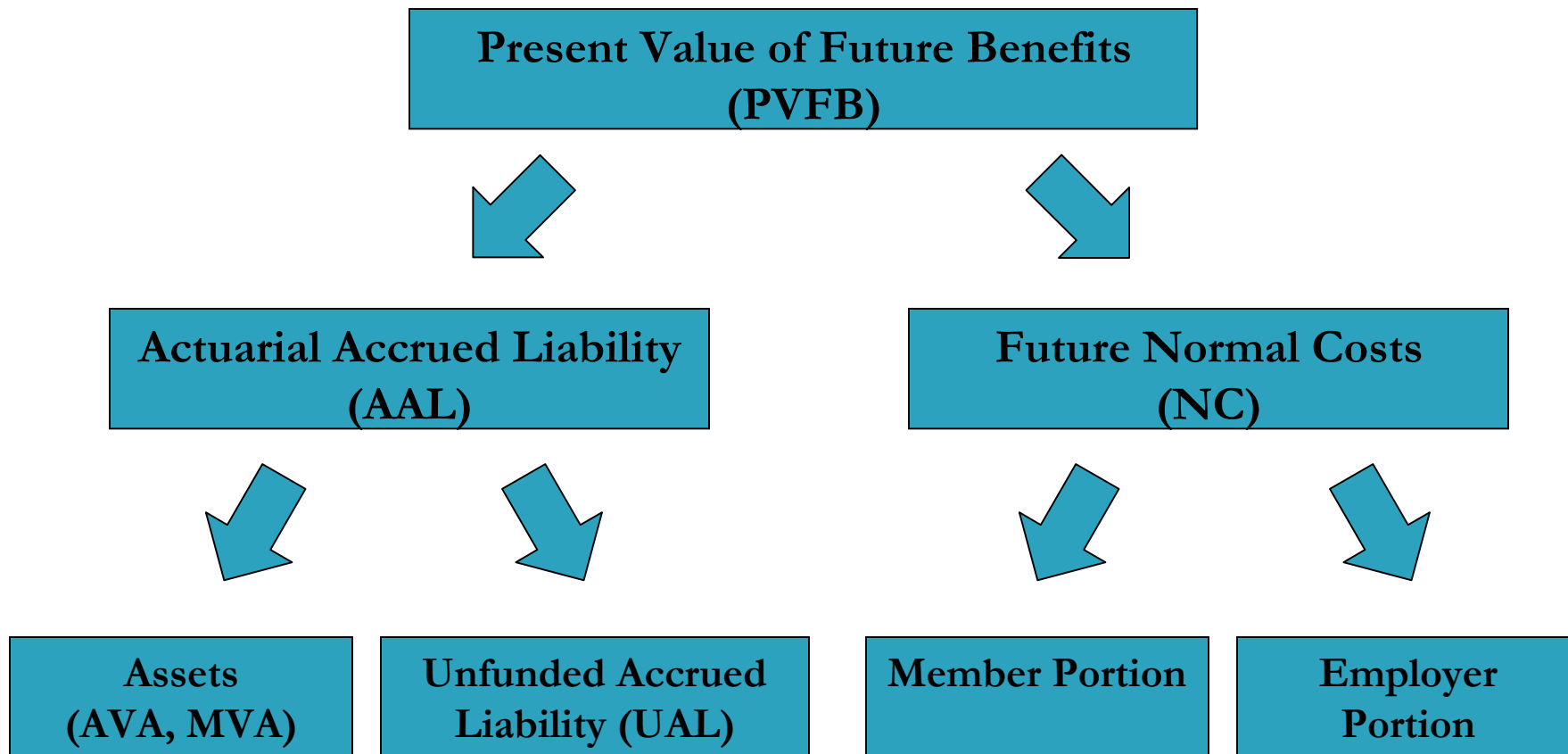
Table of Contents

- ▶ Funding Valuation Process
- ▶ Amortization Methods
- ▶ Open Period vs. Closed Period
- ▶ Insolvency Issue



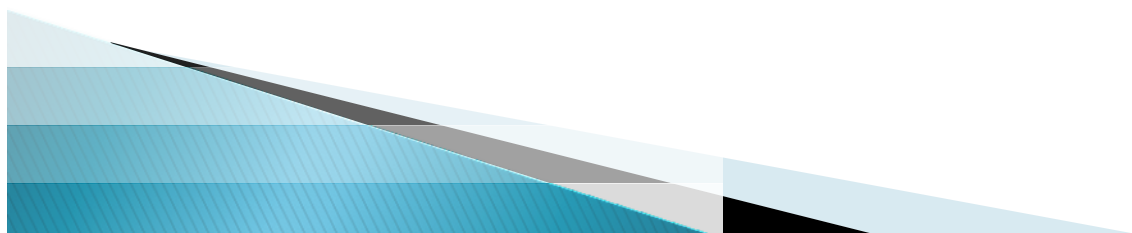
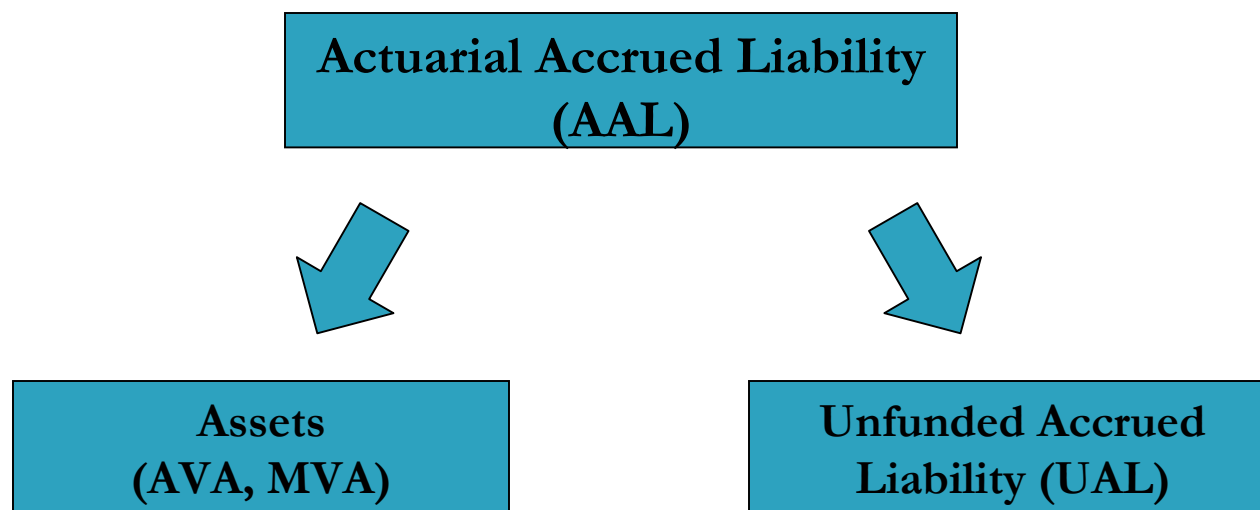


