Coping with the Realities of GASB 67 and 68

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What We Will Cover

- GASB Statements 67 and 68
  - Significant changes
  - Disclosures
  - Overview/implementation of GASB 68
  - Address practical issues
  - Examples

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Plans Subject to GASB Statement 68

- DB pension plans provided through trusts that meet the following criteria:
  - Employer/non-employer contributions irrevocable
  - Plan assets dedicated to providing pensions
  - Plan assets legally protected from creditors

Plans Subject to GASB Statement 68

- Applies to employers and non-employer contributing entities that have legal obligation to make contributions directly to a pension plan
  - Special funding situations
  - Other circumstances

Types of Plans

- Requirements depend on type of plan
  - Single-employer pension plan
    - Pensions provided to employees of only one employer
  - Agent multiple-employer pension plan
    - Plan assets pooled for investment purposes, separate accounts maintained for each employer
      - Employer's share of assets can only be used to pay benefits of its employees

Types of Plans

- Cost sharing multiple-employer pension plan
  - Plan assets are pooled for all purposes
    - Assets are used to pay benefits of the employees of any employer

Key Definitions

- **TPL** - Portion of actuarial PV of projected benefit payments that is attributed to past periods of member service

- **NPL** - Liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan

Significant Changes

Significant Changes

- Effective Dates
  - GASB Statement No. 67 – Financial Reporting for Pension Plans
    - Effective for FYs beginning after 6/15/13
  - GASB Statement No. 68 – Accounting and Financial Reporting for Pensions
    - Effective for FYs beginning after 6/15/14

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Significant Changes

- Next on the horizon
  - OPEB and pensions not within scope of Statements 67/68

Significant Changes

- Abbreviations
  - TPL – Total Pension Liability
  - FNP – Fiduciary Net Position
  - NPL – Net Pension Liability
  - EAN – Entry Age Normal
  - FMV – Fair Market Value

Significant Changes

- TPL is calculated using uniform funding method – EAN
- NPL recognized on balance sheet

Significant Changes

- Discount rate function of:
  - Expected return
  - Rate for 20-year, tax-exempt general obligation municipal bonds
  - Sufficiency of projected assets

Significant Changes

- Accelerated amortization of:
  - Plan changes
  - Gains/losses
  - Assumption changes

Significant Changes

- Uniform methodology to determine income/expense and balance sheet liability
  - Does not ***require*** change to funding method or contribution strategy
  - Volatility in accounting need not cause change to contribution strategy
    - However, determination of discount rate may impact contribution strategy

Disclosures

Disclosures

- Plan Description
  - Plan name, administrator(s), plan type (i.e., single-employer, agent or cost-sharing)
  - Number of participating ers and number of non-er contributing entities
  - Information regarding plan's board/trustees

Disclosures

- Plan Description
  - Number of participants in each class (i.e., retirees, term vested, actives)
  - Authority establishing and description of benefit terms
  - Description of contribution requirements for er, non-er contributing entities and participants

Disclosures

- Plan Investments
  - Investment policies, including:
    - Procedures for establishing and amending
    - Asset allocation policies
    - Description of significant investment policy changes during the reporting period

Disclosures

- Plan Investments
  - Description of how FMV is determined
  - Identification of investments in any organization that represents five percent or more of plan's NFP
  - Annual money-weighted rate of return

Disclosures

- Significant assumptions (i.e., salary scale, inflation, ad-hoc COLAs) used to measure the TPL
  - Source of mortality assumption
  - State if assumptions are based on an experience study and date of study

Disclosures

- Discount rate
  - Rate used to determine TPL for current year, change in rate since prior fiscal year
  - Assumptions regarding projected cash flows into and out of the plan
  - Long-term expected rate of return and description of how it was determined
  - If discount rate incorporates a municipal bond rate, rate used and source of rate

Disclosures

- Discount rate
  - Periods that long-term rate of return and municipal bond rate are applied
  - Assumed asset allocation and long-term real rate of return for each major asset class
  - NPL calculated using discount rate that is one percent higher and one percent lower than the discount rate

Disclosures

- Ten-year schedule of changes in NPL
  - Beginning and ending balances of TPL, NFP and NPL
  - Effect on changes to above for each component (i.e., service cost, interest on TPL, change in benefit terms, etc.)
  - Cost-sharing plans presented for plan as whole

Disclosures

- Second ten-year schedule
  - TPL
  - Plan's NFP
  - NPL
  - Plan's NFP as percentage of TPL
  - Covered payroll
  - NPL as percentage of covered payroll
  - Cost-sharing plans presented for plan as whole

Disclosures

- Third ten-year schedule
  - Actuarially determined contributions of employer/non-employer contributing entity
  - Cost-sharing plans – contractually required contribution of employer/non-employer contributing entity
  - Contributions recognized during fiscal year in relation to actuarially determined contribution

Disclosures

- Third ten-year schedule
  - Covered-employee payroll
  - Amount of contributions recognized by the plan in relation to the actuarially determined contribution as a percentage of covered-employee payroll

Disclosures

- Fourth ten-year schedule
  - Annual money-weighted rate of return for each fiscal year

Overview and Implementation of GASB Statement 68

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Key Definitions

- FNP presents the following items as of the end of plan's reporting period
  - Assets measured at FMV
    - plus
  - Deferred outflows of resources
    - minus
  - Liabilities, such as benefit payments due
    - minus
  - Deferred inflows of resources

Asset Reporting

- Assets reported at FMV should be subdivided
  - Major categories
    - i.e., cash, receivables, investments and assets used for plan operations
  - Principal components of receivables
    - i.e., er contributions, ee contributions and interest/dividends
  - Investment categories
    - Asset classes

Asset Reporting

- Liabilities
  - Benefits including refunds of participant contributions
    - Recognized when benefits are currently due and payable
  - Accrued investment and administrative expenses

Implementing GASB Statement 68

- Single and Agent Employers
  - Balance sheet liability recognized for NPL which is TPL net of plan's FNP
    - NPLs associated with different plans can be displayed in aggregate, aggregated liabilities and assets should be displayed separately
    - NPL should be measured as of date no earlier than end of prior fiscal year applied consistently from year to year

Agent Multiple-Employer Plan

- Employers need the following elements to record as of the measurement date:
  - TPL less NFP = NPL
  - Deferred outflows/inflows based on investment experience
  - Deferred outflows/inflows based on changes in assumptions
  - Deferred outflows/inflows based actuarial gains and losses
  - Pension expense

Agent Multiple-Employer Plan

- *How does participating employer determine and get comfortable that these amounts as of the measurement date are accurate and verifiable?*

Agent Multiple-Employer Plan

- Include supplemental condensed schedule of “changes in FNP” by employer in plan financial statements for which plan auditor is engaged to provide opinion

- Engage plan auditor to issue SOC 1 (type 2) report on allocation of inflows and outflows of plan to individual employer accounts

NPL: Measurement—Timing

- Potentially three different dates
  - FYE
  - NPL measurement date
    - No earlier than end of prior fiscal year
    - TPL and NPL measured as of the same date
  - TPL actuarial valuation date
    - If not measurement date, date no more than 30 months (plus one day) prior to FYE
    - Actuarial valuations at least every two years

