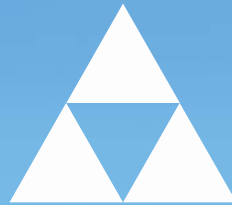


American Academy of Actuaries Annual Meeting and Public Policy Forum

November 13–14, 2014



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

Public Sector Pension Plans Plenary



AMERICAN ACADEMY *of* ACTUARIES

Objective. Independent. Effective.™

Public Sector Pension Plans Plenary

- Moderator: Bill Hallmark, MAAA, ASA, EA, FCA
 - Chairperson, Public Plans Subcommittee
- Stephen Gauthier
 - Director of Technical Services, Government Finance Officers Association
- Matthew Smith, MAAA, EA, FCA
 - Chief Pension Actuary, Office of the State Actuary, Washington State
- Frank Todisco, MAAA, FSA, EA, FCA
 - Chief Actuary, Government Accountability Office
- Melissa Moye, Ph.D.
 - Senior Policy Advisor, Office of State and Local Finance, Treasury Department



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

PUBLIC SECTOR PENSION PLANS PLENARY

Stephen J. Gauthier
Director of Technical Services
Government Finance Officers Association

Presentation to
American Academy of Actuaries Annual Meeting

PUBLIC-SECTOR BACKGROUND

Standards and Practice

Background

- Three phases
 1. NCGA Statement 1 (effective 6/30/1981)
 2. GASB Statement No. 27 (effective 6/30/98)
 3. GASB Statement No. 68 (effective 6/30/15)

1. NCGA Statement 1

- Initially: disclosure only
 - Theory = governments are perpetual entities
- Later: funding-related (APB 8)
 - Pension expense = actuarially determined contribution
 - Liability = unfunded contributions

2. GASB Statement No. 27

- No change
 - Pension expense = actuarially determined contribution
 - Liability = unfunded contributions
- Change = actuarial parameters
 - Actuarial assumptions
 - Amortization periods
 - Frequency and timing of valuations

3. GASB Statement No. 68

- Change
 - A. Employer liability
 - B. Actuarial method
 - C. Discount rate
 - D. Employer expense
 - E. Amortization

A. Employer liability

- Current guidance:
 - Annual required contribution (ARC)
 - Less: Actual contributions
 - Net pension obligation (NPO)
- New guidance:
 - Total pension liability (TPL)
 - Less: Fiduciary net position (FNP)
 - Net pension liability (NPL)

B. Actuarial method

- Current guidance
 - Whatever actuarial method is used for funding
 - Six acceptable methods
 - Must be applied within parameters defined by GASB
- New guidance
 - No tie to actuarial method used for funding
 - All employers will use the entry age method for accounting and financial reporting purposes (with service cost determined as a percentage of pay)

C. Discount rate

- Current guidance
 - Estimated long-term investment yield for the plan, with consideration given to the nature and mix of current and expected plan investments
- New guidance
 - Modification necessary if it is expected that FNP will not be sufficient to pay benefits to active employees and retirees
 - Single blended rate

D. Employer expense

- Current guidance
 - Calculation tied to funding = ADC/ARC
- New guidance
 - Calculation tied to cost
 - Changes in the net pension liability (NPL)

E. Amortization

- Current guidance
 - Effect amortized over a period not to exceed 30 years
- New guidance
 - Effect to be amortized over a much shorter period
 - Different periods, depending on the circumstances

Amortization - changes in benefits

- Immediate recognition

Amortization - changes in assumptions

- Closed period equal to average remaining service period of plan members
 - Average remaining service period of retirees = 0 years

Amortization - actual vs. assumed

- Differences between expected and actual investment returns
 - Closed 5-year period (including current period)
- Other
 - Closed period equal to average remaining service period of plan members
 - Average remaining service period of retirees = 0 years

Application to cost sharing plans

- Assign total amounts for all employers to individual participating employers based on proportionate contribution
 - Employer liability
 - Employer expense

Funding concerns

- Accounting and financial reporting no longer designed to address ongoing funding
- Need for a funding policy independent of accounting and financial reporting