Funding Valuation Process





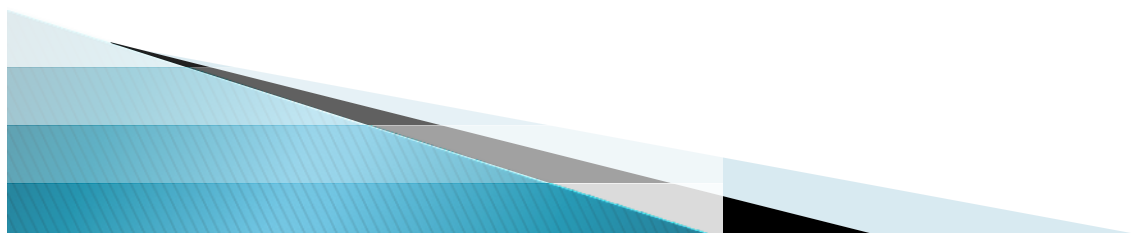
Funding Valuation Process





Actuarial Accrued Liability

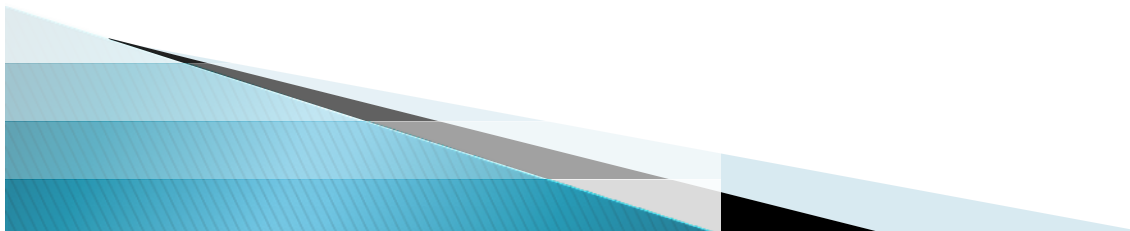
The portion of the present value of pension plan benefits not provided for by future normal costs.





Asset Valuation Methods

- ▶ Market Value of Assets (MVA)
- ▶ Smoothed Market – Actuarial Value of Assets (AVA)





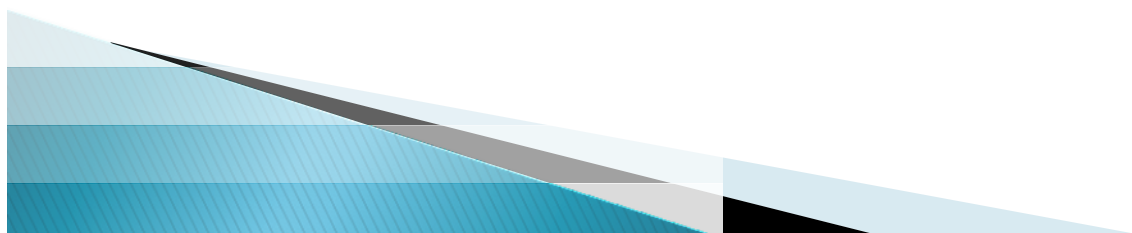
Unfunded Accrued Liability Contribution Rate

Contribution For	Description
Unfunded Accrued Liability (UAL)	Actuarial Accrued Liability - Actuarial Value of Assets
<p>“Unfunded Accrued Liabilities” are a natural part of retirement system funding comparable to a mortgage on a home. A plan which is 100% funded is required to contribute only the normal cost.</p>	
<p>Funding Ratio (or Funded Status) of the Plan is the ratio of Actuarial Value of Assets divided by the Actuarial Accrued Liability. If the Plan has a 100% Funding Ratio, there is no Unfunded Accrued Liability.</p>	



Unfunded Accrued Liability Amortization Methods

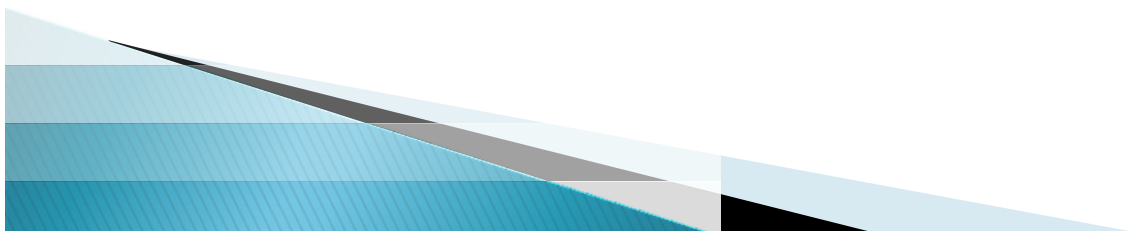
- ▶ Level \$
- ▶ Level % of payroll
- ▶ Closed period
- ▶ Open or rolling period
- ▶ Maximum 30 years (GASB requirement)