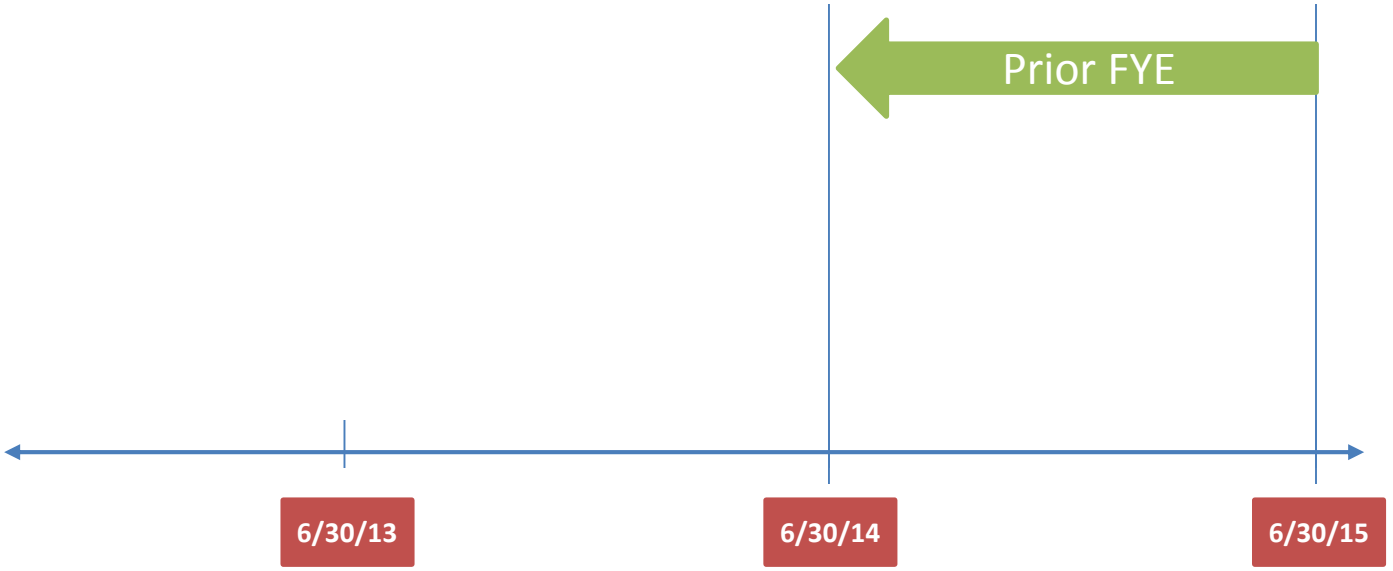
NPL: Measurement—Timing

- Coordination with pension plan
    - Measurement date will most likely correspond to year-end of plan. In this case, employers with same year-end as plan must choose measurement date as of their prior or current year-end

Timing—Example

Employer FYE

Timing—Example



Employer FYE

Measurement Date

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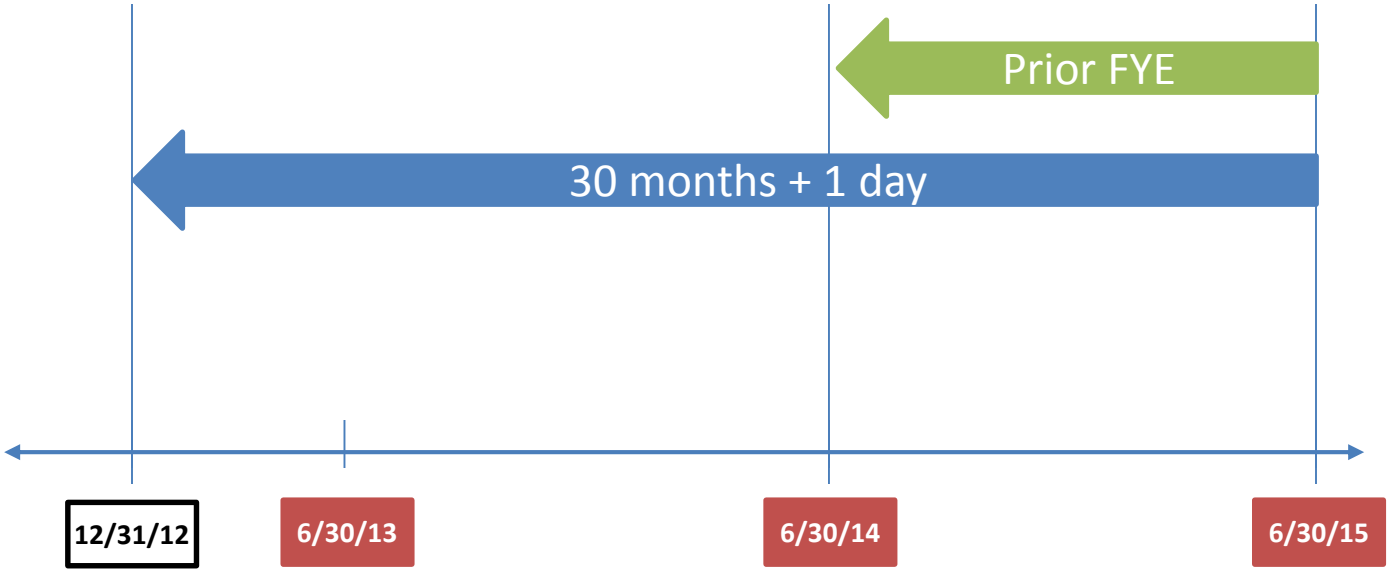
Timing—Example



