

Formulating a Funding Policy

Innovative Public Pension Funding Strategy Contest
Winner - Risk Based Funding Policy



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Why do we need a Funding Policy?



To provide benefit security

- Proactive/Intentional plan to make sure there all promised benefits are paid
- Prefunding lowers the amount of plan sponsor contributions needed
- All parties are aware of when and how benefits will be paid for

The Texas Pension Review Board requires it

- TLFFRA plans have historically been passively funded through fixed contribution rates

Texas PRB Funding Policy Components

Clear and concrete funding objectives

Actuarial methods

- Actuarial Cost method
- Asset Smoothing method
- Amortization Policy

A roadmap to achieve funding objectives

- Contribution rate calculation
- Benefit/Contribution Changes

Actions that will be taken to address actual experience that diverges from assumptions

- Risk Sharing
- Contributions
- Benefits



Table of Contents

CONSOLIDATED STATEMENT
(dollars in millions)

REVENUE
Rental (including rental income)
Other
Total revenue
EXPENSES
Depreciation and amortization
Interest
General and administrative
Provision for doubtful accounts

(in € million)

Equity

Equity

So What is the Goal?

PRB recommends **100%** funded ratio in **10-25** years

What Are We Funding?

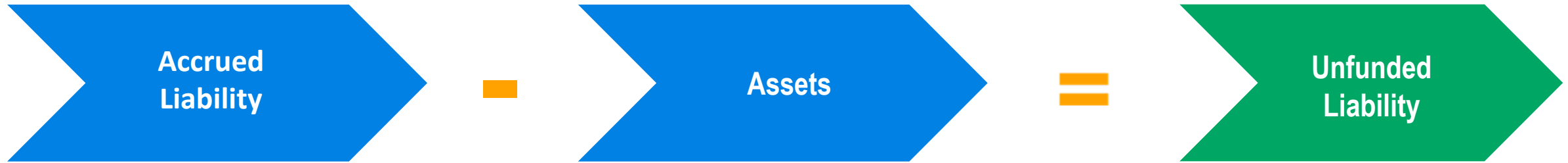
Prior Costs

- Experience Losses
- Assumption Changes
- Benefit Improvements
- Underfunding

Annual Costs

- Service Cost
- Administration Expenses
- Investment Expenses

Prior Costs



- Present value of all benefits that have been promised and have been accrued as of the valuation

- \$\$\$ you have on hand in order to pay benefits

- How much more \$\$\$ you need in order to pay for the benefits that have been promised

Prior Costs



Should be eliminated in a reasonable period

- PRB recommends 10-25 years, that may not be reasonable
- Could use different periods for different causes
 - Assets
 - Liability Experience
 - Assumptions
 - Plan Amendments

Amortization structures may vary

- Level percent of pay each year
 - May make sense from a budgeting standpoint
 - Could have negative amortization in early years
- Level dollar each year
- Payments could be layered
 - Helps smooth contribution volatility
- Cash infusion (pension obligation bond)