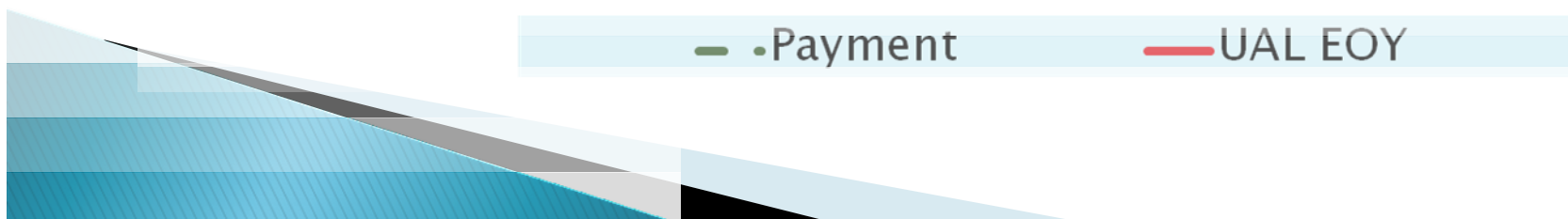
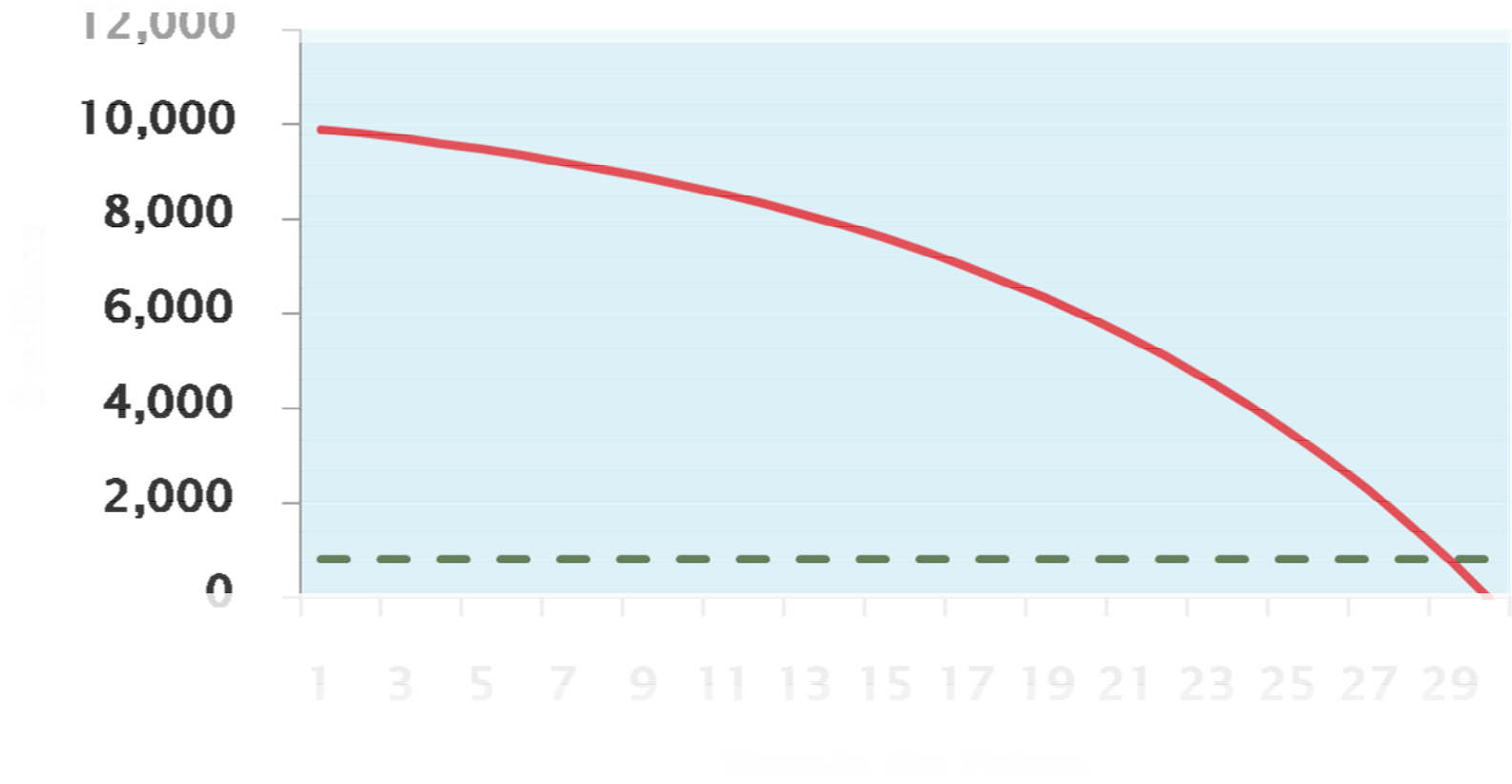
Level \$ Amortization

- ▶ Same as paying a home mortgage on a fixed interest rate.
- ▶ Payments remain constant in dollar amount over the amortization period, but decline as a percent of a, presumably, growing payroll.
- ▶ UAL declines in nominal (total dollar) value every year.