Employer FYE

Actuarial Valuation Date

Measurement Date

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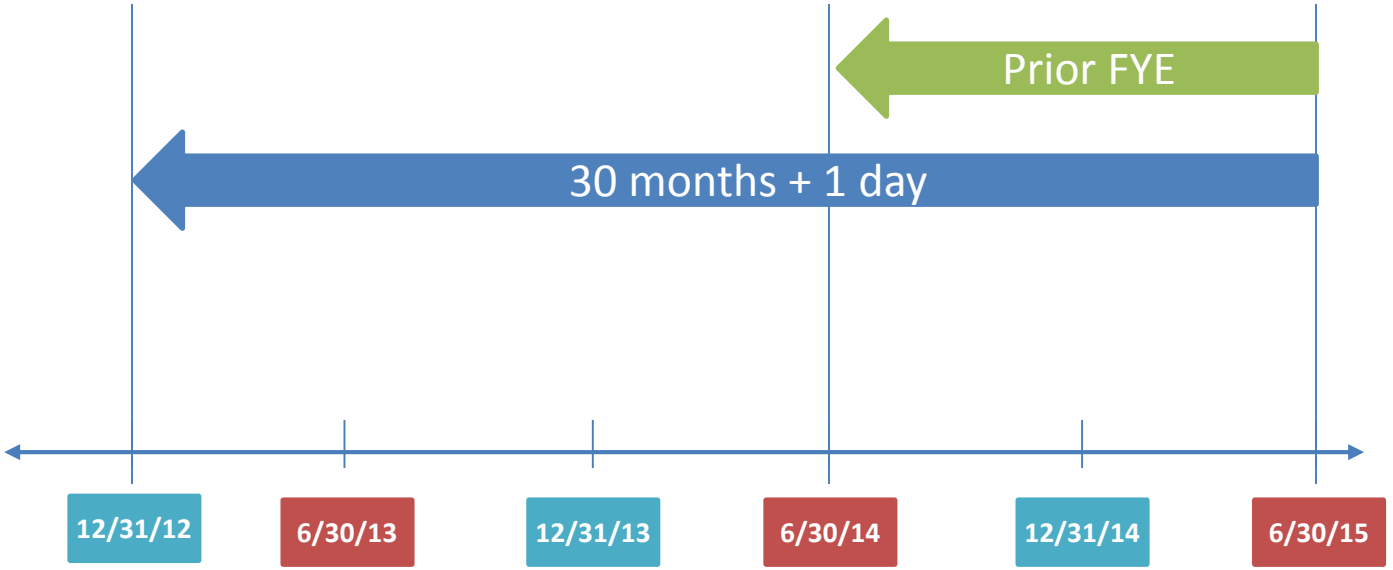
Timing—Example



Employer FYE

Plan FYE

Actuarial Valuation Date

Measurement Date

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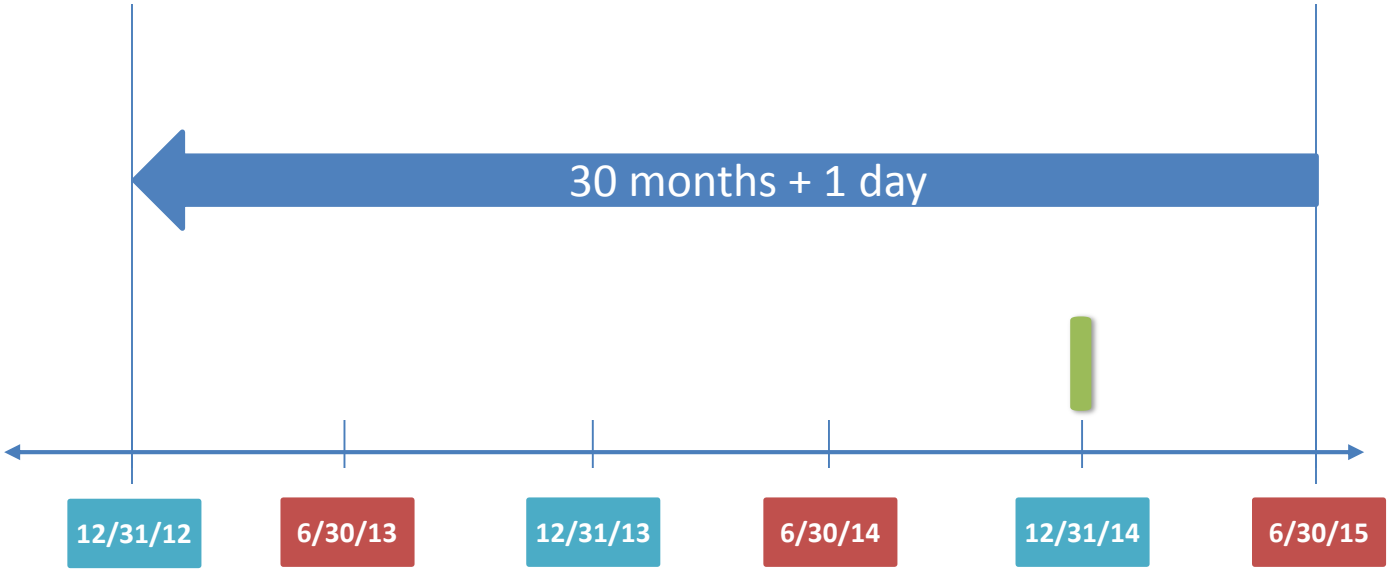
Timing—Example



Employer FYE

Plan FYE

Actuarial Valuation Date

Measurement Date

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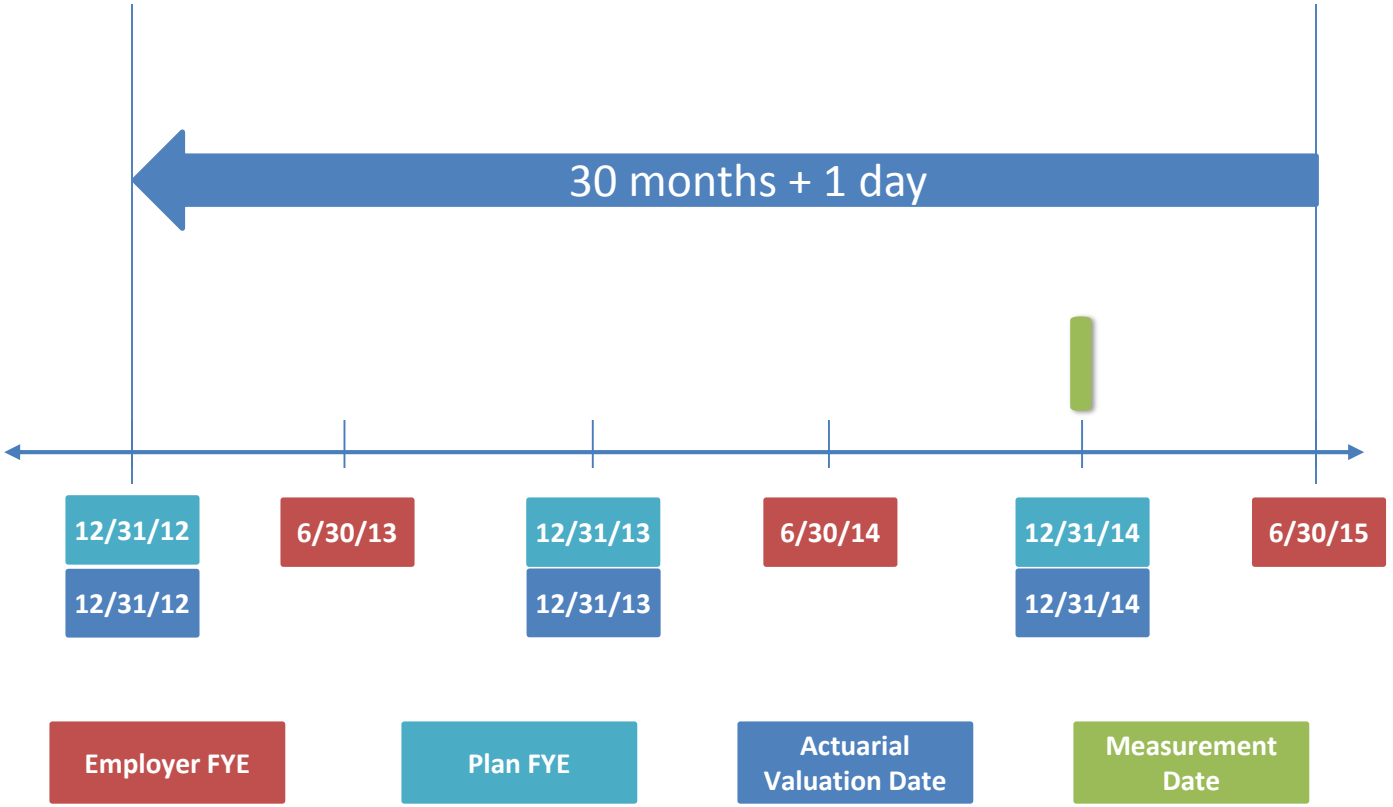
Timing—Example