Funding guidelines

- Four basic principles
 1. Employer contribution should be actuarially determined
 2. Calculation of the ADEC should balance
 - Interperiod equity
 - Volatility management (stable contributions)
 3. Employer should commit to fully funding the ADEC
 4. Employer should demonstrate accountability and transparency

GFOA Best Practice

- Adopts funding guidelines
- Specific guidance on application to a number of situations
 - Example: asset smoothing

Public-Sector Pension Plans Plenary

Matt Smith
 State Actuary, Washington State

Presentation to
 American Academy of Actuaries Annual Meeting

$$\int x^2 \sqrt{x^2 \pm a^2} dx = \frac{x}{8} (2x^2 \pm a^2) \sqrt{x^2 \pm a^2} - \frac{a^2}{8} \ln|x + \sqrt{x^2 \pm a^2}| + C$$

$$\int \frac{\sqrt{x^2 - a^2}}{x} dx = \sqrt{x^2 - a^2} - a \operatorname{sech}^{-1} \frac{x}{a} + C$$

$$\int x^2 \sqrt{x^2 \pm a^2} dx = \frac{x}{8} (2x^2 \pm a^2) \sqrt{x^2 \pm a^2} - \frac{a^2}{8} \ln|x + \sqrt{x^2 \pm a^2}| + C$$

$$\int \frac{x^2}{\sqrt{x^2 \pm a^2}} dx = \frac{x}{2} \sqrt{x^2 \pm a^2} \mp \frac{a^2}{2} \ln|x + \sqrt{x^2 \pm a^2}| + C$$

$$\int \frac{\sqrt{x^2 \pm a^2}}{x^2} dx = -\frac{\sqrt{x^2 \pm a^2}}{x} + \ln|x + \sqrt{x^2 \pm a^2}| + C$$

$$\int \frac{dx}{x^2 \sqrt{x^2 \pm a^2}} = -\frac{1}{a^2 x} \sqrt{x^2 \pm a^2} + C$$

$$\int \frac{dx}{(x^2 \pm a^2)^{3/2}} = \frac{\pm x}{a^2 \sqrt{x^2 \pm a^2}} + C$$

$$\int (x^2 \pm a^2)^{3/2} dx = \frac{x}{8} (2x^2 \pm 5a^2) \sqrt{x^2 \pm a^2} + \frac{3a^4}{8} \ln|x + \sqrt{x^2 \pm a^2}| + C$$

$x = p \cos \varphi$
 $y = p \sin \varphi$
 $|r| = p$
 $\varphi \in [2\pi, 2\pi]$
 $-4 \leq x^2 + y^2 \leq -6y$
 $-4 \sin^2 \varphi \leq p - 6 \sin \varphi$
 $2\pi - 6 \sin \varphi$
 $|r| = \sqrt{p^2 - 4 \sin^2 \varphi}$
 $p dp = \dots$
 $\sqrt{h^2 + h^2} = 60$



Overview

- Background on Washington State pensions
- What made Washington's first generation plans unsustainable?
- Lessons learned and applied to current plans
- Recent efforts to support sustainability



Washington State Plans Cover Diverse Membership

- Six open systems
 - Defined Benefit (DB) plans
 - Hybrid plans – DB and Defined Contribution (DC)
- General government employees at state and local levels
 - Except Seattle, Tacoma, and Spokane
- School employees
- Police, fire, and public safety
- Most employees covered by Social Security

Early Reformer And Adopter Of Hybrid Design

- Washington's first generation plans ("Plans 1") closed to new members in October 1977
- Replaced with plans with age 65 unreduced retirement age for non-safety plans
- New members of PERS, TRS, and SERS can choose between
 - Traditional DB plan (Plan 2)
 - Hybrid plan (Plan 3); first adopted in 1996



Unique Governance Structure In Washington

- Legislature sets statewide funding and benefits policy
- Separate state investment board
- Separate plan administrator
- In-house actuarial services provided by independent agency
 - State actuary appointed/removed by bipartisan committee that includes stakeholder representatives
- No umbrella board

Summary Of Plan Participants At June 30, 2013

Participant Data	
All Systems	2013
Active Members	
Number	291,345
Total Salaries (<i>in Millions</i>)	\$16,522
Average Annual Salary	\$56,710
Average Attained Age	47.7
Average Service	12.4
Retirees and Beneficiaries	
Number	150,145
Average Annual Benefit	\$21,637