Level \$ Amortization





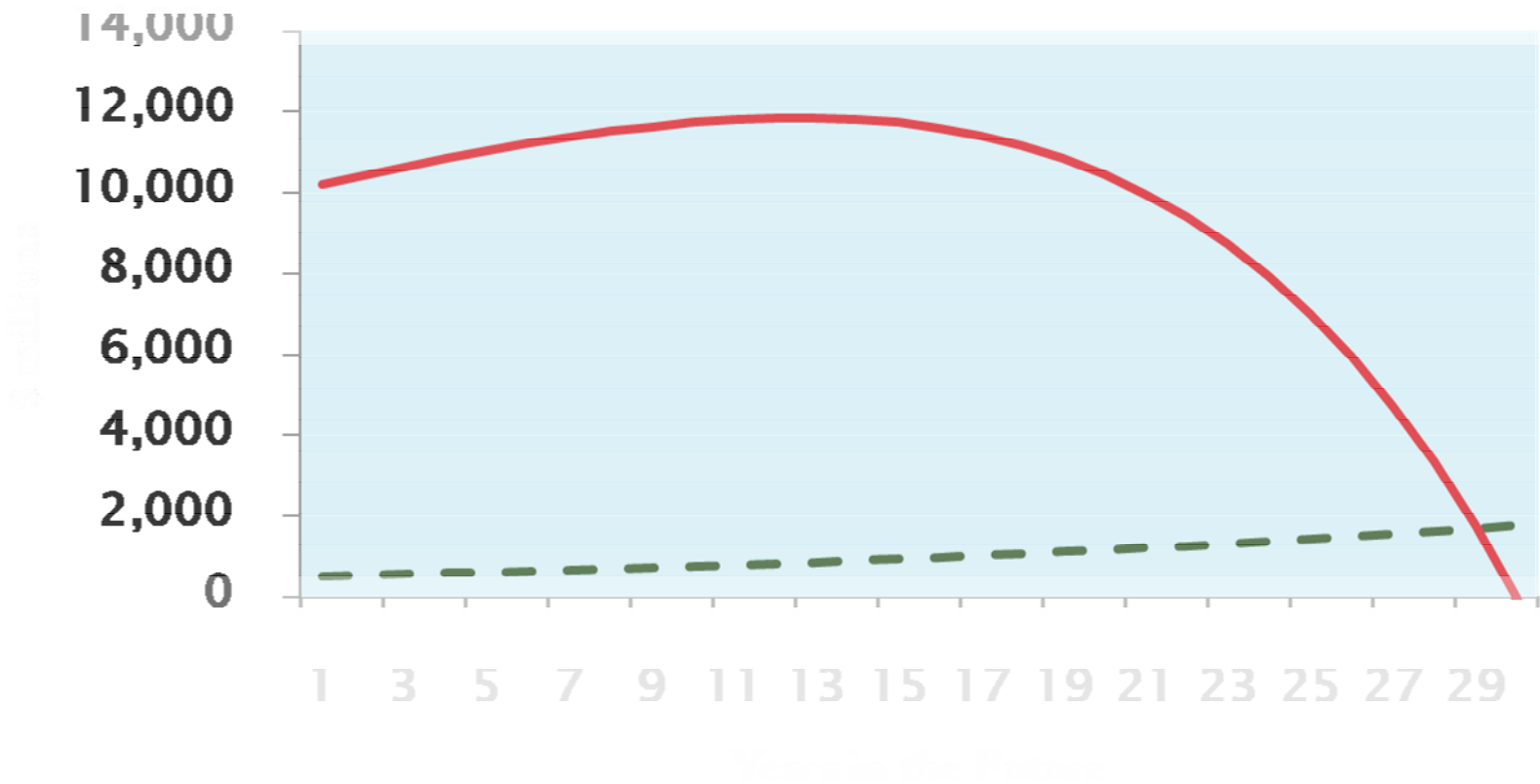
Level % Amortization

- ▶ Developed to help better achieve the goal of level contributions as a percent of payroll.
- ▶ Requires an assumption regarding annual total payroll growth.
- ▶ GASB permits this method as long as growth in the active membership is not reflected in the payroll growth assumption. However expected declines in membership (e.g., closed plans) should be reflected.
- ▶ This results in the use of the wage inflation assumption for ongoing plans.





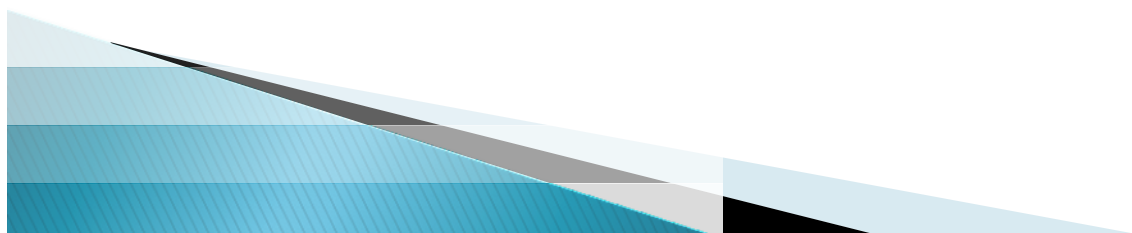
Level % Amortization





Amortization Example

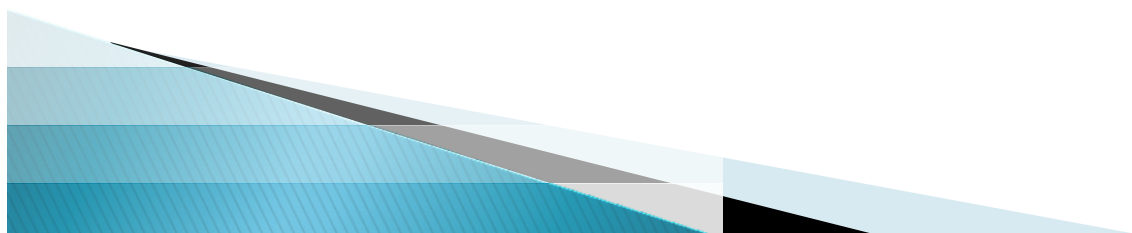
- ▶ Unfunded Accrued Liability of \$10 million and Amortization Period is 30 years.
- ▶ Long Term Investment Return is 8% and Payroll Growth Assumption is 4%.
- ▶ All other Actuarial Assumptions are met.





Amortization Example

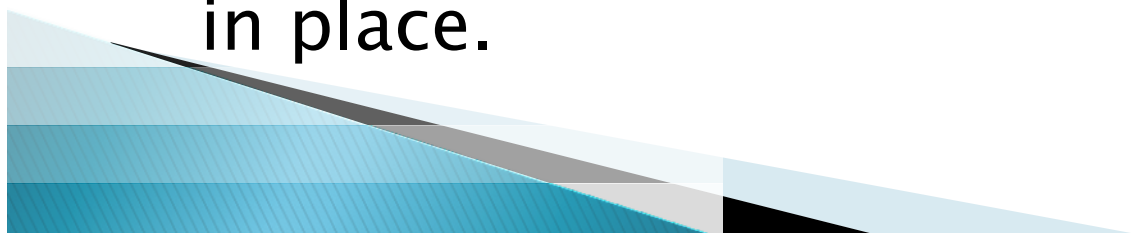
Year	Level \$		Level % of Payroll	
	UAL	Payment	UAL	Payment
1	\$10,000,000	\$888,274	\$10,000,000	\$567,547
5	\$9,602,226	\$888,274	\$10,891,229	\$670,061
10	\$8,897,669	\$888,274	\$11,749,804	\$825,704
12	\$8,530,631	\$888,274	\$11,952,082	\$898,163
15	\$7,862,444	\$888,274	\$12,019,310	\$1,019,825
20	\$6,341,359	\$888,274	\$11,173,211	\$1,264,851
25	\$4,106,385	\$888,274	\$8,347,033	\$1,584,330
30	\$888,274	\$888,274	\$2,113,539	\$2,113,539