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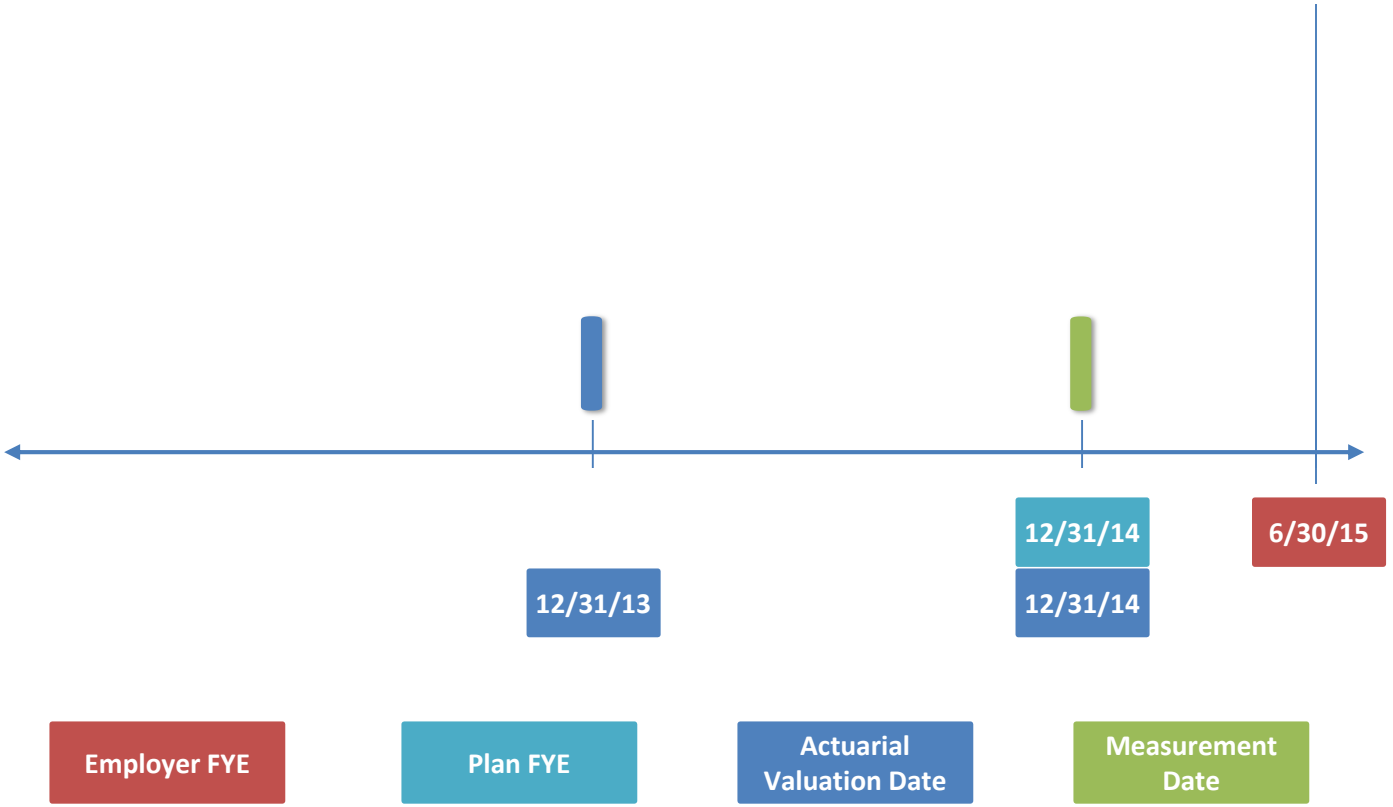
Timing—Example



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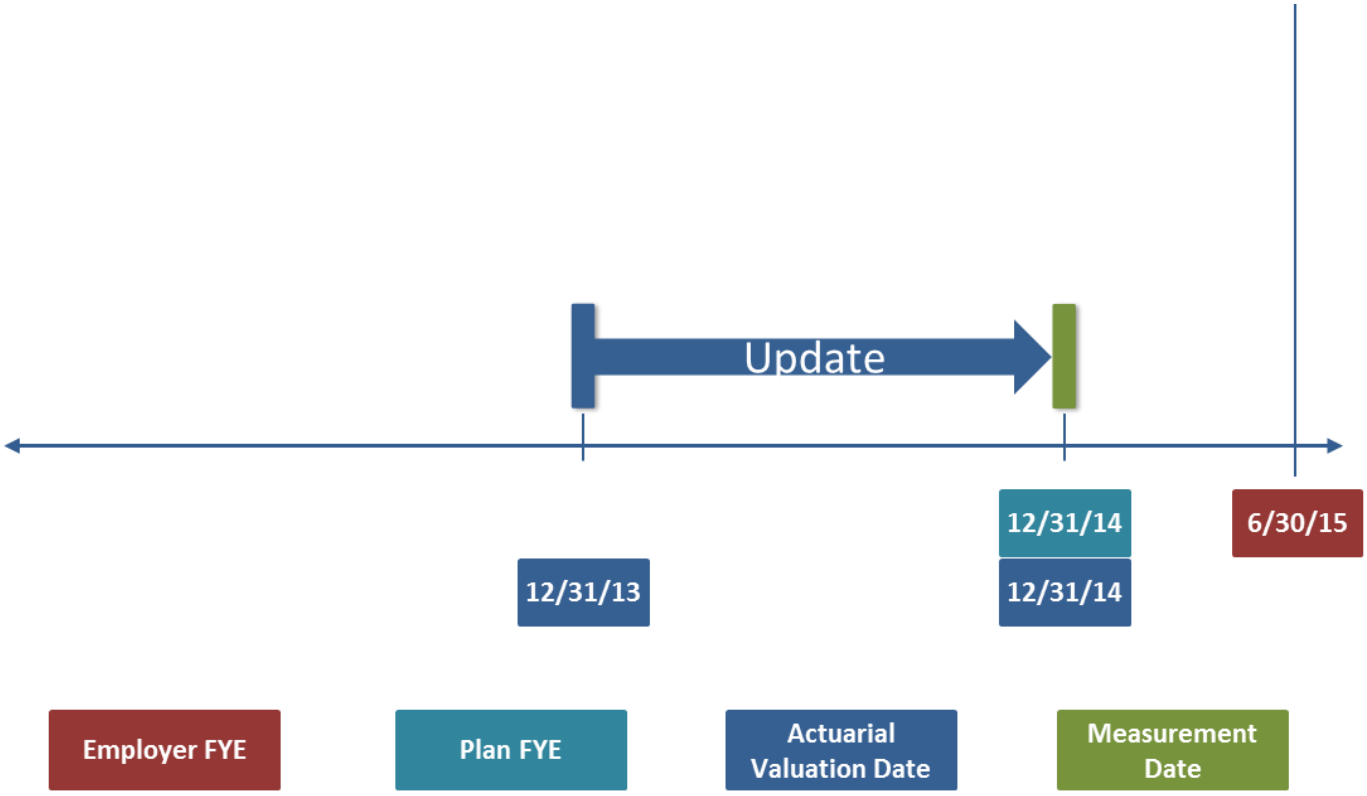
Timing—Example