Annual Costs



Service Cost

Cost of current active members accruing a year of service

Shared with the employee

Administrative Costs

Cost of running the plan

Generally added to Service Cost

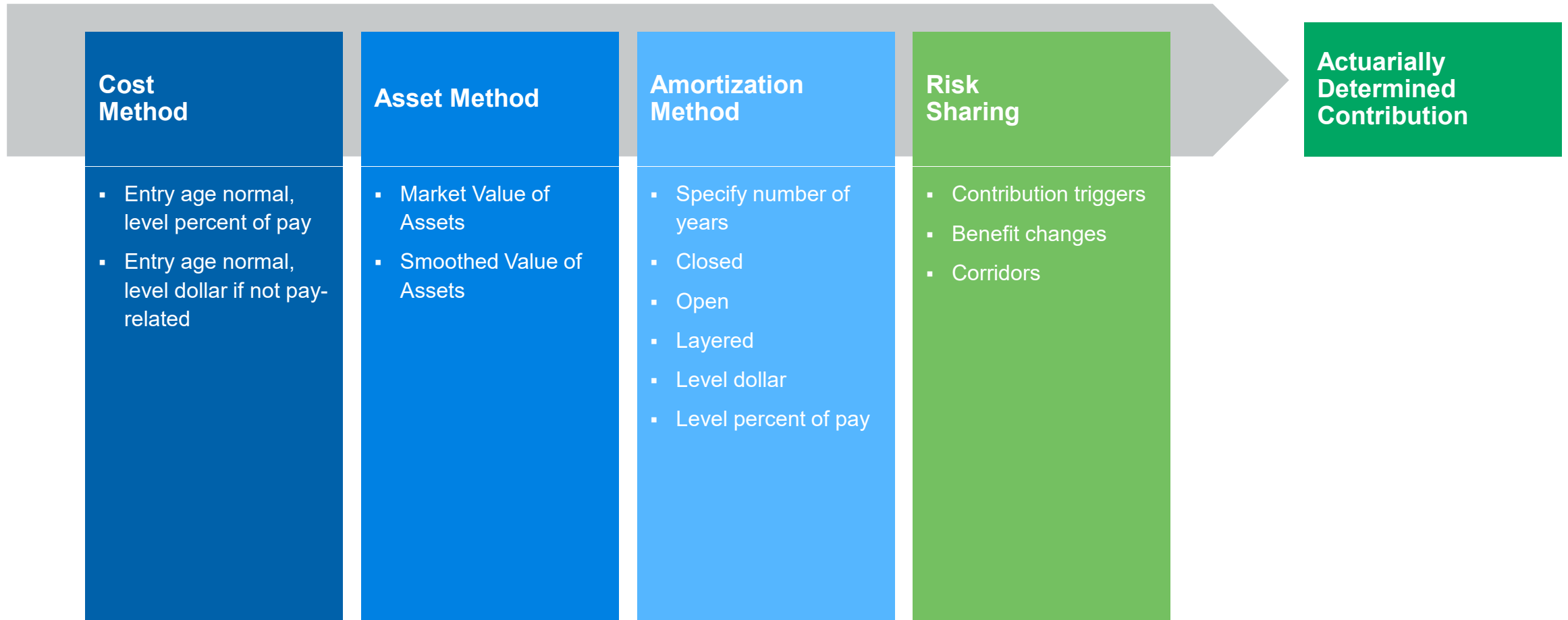
Based on an assumption (historical averages, percent of assets, etc.) or on actual budgeted expense

Investment Costs

Cost associated with investing plan assets

Accounted for by reducing asset return assumption

Standard Funding Policy Example




**Innovative Public Pension Funding Strategy
Contest Winner - Risk Based Funding Policy**


Contest Overview



The National Institute on Retirement Security (NIRS) and the Conference of Consulting Actuaries (CCA) held a competition in January 2022.




Aimed at encouraging and sharing innovative thinking around the funding of state and local pension plans.



Focus on innovative ideas on funding policies that can reduce cost volatility, promote intergenerational equity, and assure plans remain on a strong fiscal path over time.



Entrants provided a hypothetical pension scenario and asked to design a funding policy that will address the goals above over the long-term.



Adhere to the recommendations of the 2014 CCA White Paper on Public Plan Funding Policies.



Milliman Team policy chosen as one of the winners.

Key Risk Based Funding Policy Components

Risk Adjustment

- Key aspects of some plans may be inherently more volatile than others
- Risk adjustment allows for cushion to absorb adverse volatility

Contribution Surplus Account

- Allows for flexibility in plan sponsor contributions
- Encourages contribution stability



Risk-Based Funding Policy

Overview

Cost Method	Asset Method	Amortization Method	Risk Adjustment	Contribution Surplus Account (CSA)
<ul style="list-style-type: none">▪ Entry age normal, level percent of pay (level dollar if not pay-related)	<ul style="list-style-type: none">▪ Market Value of Assets▪ Asset smoothing, max 5 years with a 20% corridor▪ If smoothing applied, reduces the maximum amortization period	<ul style="list-style-type: none">▪ Layered▪ Level percent of pay (level dollar if not pay-related <u>or</u> accruals frozen)▪ Max 15 years of deferrals, reduced for asset smoothing	<ul style="list-style-type: none">▪ Risk matrix yields a risk load factor of at least 100%▪ Funding Policy Liability (FPL) = Accrued Liability x Risk Load Factor▪ $ADC = \text{Normal Cost} + \text{Layered Amortization of unfunded FPL}$	<ul style="list-style-type: none">▪ Contributions greater than ADC can be allocated to the CSA▪ CSA adjusted by actual investment return annually▪ Apply towards future benefit improvements or reduce ADC