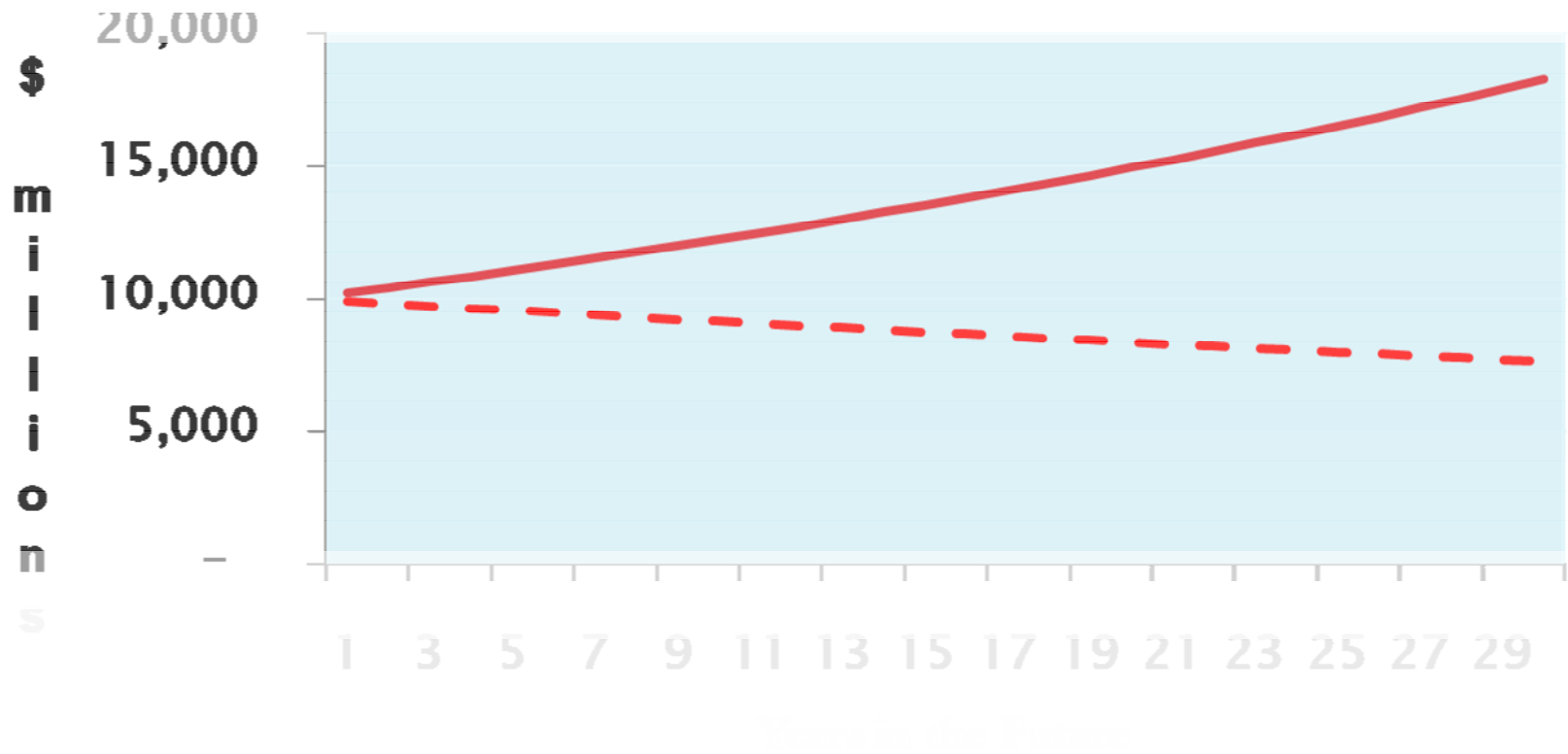


Closed vs. Open Periods

- ▶ Closed period means a one year drop in the amortization period each year until you reach zero.
- ▶ Open period means the amortization period fluctuates up or down, or stays the same from year to year.
- ▶ Open period with level % amortization can result in never paying off the UAL, although it does decline as a percent of payroll.
- ▶ Make sure to check if Plan has Funding Policy in place.