Employer Contribution Rates

Employer Contribution Rates*		
	Current	2015-17 Adopted
PERS	9.03%	11.00%
TRS	10.21%	12.95%
SERS 2/3	9.64%	11.40%
PSERS	10.36%	11.36%
LEOFF 1	0.00%	0.00%
LEOFF 2	8.41%	8.41%
WSPRS 1/2	7.91%	8.01%

**Excludes current administrative expense rate of 0.18%. Adopted rates subject to revision by Legislature.*

- PERS, SERS, and PSERS rates include PERS 1 UAAL rate
- TRS rate includes TRS 1 UAAL rate
- LEOFF 2 rate includes state and local employer rate

Funded Status At June 30, 2013

Funded Status on an Actuarial Value Basis*

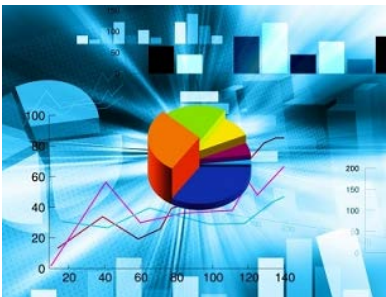
(Dollars in Millions)

	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plans 2/3	Plan 1	Plans 2/3	Plans 2/3	Plan 2	Plan 1	Plan 2		
Accrued Liability	\$12,884	\$23,798	\$9,449	\$8,016	\$3,273	\$180	\$4,410	\$6,859	\$959	\$69,828
Valuation Assets	\$8,053	\$24,335	\$6,717	\$8,406	\$3,335	\$224	\$5,516	\$7,862	\$1,009	\$65,458
Unfunded Liability	\$4,831	(\$537)	\$2,732	(\$390)	(\$62)	(\$44)	(\$1,107)	(\$1,003)	(\$50)	\$4,370
Funded Ratio										
2013	63%	102%	71%	105%	102%	124%	125%	115%	105%	94%

*Liabilities valued using the PUC cost method at an interest rate of 7.8% (7.5% for LEOFF 2). All assets have been valued under the actuarial asset method.

Funded Status – One Measurement Does Not Fit All

- Developing interactive funded status reports where user can select
 - Measurement year
 - Asset valuation method
 - Discount rate
- Link to developmental site
 - [Interactive Report Site](#)



What Made Washington's Plans 1 Unsustainable?

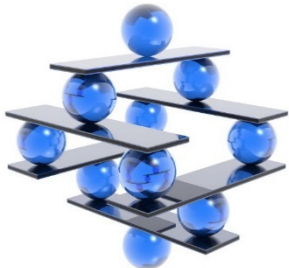
- Unanticipated needs and cost increases
 - Plan design and original funding policy did not anticipate longer life spans and post-retirement inflation
- Retroactive benefit increases
 - Benefit increases provided for all years of service
 - Loss of intergenerational equity for funding purposes
- Funding shortfalls
 - No systematic actuarial funding policy for over 50 years for TRS (over 40 years for PERS)
 - Fixed employee contribution rates
 - Contributions made at discretion of Legislature and consistently below required levels
- Significant unfunded accrued liabilities developed

Lessons Learned And Applied To Current Plans

- The “first rule of holes” ... if you find yourself in a hole, stop digging
 - Identification of unaffordability of Plans 1 led to their closure 37 years ago
- Closed plans replaced with plan designs with later retirement ages and post-retirement inflation protection
- Increased cost sharing
 - Plan 2 members share equally in cost of their plan with employers
 - Non-safety members assume a much larger share of cost of early retirement through early retirement reduction factors
- Remove unfunded accrued liability from funding policy
 - Open plans use the Aggregate actuarial cost method
 - By definition, all expected plan costs contained over expected working lifetimes of current employees under this method

More Lessons Learned And Responses

- Under former funding policies and actuarial methods, bull markets led to adoption of decreasing contribution rates and benefit improvements
- In response, funding policy strengthened with adoption of minimum contribution rates
 - Based on normal cost under Entry Age Normal (EAN) method
 - Rate does not vary based on short-term investment performance
- Some benefit improvements repealed after Great Recession
 - Legislature reserved right to repeal certain benefit improvements in the future, on a prospective basis only, at the time benefits were enacted
 - State supreme court recently affirmed Legislature's right in one resolved court case; another similar case pending