Risk Matrix Example

Investment Risk

DESCRIPTION OF RISK	ANALYSIS		RISK FACTOR
Portfolio Volatility	Measured by the standard deviation of the expected return:		Standard deviation = 11 1
		<i>Risk Factor</i>	
	< 4	-3	
	4-6	-2	
	6-8	-1	
	8-10	0	
	10-12	1	
	12-14	2	
> 14	3		
Portfolio Liquidity	Measured by portion of the portfolio in illiquid or difficult to sell assets:		Illiquid assets < 10% 0
		<i>Risk Factor</i>	
	< 10%	0	
	10-20%	1	
	20-30%	2	
> 30%	3		
Well-defined investment policy	Robust investment policy	0	Robust Policy 0
	Missing key elements	1+	

Risk Matrix

Plan Design Risk

- Most flexibility in this component
- Significant opportunities for risk adjustment

DESCRIPTION OF RISK	ANALYSIS	RISK FACTOR	
Benefit Accrual	Assess benefit risk:		
		<i>Risk Factor</i>	3-year Final Average Formula
	Frozen accruals	-1	
	Career average	-1	
	Final average (4 years or more)	0	
	Final average (less than 4 years)	1	
Overtime, vacation, sick payout included	2		
Optional Forms	Assess potential for adverse selection or "run on the bank":		
		<i>Risk Factor</i>	Traditional Annuities only
	Traditional annuities, actuarial equivalent forms	0	
	Subsidized optional forms (like free J&S)	1	
	Level Income Option	1	
Lump sums (other than return of contributions)	2		
Early Retirement	Actuarial equivalence	0	1
	Subsidized factors/unreduced early	1+	

Risk Matrix

Plan Design Risk (continued)

- Most flexibility in this component
- Significant opportunities for risk adjustment

DESCRIPTION OF RISK	ANALYSIS	RISK FACTOR
Disability	none or requires Social Security disability	0
	Plan determines eligibility or highly subsidized benefit	1+
COLA	Sum the following, based on design:	<i>Risk Factor</i>
	none	0
	fixed rate < 2%	1
	fixed rate > 2%	2
	linked to CPI	3
	Annual minimum rate	1
	Annual maximum rate	-0.5
	Lifetime maximum increase	-0.5
Delayed start	-0.5	
DROP	If the plan offers DROP, add 1+ based on design	
Other	Determined by the actuary	

Fixed COLA of 1.5%

Risk Matrix

Plan Sponsor Risk and Total Risk Factor

DESCRIPTION OF RISK	ANALYSIS		RISK FACTOR
10-year average % ADC contributed	95%+	0	0
	< 95%	1+	
Fiduciary risk	Follows good fiduciary practice	0	0
	Missing key elements (such as annual valuations, completing an experience study every five years, using a reasonable investment return assumption)	1+	
		Total Risk Factor	4

Risk Matrix

Plan Sponsor Risk and Total Risk Factor

- Sum all risk components (1 + 3 + 0) = 4
- Identify the Risk Load Factor based on the Total Risk Factor = 10%
- Funding Policy Liability = 110% x Accrued Liability

Total Risk Factor	Risk Load Factor
< 1	0%
1 - 2	5%
3 - 4	10%
5	15%
6	20%
7	25%
8	30%
9	35%
10+	40%

Pros/Cons

Plan Sponsor Risk and Total Risk Factor

PROS

- Quantifies a process that many actuaries historically do subjectively
- Built in margin for adverse experience
- Helps to communicate risk to the board/stakeholders
- Provides a structure for discussing plan changes/improvements
- Possible compromise when there is disagreement on key assumptions (such as discount rate)
- Disciplined approach for sponsors who desire/need a conservative funding policy
- CSA allows for funding flexibility

CONS

- Could be politically difficult to implement
- Concerns about increased burden on current contribution payers
- Possible issues with having a funding target something other than 100% of AAL
- Some projection scenarios result in substantial surplus (when measured against AAL)
- Different measures for GASB and other reporting
- Fiduciary (Agency) risk category(ies) can be a challenge to communicate

Applications (short of full implementation)

- ✓ Educational exercise during assumption setting or plan design processes
- ✓ Measuring stick for benefit improvements
- ✓ Risk adjusted target could be used as a metric in funding projections
- ✓ Secondary funding policy for making ad hoc additional contributions
- ✓ Normalization tool for comparing different pension plans/systems



Q&A

Data reliance and limitations

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Thank you!

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