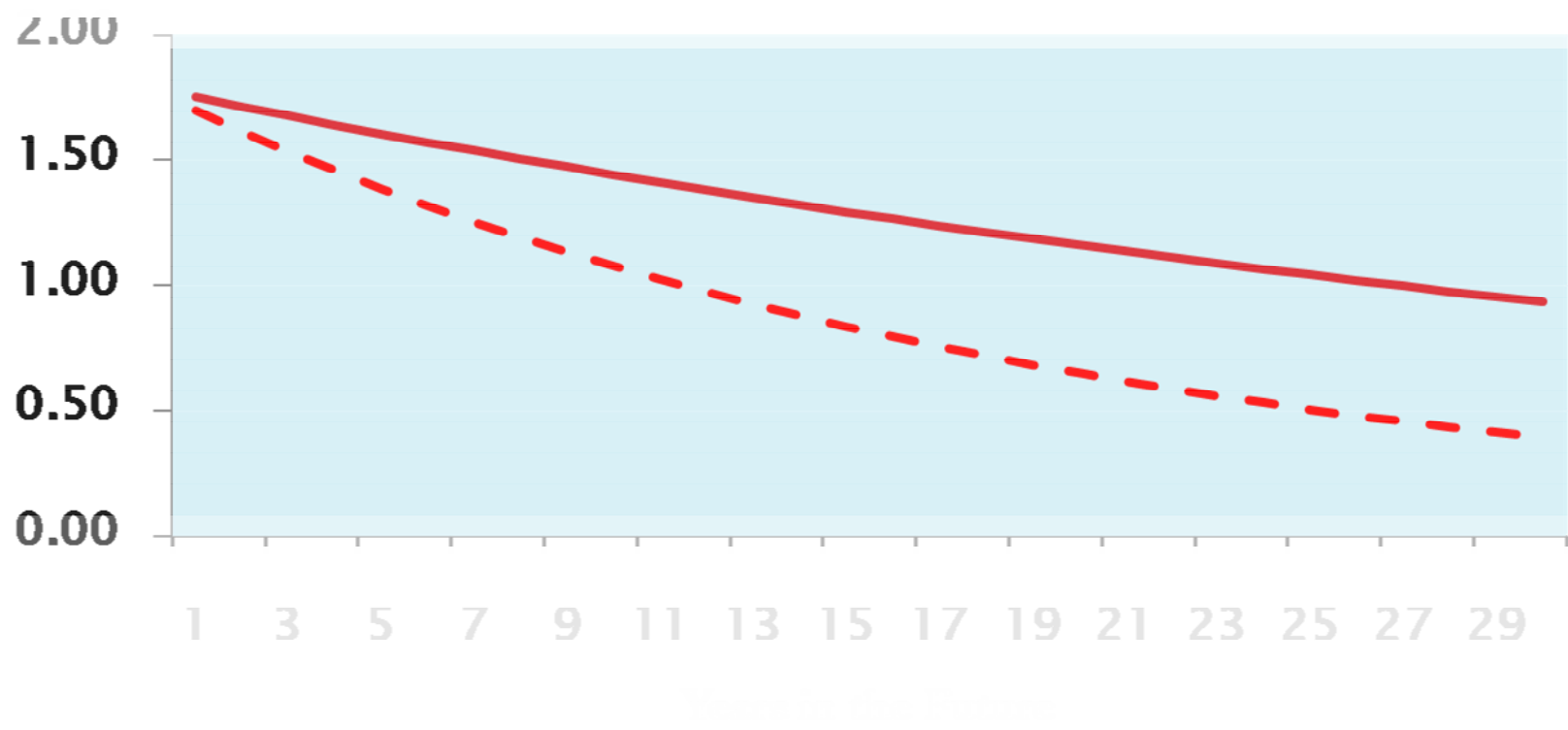


Open Period UAL Dollar Amount

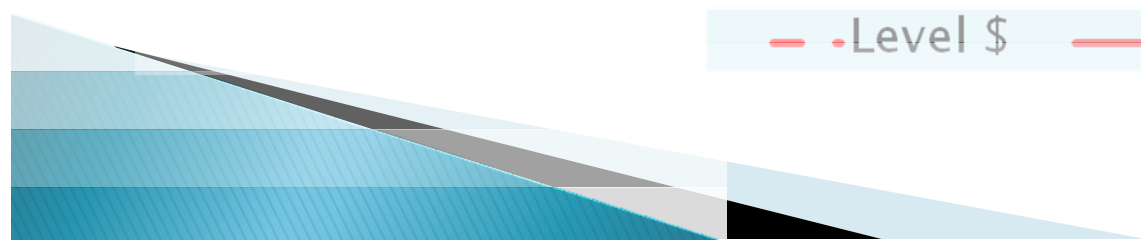


— UAL Level \$ — UAL Level %

Open Period UAL as % of Payroll

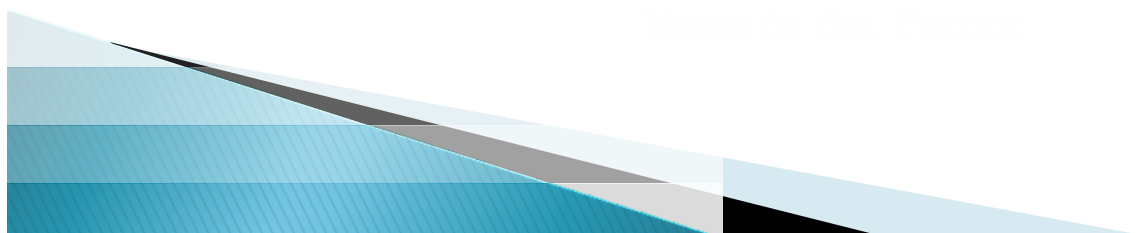
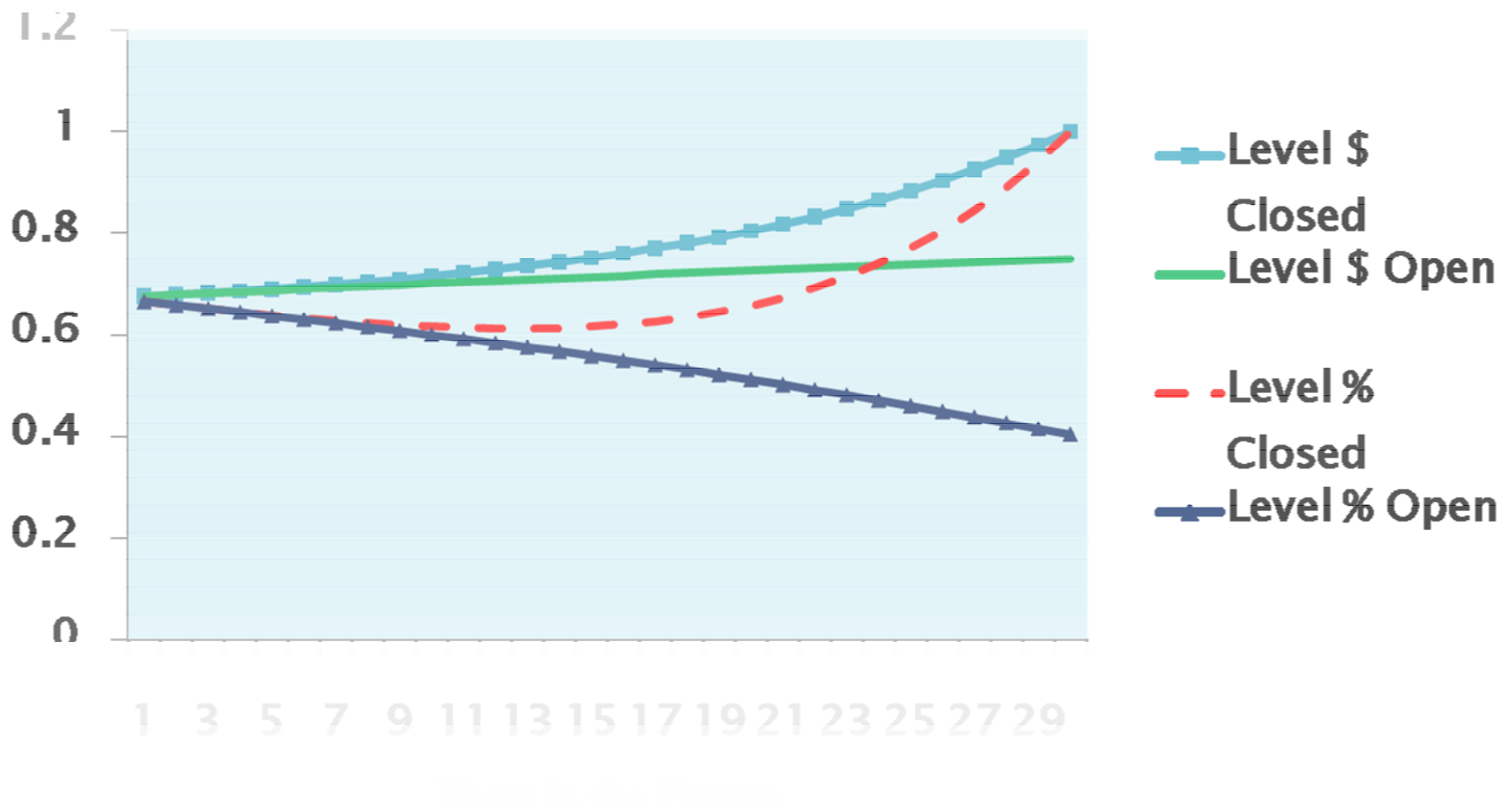