Recent Efforts To Support Sustainability

- Risk assessment performed and new tools/information provided
 - Included 20-year look-back on investments, state tax revenue, funding practices, and benefit enhancements
 - Stochastic modeling used to evaluate outcomes if past practices continue
 - “Pension scorecard” summarizes risk profile; updated annually
- Removed negative amortization from Plan 1 funding method
- Lowering the assumed rate of return
 - High was 8 percent; now 7.8 percent with a plan to phase down to 7.7 percent by 2017
 - Most recent recommendation was 7.5 percent
- Adoption of Scale BB Mortality Improvement
 - Assumption adopted after recent experience study
 - Contribution rate impact spread over six years; subject to revision by the Legislature

Pension Risk Scorecard

Pension Score Card			
Category (Dollars in Billions)	Value	Year	Score
Affordability			
Chance Pensions will Consume More than 8% of GF-S ¹	3.9%	2024	86
5% Chance GF-S ¹ Consumption will Exceed	7.7%	2024	66
5% Chance Employer Contribution Rate will Exceed	16.9%	2034	56
Risk			
Chance of PERS 1, TRS 1 in Pay-Go ²	19.0%	2036	41
Chance of Open Plan in Pay-Go ²	5.7%	2062	54
5% Chance Annual Pay-Go Cost ³ in PERS 1, TRS 1 Exceed	\$1.3	2021	42
5% Chance Annual Pay-Go Cost ³ in Open Plans Exceed	\$12.5	2062	0
Chance of Total Funded Status Below 60%	24.9%	2062	39
Total Weighted Score			54

¹Approximately 3% of current General Fund-State (GF-S) budget; excludes higher education.

²When today's value of annual cost exceeds \$25 million.

³Pay-Go costs on top of normal pension costs.

- Assumes continuation of past funding and benefit enhancement practices
- See *2010 Risk Assessment Report* for supporting information

Recapping Washington's Experience

- Factors that led to closure of original plan designs
 - Unanticipated needs and cost increases
 - Retroactive benefit improvements
 - Funding shortfalls
- Many lessons learned and applied to current plan designs and funding policy in Washington State
 - Later retirement ages, post-retirement inflation protection, and increased cost sharing
 - Unfunded accrued liability removed from funding policy
 - Minimum contribution rates adopted
- Recent efforts to support sustainability
 - Expanded risk analysis
 - Removed negative amortization
 - Assumption changes
- Efforts will continue and risk management practices will evolve

Funded Status Measurements

Valuation Year: Asset Valuation Method:

Accrued Liability:

1 of 1 100% Find | Next

Funded Ratio as of 6/30/2013 Based on Actuarial Value of Assets and Liabilities Discounted @ Statutory Rate for Funding¹

(Dollars in Millions)	PERS Plan 1	PERS Plan 2/3	TRS Plan 1	TRS Plan 2/3	SERS Plan 2/3	PSERS Plan 2	LEOFF Plan 1	LEOFF Plan 2	WSPRS Plan 1/2	Total
Accrued Liability	\$12,884	\$23,798	\$9,449	\$8,016	\$3,273	\$180	\$4,410	\$6,859	\$959	\$69,828
Actuarial Value of Assets	\$8,053	\$24,335	\$6,717	\$8,406	\$3,335	\$224	\$5,516	\$7,862	\$1,009	\$65,458
Unfunded Liability	\$4,831	(\$537)	\$2,732	(\$390)	(\$62)	(\$44)	(\$1,107)	(\$1,003)	(\$50)	\$4,370
Funded Ratio	63%	102%	71%	105%	102%	124%	125%	115%	105%	94%

¹Discount Rates for 2013: Statutory = 7.8% (7.5% in LEOFF 2); Market = 5.0%

Note: Please see the [Actuarial Valuation Report \(AVR\)](#) on the Office of the State Actuary's website for the data, assumptions, and methods used to produce these results. The AVR also includes other information on the intended use and purpose of this information. Distribution or reliance on this information without consideration of the intended use and purpose could result in its misuse and may mislead others. Totals may not add due to rounding.