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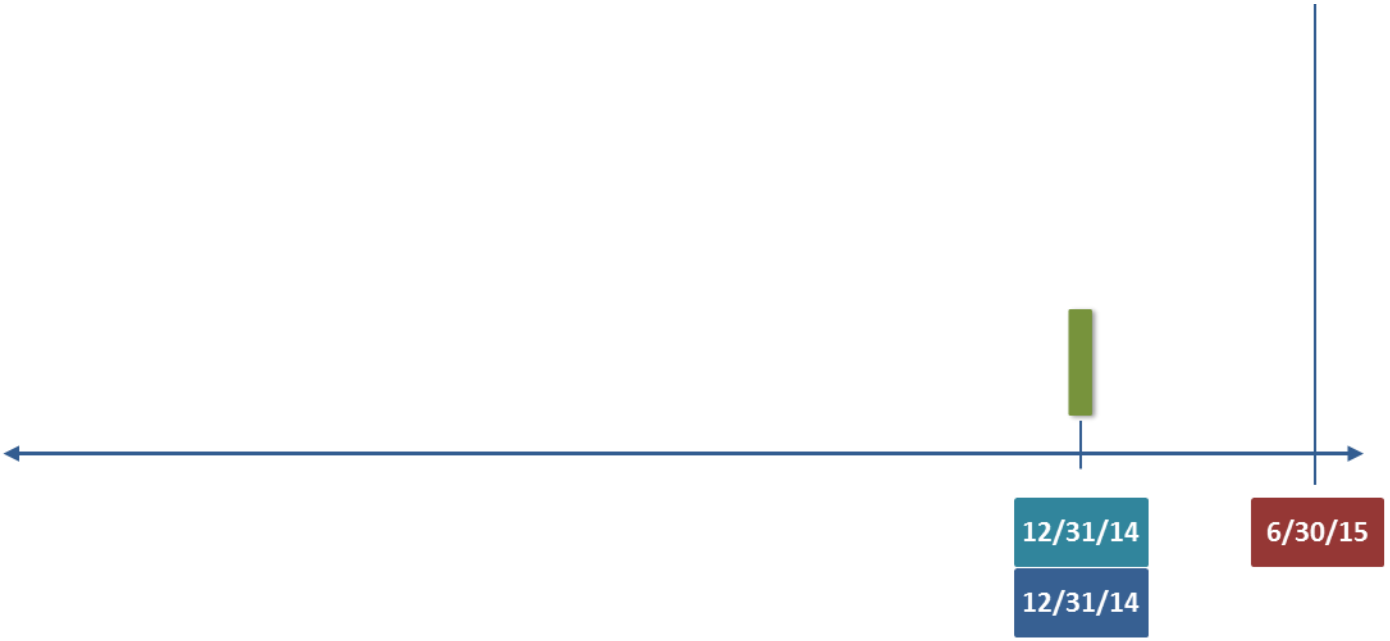
Timing—Example



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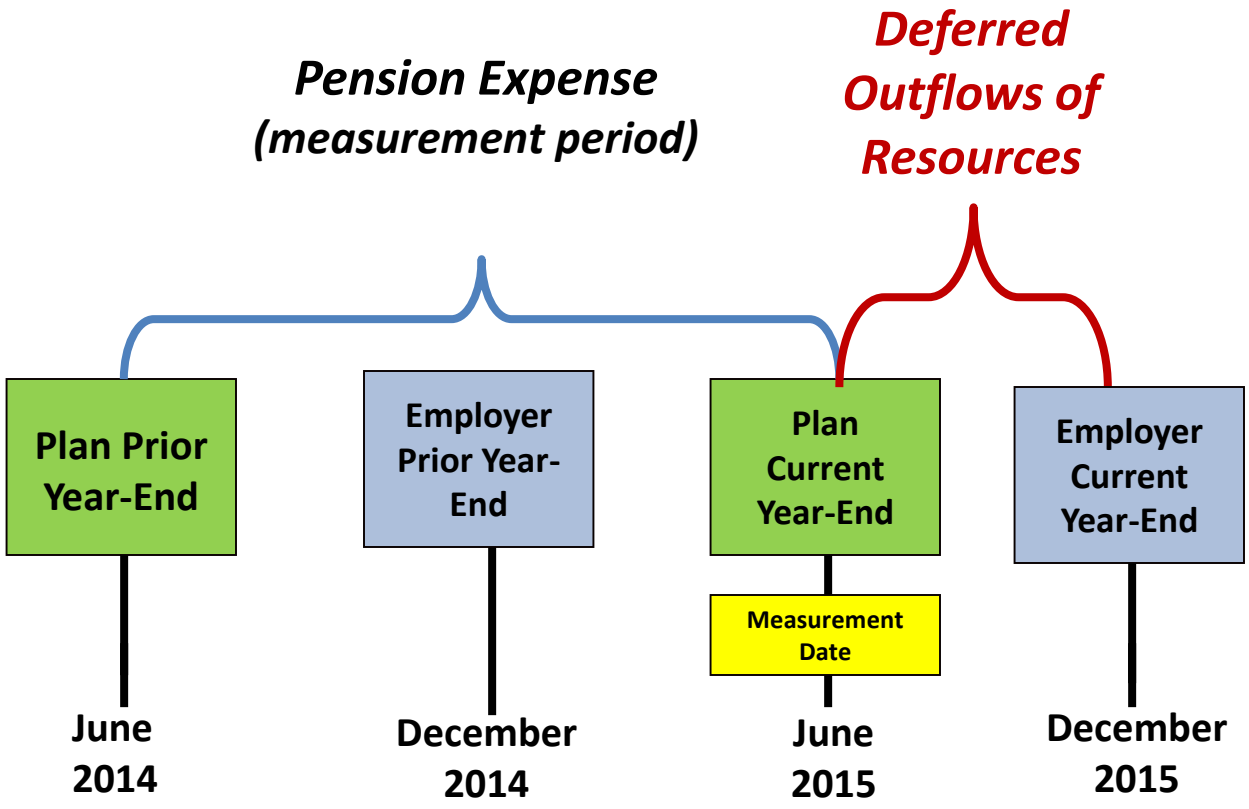
Timing of Measurement of Total Pension Liability



Employer contributions made directly by employer subsequent to measurement date of NPL and before the end of the employer's fiscal year should be recognized as a deferred outflow of resources.