- - Level \$ — Level %



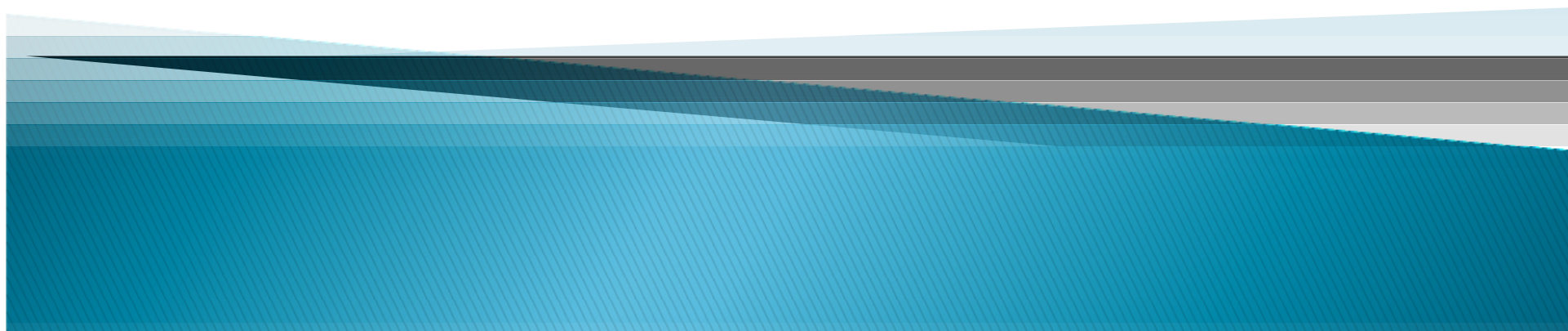


Funding Ratio Comparison





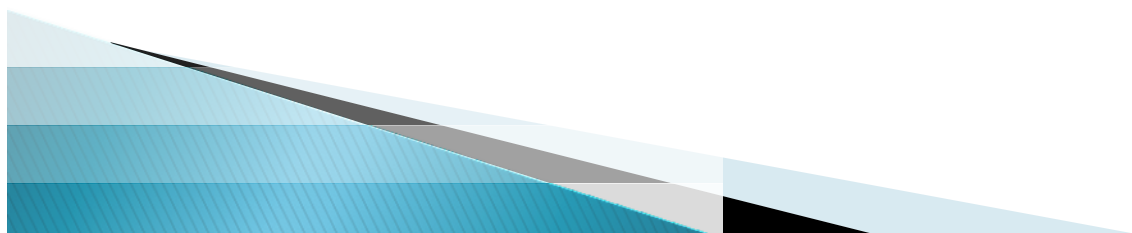
Insolvency Issue





Insolvency

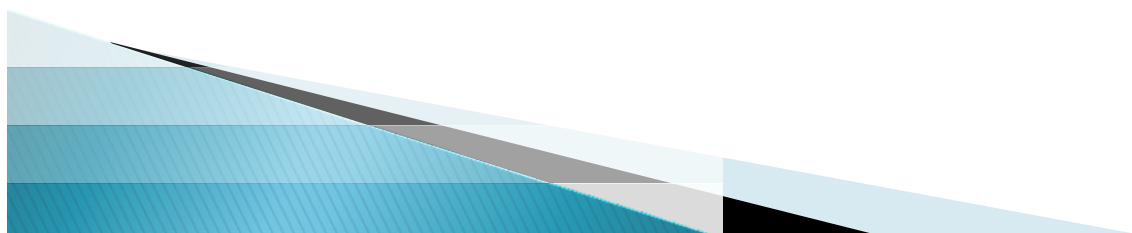
- ▶ Studies have been published over the past few years that predict that many State Defined Benefit Plans will become insolvent within the next 30 years.





Inaccuracies

- ▶ These studies are assuming that the only contribution made by the employer is the one to cover the Normal Cost of Active Members.
- ▶ But for most states, the contributions being made by the State, statutorily or not, are more than the Normal Cost and a portion will go towards the UAL to help payoff the debt of the System.