Funded Status Measurements

Valuation Year: Asset Valuation Method:

Accrued Liability:

1 of 1 100% Find | Next

Funded Ratio as of 6/30/2013 Based on Market Value of Assets and Liabilities Discounted @ Statutory Rate for Funding¹

(Dollars in Millions)	PERS Plan 1	PERS Plan 2/3	TRS Plan 1	TRS Plan 2/3	SERS Plan 2/3	PSERS Plan 2	LEOFF Plan 1	LEOFF Plan 2	WSPRS Plan 1/2	Total
Accrued Liability	\$12,884	\$23,798	\$9,449	\$8,016	\$3,273	\$180	\$4,410	\$6,859	\$959	\$69,828
Market Value of Assets	\$7,347	\$23,459	\$6,127	\$8,109	\$3,212	\$226	\$5,140	\$7,637	\$956	\$62,213
Unfunded Liability	\$5,538	\$339	\$3,321	(\$93)	\$61	(\$46)	(\$730)	(\$778)	\$3	\$7,615
Funded Ratio	57%	99%	65%	101%	98%	125%	117%	111%	100%	89%

¹Discount Rates for 2013: Statutory = 7.8% (7.5% in LEOFF 2); Market = 5.0%

Note: Please see the [Actuarial Valuation Report \(AVR\)](#) on the Office of the State Actuary's website for the data, assumptions, and methods used to produce these results. The AVR also includes other information on the intended use and purpose of this information. Distribution or reliance on this information without consideration of the intended use and purpose could result in its misuse and may mislead others. Totals may not add due to rounding.

Funded Status Measurements

Valuation Year: Asset Valuation Method:

Accrued Liability:

1 of 1 100% Find | Next

Funded Ratio as of 6/30/2013
Based on Actuarial Value of Assets and
Liabilities Discounted @ Statutory Rate for Funding minus 1%¹

(Dollars in Millions)	PERS Plan 1	PERS Plan 2/3	TRS Plan 1	TRS Plan 2/3	SERS Plan 2/3	PSERS Plan 2	LEOFF Plan 1	LEOFF Plan 2	WSPRS Plan 1/2	Total
Accrued Liability	\$14,012	\$27,818	\$10,272	\$9,523	\$3,806	\$226	\$4,844	\$8,212	\$1,105	\$79,818
Actuarial Value of Assets	\$8,053	\$24,335	\$6,717	\$8,406	\$3,335	\$224	\$5,516	\$7,862	\$1,009	\$65,458
Unfunded Liability	\$5,959	\$3,484	\$3,555	\$1,117	\$471	\$2	(\$673)	\$349	\$96	\$14,360
Funded Ratio	57%	87%	65%	88%	88%	99%	114%	96%	91%	82%

¹Discount Rates for 2013: Statutory = 7.8% (7.5% in LEOFF 2); Market = 5.0%

Note: Please see the [Actuarial Valuation Report \(AVR\)](#) on the Office of the State Actuary's website for the data, assumptions, and methods used to produce these results. The AVR also includes other information on the intended use and purpose of this information. Distribution or reliance on this information without consideration of the intended use and purpose could result in its misuse and may mislead others. Totals may not add due to rounding.

Funded Status Measurements

Valuation Year: Asset Valuation Method:

Accrued Liability:

1 of 1 100% Find | Next

Funded Ratio as of 6/30/2013 Based on Market Value of Assets and Liabilities Discounted @ Market Value (2% + Assumed Inflation for Liabilities)¹

(Dollars in Millions)	PERS Plan 1	PERS Plan 2/3	TRS Plan 1	TRS Plan 2/3	SERS Plan 2/3	PSERS Plan 2	LEOFF Plan 1	LEOFF Plan 2	WSPRS Plan 1/2	Total
Accrued Liability	\$16,561	N/A	\$12,134	N/A	N/A	N/A	\$5,840	N/A	N/A	N/A
Market Value of Assets	\$7,347	N/A	\$6,127	N/A	N/A	N/A	\$5,140	N/A	N/A	N/A
Unfunded Liability	\$9,214	N/A	\$6,007	N/A	N/A	N/A	\$701	N/A	N/A	N/A
Funded Ratio	44%	N/A	50%	N/A	N/A	N/A	88%	N/A	N/A	N/A