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Example

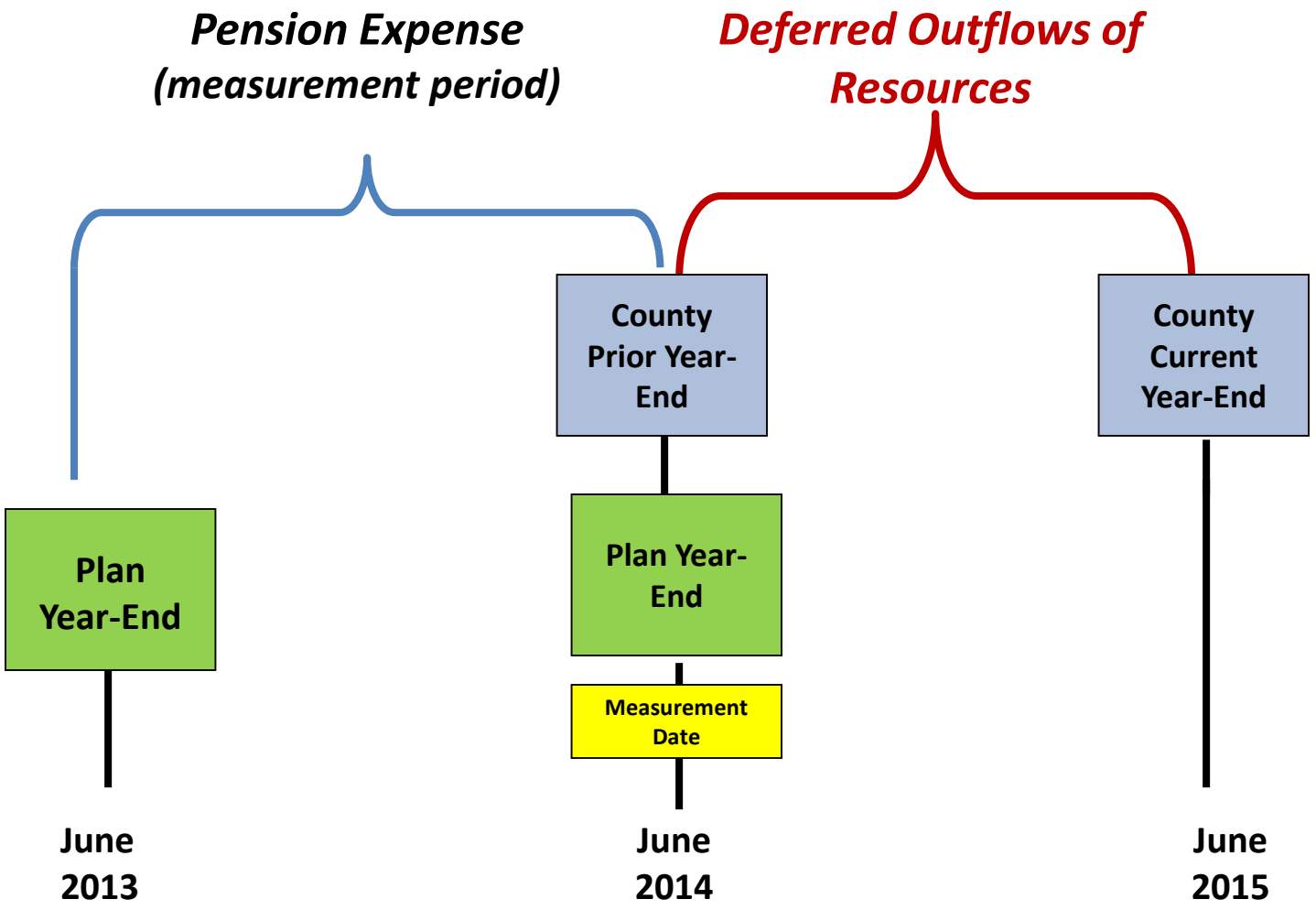
Sample county participates in an agent multiple-employer defined-benefit plan sponsored by an association of counties. Sample county is implementing GASB Statement 68 during the year ended June 30, 2015. The agent plan also has a fiscal year-end of June 30th and implemented the provisions of GASB Statement 67 during the year ended June 30, 2014. Sample county's financial statements are a single-year presentation.

When should be sample county's measurement date? Does it have any options?

Example (Continued)

In accordance with GASB Statement 68, the measurement date for sample county must be as of a date no earlier than the end of its prior fiscal year. Since sample county and the plan have the same year end, sample county may elect to use June 30, 2014 or June 30, 2015 as the measurement date. However, once selected, the measurement date should be consistently applied from period to period.

Sample County– Impact of Using Prior Year Measurement Date



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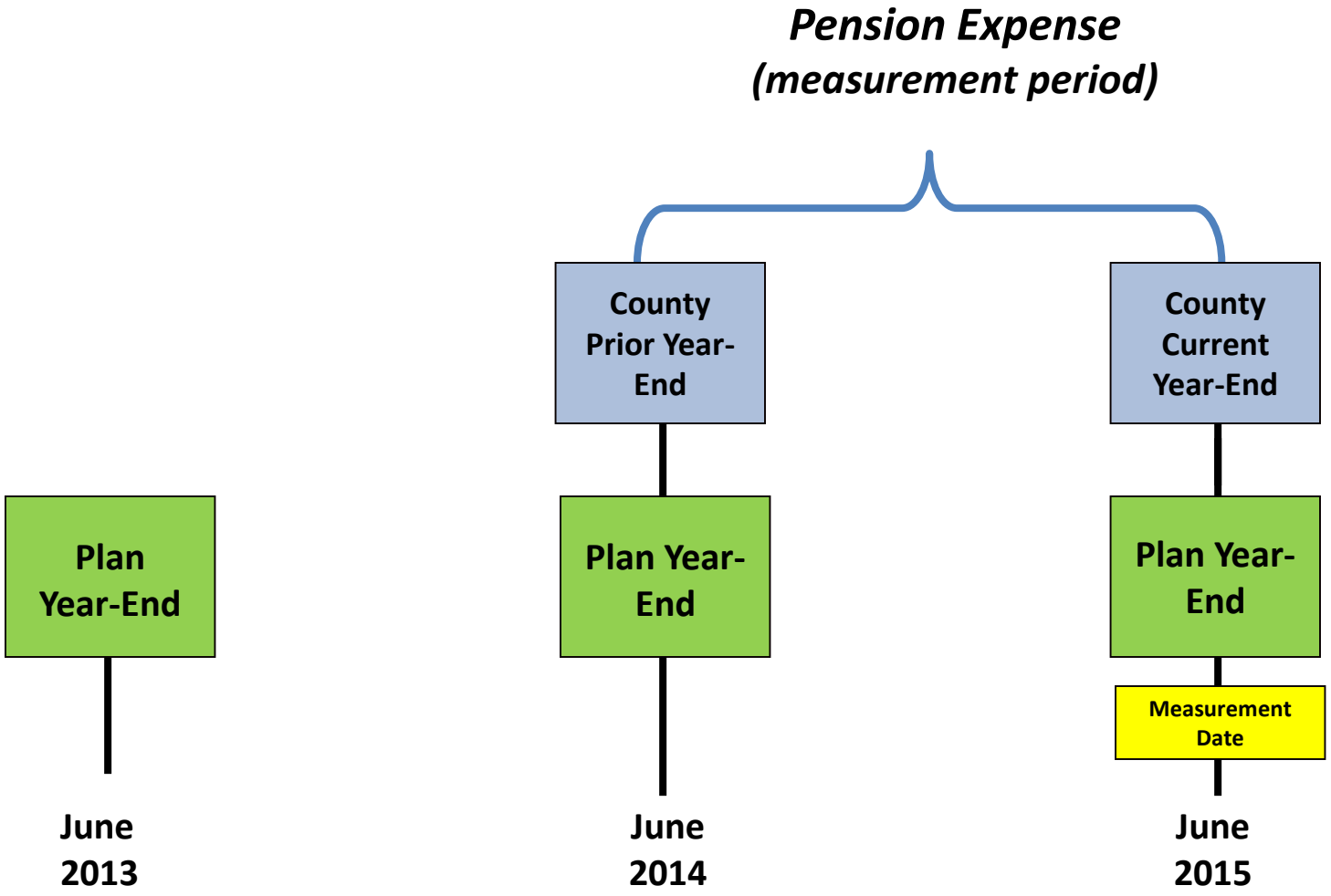
Sample County– Impact of Using Current Year Measurement Date