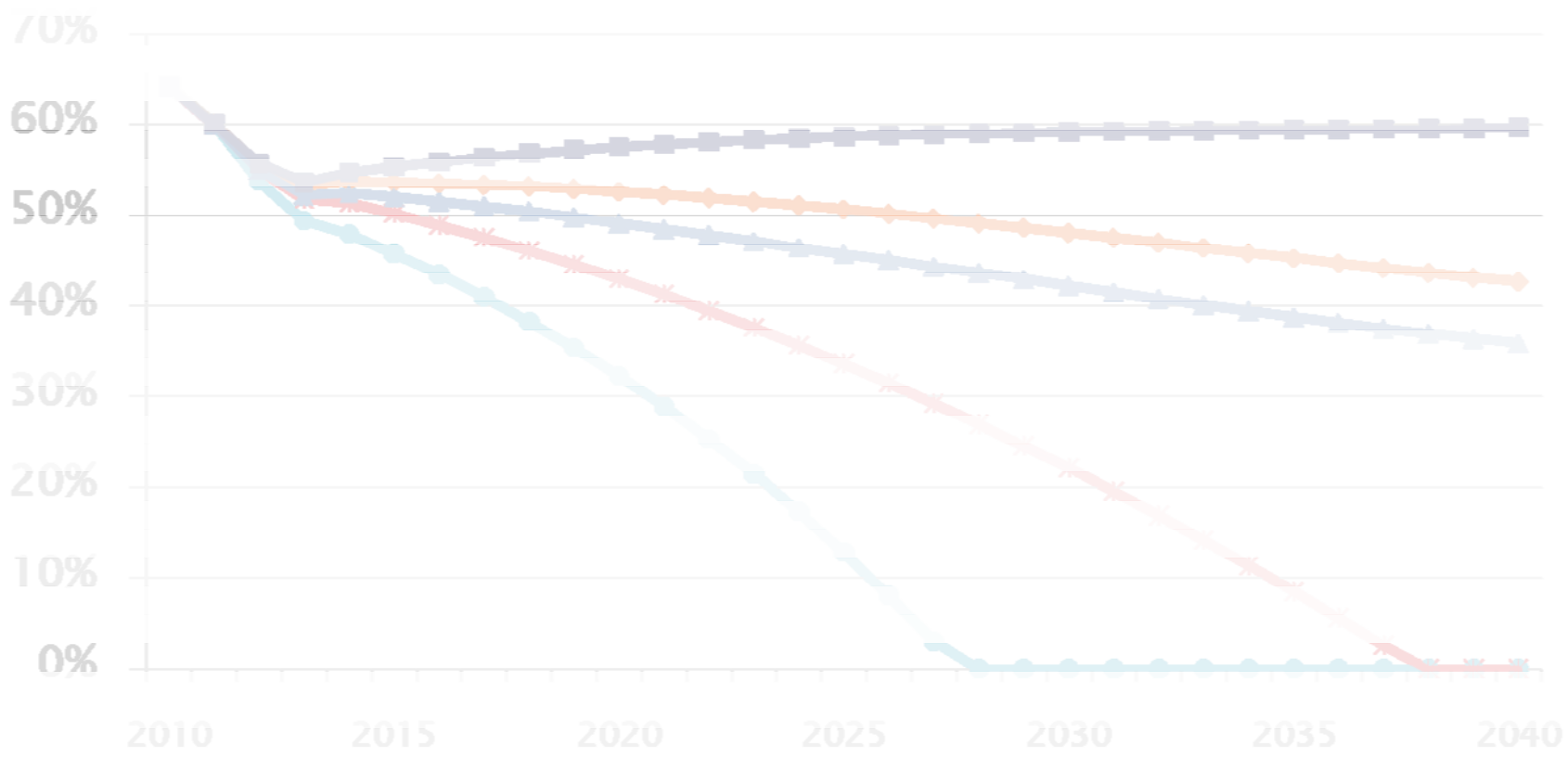




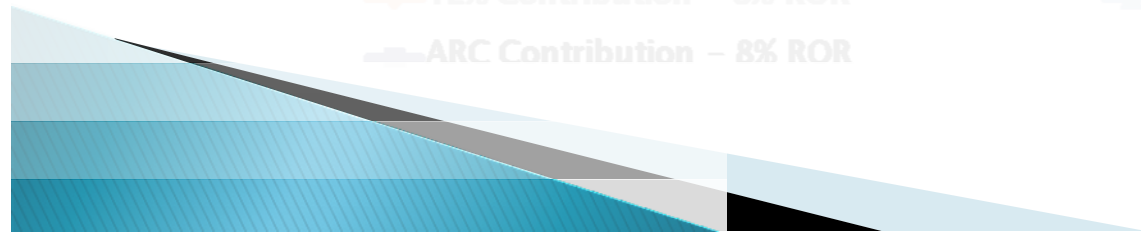
State Example

- ▶ “Representative System” as of June 30, 2010 is 64% funded and the 2012 fiscal year annual required contribution rate is 12.93% of payroll and expected to rise.
- ▶ Employees currently contribute 9.00%, leaving employer Normal Cost rate of 2.18%.
- ▶ Therefore, UAL contribution rate is 10.75% of payroll.
- ▶ For the most part, historically, System has made their ARC payment.
- ▶ Amortization Period based on Open Period.

Projection Results - Funding Ratio



- NC Contribution - 8% ROR
- 12% Contribution - 8% ROR
- ARC Contribution - 8% ROR
- 12% Contribution - 6% ROR
- ARC Contribution - 6% ROR





Conclusion

- ▶ As can be seen from example on last page, using the Open Period of Amortization will not get the Plan to 100% Funding in 30 years, however, the Plan will not be insolvent either.
- ▶ If funding policy calls for the Plan to reach full funding within a certain period, make sure to be on Closed Period of Amortization.
- ▶ Talk to your actuary about Level \$ and Level % of payroll Amortization Methods.
- ▶ Make sure to talk to your actuary regarding these ill-advised studies recently published.



Questions ???

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