¹Discount Rates for 2013: Statutory = 7.8% (7.5% in LEOFF 2); Market = 5.0%

Note: Please see the [Actuarial Valuation Report \(AVR\)](#) on the Office of the State Actuary's website for the data, assumptions, and methods used to produce these results. The AVR also includes other information on the intended use and purpose of this information. Distribution or reliance on this information without consideration of the intended use and purpose could result in its misuse and may mislead others. Totals may not add due to rounding.

American Academy of Actuaries 2014 Annual Meeting

Public Sector Pension Plans Plenary

November 13, 2014

Frank Todisco, MAAA, FSA, FCA, EA
Chief Actuary
U.S. Government Accountability Office (GAO)
TodiscoF@gao.gov

Views expressed are not necessarily those of the GAO.

GAO reports referred to today

- 2010: *State and Local Government Pension Plans: Governance Practices and Long-Term Investment Strategies Have Evolved Gradually as Plans Take on Increased Investment Risk* (GAO-10-754)
- 2012: *State and Local Government Pension Plans: Economic Downturn Spurs Efforts to Address Costs and Sustainability* (GAO-12-322)
- Sept 2014: *Pension Plan Valuation: Views on Using Multiple Measures to Offer a More Complete Financial Picture* (GAO-14-264)
- For more on GAO, see 3/20/14 Academy webinar, *Actuary Serving Congress: A Conversation with GAO's Chief Actuary* (<http://www.actuary.org/content/actuary-serving-congress-conversation-gao%E2%80%99s-chief-actuary>)

2010 report on investment policy

- Gradual increases, over many years, in higher risk investments
- Approx. two-thirds in equities, alternatives, real estate
- Ex: CalSTRS gradually decreased its allocation to fixed income from 80% in 1981 to 20 % in 2009

2012 report on responses to financial crisis

Notable Changes to State-Sponsored Pension Plans, Jan 2008–June 2011



Source: GAO analysis of annual NCSL reports.

2012 report on responses to financial crisis

- Other actions to reduce sponsor contributions in the short term:
 - Stretching out amortization periods
 - Expanded asset smoothing
 - Phasing in or capping contribution increases, or not making scheduled contributions
- Multiple benefit and funding actions packaged together

2014 report on discount rates

- Public sector
- Private sector
 - Single-employer
 - Multiemployer
- Other countries
 - Canada
 - Netherlands
 - U.K.

Discount rate approaches

- “Assumed return” approach
 - Depends on allocation of plan assets
- “Bond-based” approach
 - Based on observable prices
 - Independent of allocation of plan assets
- Variations
 - Bond quality (or annuity prices)
 - Smoothing
 - Margin for conservatism

Purpose of measurement

- Funding / budgeting
- Reporting to stakeholders
 - Financial reporting (accounting)
 - Notices to participants
- Amount needed for solvency, termination, settlement, or to minimize or eliminate risk
- Valuing benefits as part of compensation
- Lump sum settlement amounts (forthcoming GAO report)

Some available US discount rate information

(see Table 2 in GAO-14-264 for sources, dates, and additional detail)

Applicability	Discounting premise	Discount rate
Public sector sponsors	Assumed return	7.72%
Multiemployer plans	Assumed return	7.52%
Private sector single-employer sponsors, funding, post-MAP-21	Corporate bond rates averaged over 25 years	4.94% (0-5 yrs) 6.15% (5-20 yrs) 6.76% (20+ yrs)
Private sector single-employer sponsors, funding, pre-MAP-21	Corporate bond rates averaged over 2 years	1.28% (0-5 yrs) 4.05% (5-20 yrs) 5.07% (20+ yrs)
Private sector single-employer sponsors, financial reporting	Corporate bond rates, no averaging	4.88%
PBGC	Group annuity prices	3.00% (0-20 yrs) 3.31% (20+ yrs)

Considerations (slide 1 of 2)