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Selecting Measurement Date

- Use same date for funding valuation
- Use same date for GASB 67 and GASB 68
- Provide lead time for valuation
  - Requires contributions made after measurement date to be recognized as a deferred outflow of resources

NPL: Measurement—General Approach

- Three broad steps
  - Project benefit payments
  - Discount projected benefit payments to actuarial present value
  - Attribute actuarial present value to periods

NPL: Measurement—General Approach

- Methods and assumptions
  - Assumptions in conformity with Actuarial Standards of Practice
  - Fewer alternatives than in Statement 27
  - No changes required to methods and assumptions used for funding

NPL: Measurement—Projection

- Benefit terms/agreements at measurement date
- Current active and inactive employees
- Incorporate expectations of:
  - Salary changes
  - Service credits
  - Automatic postemployment benefit changes (including COLAs)
  - Ad hoc postemployment benefit changes *if substantively automatic*

NPL: Measurement—Discounting

- Single discount rate reflecting
  - Long-Term Rate of Return (LTRR) on plan investments, to extent that plan net position:
    - Projected to be sufficient to pay benefits
    - Plan assets expected to be invested using a strategy to achieve that return
  - Rate for 20-year, tax-exempt general obligation municipal bonds to extent that conditions for LTRR not met

Sufficiency of Projected Plan Net Position

- Includes:
  - Employer contributions for current and former employees
  - Contributions from current employees
  - Projected investment earnings on projected plan net position
  - Projected benefit payments and administrative expenses

Sufficiency of Projected Plan Net Position

- Does not include:
  - Employer contributions for service costs of future employees
  - Contributions of future employees, unless expected to exceed their own service cost

Sufficiency of Projected Plan Net Position

- Projections of employer contributions
  - Apply professional judgment if amounts established by statute, contract, or formal written policy
    - Consider most recent five-year contribution history
    - Reflect all known events and conditions

Sufficiency of Projected Plan Net Position

- Projections of employer contributions
  - In other circumstances, projected contributions limited to average over most recent five years
    - May be modified by consideration of subsequent events
    - Basis for average determined through professional judgment

Sufficiency of Projected Plan Net Position

- Involve the auditor
  - Use five-year average if leads to sufficiency
  - Considerations to alternatives to five-year average compensation
    - Funding policy
    - Budget
    - Other formal contribution commitments

Sufficiency of Projected Plan Net Position

- Funding Policy
  - Outline principles that will guide the plan sponsor in making funding decisions about the plan in order to accumulate the funds needed to fulfill the plan's obligations to the participants and beneficiaries

Sufficiency of Projected Plan Net Position

- Funding Policy
  - Annual contribution will be the greater of:
    - Level contribution required to fund all current and future benefits promised to current plan participants over the next ___ years
    - The contribution amount determined by the Plan Actuary based on the Statement of Funding Policy adopted by the Board of Trustees

Discount Rate—Determining Single Rate

- Compare projected benefit payments to plan's projected fiduciary net position in each period
- Apply relevant rate to each period's projected benefit payments
- Total the present values of all projected benefit payments

Discount Rate—Determining Single Rate

- Calculate single discount rate that results in same present value (if applied to all projected benefit payments) as use of the two rates

Discount Rate Calculation: Steps

Step 1:

Project benefit payments

Step 2:

Project plan NFP

Discount Rate Calculation: Steps 1 and 2

Year (a)	Projected Beginning Fiduciary Net Position (b)	Projected Benefit Payments (c)	Projected Benefit Payments: "Funded" Portion of Benefit Payments (d)	Projected Benefit Payments: "Unfunded" Portion of Benefit Payments (e)	Actuarial Present Values of Projected Benefit Payments: Present Value of "Funded" Benefit Payments (f) = (d) ÷ (1 + 7.5%)[a]	Actuarial Present Values of Projected Benefit Payments: Present Value of "Unfunded" Benefit Payments (g) = (e) ÷ (1 + 4%)[a]	Actuarial Present Values of Projected Benefit Payments: Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) ÷ (1 + 5.29%)[a]
1	$ 1,431,956	$ 109,951	$ 109,951	$ -	$ 102,280	$ -	$ 104,427
2	1,500,197	116,500	116,500	-	100,811	-	105,088
3	1,565,686	123,749	123,749	-	99,613	-	106,019
4	1,628,547	131,690	131,690				,154
5	1,687,890	140,229	140,229				,370
6	1,742,722	149,168	149,168				,487
7	1,792,194	158,466	158,466				,468
8	1,835,463	168,332	168,332				,450
9	1,871,402	178,591	178,591				,302
10	1,898,930	189,069	189,069	-	91,735	-	112,918
26	547,880	322,779	322,779	-	49,236	-	84,503
27	316,985	326,326	-	326,326	-	113,175	81,140
28	64,800	328,997	-	328,997	-	109,713	77,694
29	-	330,678	-	330,678	-	106,032	74,168
30	-	331,266	-	331,266	-	102,135	70,567
96	-	1	-	1	-	-	-
97	-	-	-	-	-	-	-
Total					$ 2,109,333	+ $ 1,724,534	= $ 3,833,867

Future benefit payments (column c) and plan fiduciary net position (column b) are both projected.