- Impact / incentives re “real” policies: funding, benefits, investment
- Level and predictability of cost
- Benefit security and risks to stakeholders
- Plan and sponsor characteristics

Considerations (slide 2 of 2)

- Intergenerational equity
- System sustainability
- Transparency and comparability

Two opposing views on sustainability of DB plans

(A) DB plans have / will disappear **because of** market-based measures

- Stringent rules → too much volatility → preference for DC, or
- Stringent rules → forced de-risking → ↑ perceived cost
→ preference for DC

(B) DB plans have / will disappear **because of absence of** market-based measures

- Flexible rules → limited risk management → inevitable crises
→ abandonment of DB

Multiple measures and assumed returns

- Many called for multiple liability measures
 - Some called for just assumed return measures
 - Some called for just bond-based measures
- Many viewed assumed returns of 7.5-8% as too high

Canada

- No national pension insurance system
- Two liability measures: “going concern” (assumed return) and “solvency” (bond-based, tied to Canadian government bonds)
- Private sector – Funding based on greater of two amortization calculations
- Public and multiemployer – Funding based on going concern measure, but solvency measure disclosed
- Assumed returns typically not more than 6%

The Netherlands (slide 1 of 2)

- No pension insurance system
- Indexation of benefits dependent on investment returns
- No regulatory distinctions among public, private, or multiemployer plans
- Bond-based liability measure (Euro interest rate swaps curve)

The Netherlands (slide 2 of 2)

- Risk-adjusted funding target
 - Increases with riskiness of asset allocation
 - E.g., if 50% equity, 40% bond, 10% real estate, funding target = about 120% of liability
- Can use assumed returns in determining contribution or developing recovery plan
 - Assumed return assumptions capped by an independent commission
 - E.g., not more than 7% for equities (Dec 2013)

United Kingdom (slide 1 of 2)

- National pension insurance program for private plans (Pension Protection Fund)
- Public plans not funded; benefits paid out of general revenue; 5% discount rate (Dec 2013)
- Private plans: “Scheme-Specific Funding” framework
 - Overseen by The Pensions Regulator
 - Risk-based review

United Kingdom (slide 2 of 2)

- Regulator looks at plan characteristics and strength of sponsor
- Plans can use bond-based or assumed return discount rates, or a combination
- Split discount rates are common
 - Gilt rates for the retirement period
 - Gilts plus 2-3% for the preretirement period
 - Overall rates around gilts plus 1%
- Discount rates averaged 4.3% (2012)

Regulatory oversight of assumed returns

- Other countries' assumed returns (to the extent used) are lower than in U.S.
- Greater regulatory oversight cited

U.S. Department of the Treasury Office of State and Local Finance

American Academy of Actuaries

Panel on Public Sector Plans

November 13, 2014

- ▶ OSLF is designed and staffed to provide critical thinking and coordination on federal policies that impact state and local finance.
- ▶ OSLF provides analysis and coordination on federal policies that impact state and local finance, particularly in the following areas:
 - ▶ developments in the municipal markets
 - ▶ infrastructure finance
 - ▶ pension and OPEB funding
 - ▶ budget practices and fiscal condition
- ▶ Treasury has a keen interest in state and local governments being able to fund debt and retirement obligations while continuing to provide critical health, safety, education, infrastructure and economic development programs to their residents.
- ▶ With over 25 million Americans depending on public pensions, the health of state and local funds is clearly critical to the retirement security equation in the U.S.

- In the wake of GASB 67 and 68, is there a gap in guidance for funds and sponsors in setting contributions? If so, what are actuaries doing about it (or could do about it)?
- Are the policies and practices described in the CCA's recent white paper, 'Actuarial Funding Policies and Practices for Public Pension Plans,' sufficient to ensure public plans are affordable and sustainable going forward?
- In your experience, does direct smoothing of contributions combined with smoothing of asset values risk the slow recuperation of funding (and thereby impede the goal of accumulating the PV of benefits by retirement)?
- What challenges, if any, are posed by increasing complexity of actuarial reports, particularly in the case of smaller plans?
- How can risk be better measured and communicated to public plan stakeholders? Since all retirement plans including DC plans, are subject to risk, how can the degree and elements of risk be communicated to facilitate better decision-making and provide more reliable information to the public?