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Discount Rate Calculation: Step 2

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expense (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) – (c) – (d) + (e)
1	$ 1,431,956	$ 73,211	$ 109,951	$ 1,000	$ 105,981	$ 1,500,197
2	1,500,197	72,204	116,500	1,030	110,815	1,565,686
3	1,565,686	72,217	123,749	1,061	115,454	1,628,547
4	1,628,547	72,255	131,690	1,093	119,871	1,687,890
5	1,687,890	72,189	140,229	1,126	123,998	1,742,722
6	1,742,722	72,032	149,168	1,160	127,768	1,792,194
7	1,792,194	71,810	158,466	1,195	131,120	1,835,463
8	1,835,463	71,519	168,332	1,231	133,983	1,871,402
9	1,871,402	71,110	178,591	1,268	136,277	1,898,930
10	1,898,930	70,620	189,069	1,306	137,929	1,917,104

- Include only cash flows associated with current employees
- Cash flows from future employees should not be included, unless those employees contribute more than their own service cost.

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Discount Rate Calculation: Steps (continued)

Step 3:

In each period, determine whether plan fiduciary net position is projected to be sufficient to make the benefit payments

Discount Rate Calculation: Step 3

Year (a)	Projected Beginning Fiduciary Net Position (b)	Projected Benefit Payments (c)	Projected Benefit Payments "Funded" Portion of Benefit Payments (d)	Projected Benefit Payments "Unfunded" Portion of Benefit Payments (e)
1	$ 1,431,956	$ 109,951	$ 109,951	$ -
2	1,500,197	116,500	116,500	-
3	1,565,686	123,749	123,749	-
4	1,628,547	131,690	131,690	-
5	1,687,890	140,229	140,229	-
6	1,742,722	149,168	149,168	-
7	1,792,194	158,466	158,466	-
8	1,835,463	168,332	168,332	-
9	1,871,402	178,591	178,591	-
10	1,898,930	189,069	189,069	-
26	547,880	322,779	322,779	-
27	316,985	326,326	-	326,326
28	64,800	328,997	-	328,997
29	-	330,678	-	330,678
30	-	331,266	-	331,266
96	-	1	-	1
97	-	-	-	-
Total				

Actuarial Present Values of Projected Benefit Payments

Pr "F (f) =

Benefit g the Rate 29%)[a]

$ 104,427
105,088
106,019
107,154
108,370
109,487
110,468
111,450
112,302
112,918
84,503
81,140
77,694
74,168
70,567
- -
- -

$ 2,109,333 + $ 1,724,534 = $ 3,833,867

Each year's projected benefit payments (column c) are compared to projected beginning plan fiduciary net position (column b) and are assigned to one of two benefit payment streams (columns d and e) depending upon whether plan fiduciary net position is projected to be sufficient to make the benefit payments.

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Discount Rate Calculation: Step 3 (continued)

Year (a)	Projected Beginning Fiduciary Net Position (b)	Projected Benefit Payments (c)	Projected Benefit Payments "Funded" Portion of Benefit Payments (d)	Projected Benefit Payments "Unfunded" Portion of Benefit Payments (e)	Actuarial Present Values of Projected Benefit Payments Present Value of Benefit Payments Using the Discount Rate ÷ (1 + 5.29%)[a]
1	$ 1,431,956	$ 109,951	$ 109,951	$ -	104,427
2	1,500,197	116,500	116,500	-	105,088
3	1,565,686	123,749	123,749	-	106,019
4	1,628,547	131,690	131,690	-	107,154
5	1,687,890	140,229	140,229	-	108,370
6	1,742,722	149,168	149,168	-	109,487
7	1,792,194	158,466	158,466	-	110,468
8	1,835,463	168,332	168,332	-	111,450
9	1,871,402	178,591	178,591	-	112,302
10	1,898,930	189,069	189,069	-	112,918
26	547,880	322,779	322,779	-	84,503
27	316,985	326,326	-	326,326	81,140
28	64,800	328,997	-	328,997	77,694
29	-	330,678	-	330,678	74,168
30	-	331,266	-	331,266	70,567
96	-	1	-	1	-
97	-	-	-	-	-
Total					$ 2,109,333 + $ 1,724,534 = $ 3,833,867

In this example, projected beginning plan fiduciary net position is greater than projected benefit payments through year 26. Therefore, those projected benefit payments are assigned to the "funded" benefit payment stream in column d.

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Discount Rate Calculation: Step 3 (continued)

Year (a)	Projected Beginning Fiduciary Net Position (b)	Projected Benefit Payments (c)	Projected Benefit Payments: "Funded" Portion of Benefit Payments (d)	Projected Benefit Payments: "Unfunded" Portion of Benefit Payments (e)	Actuarial Present Values of Projected Benefit Payments: Present Value of (f)	Present Value of	Present Value of Benefit Payments Using the gle Discount Rate (c) ÷ (1 + 5.29%)[a]
1	$ 1,431,956	$ 109,951	$ 109,951	$ -	$		104,427
2	1,500,197	116,500	116,500	-			105,088
3	1,565,686	123,749	123,749	-			106,019
4	1,628,547	131,690	131,690	-			107,154
5	1,687,890	140,229	140,229	-			108,370
6	1,742,722	149,168	149,168	-			109,487
7	1,792,194	158,466	158,466	-			110,468
8	1,835,463	168,332	168,332	-			111,450
9	1,871,402	178,591	178,591	-			112,302
10	1,898,930	189,069	189,069	-			112,918
26	547,880	322,779	322,779	-			84,503
27	316,985	326,326	-	326,326			81,140
28	64,800	328,997	-	328,997			77,694
29	-	330,678	-	330,678			74,168
30	-	331,266	-	331,266			70,567
96	-	1	-	1	-	-	-
97	-	-	-	-	-	-	-
Total					$ 2,109,333	+ $ 1,724,534 =	$ 3,833,867

In year 27, the total of projected benefit payments exceeds projected beginning plan fiduciary net position. Beginning in that year, projected benefit payments are assigned to the "unfunded" benefit payment stream in column e.

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Discount Rate Calculation: Steps (continued)

Step 4:

Calculate the present value of each period's projected benefit payments using the relevant rate.

Discount Rate Calculation: Step 4

Ye (a)	Projected Beginning Fiduciary Net	Projected Benefit	Projected Benefit Payments: "Funded" Portion of Benefit Payments (d)	Projected Benefit Payments: "Unfunded" Portion of Benefit Payments (e)	Actuarial Present Values of Projected Benefit Payments: Present Value of "Funded" Benefit Payments (f) = (d) ÷ (1 + 7.5%)[a]		Actuarial Present Values of Projected Benefit Payments: Present Value of "Unfunded" Benefit Payments (g) = (e) ÷ (1 + 4%)[a]		Actuarial Present Values of Projected Benefit Payments: Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) ÷ (1 + 5.29%)[a]
			$ 109,951	$ -	$ 102,280		$ -		$ 104,427
			116,500	-	100,811		-		105,088
			123,749	-	99,613		-		106,019
			131,690	-	98,610		-		107,154
			140,229	-	97,678		-		108,370
			149,168	-	96,655		-		109,487
			158,466	-	95,516		-		110,468
			168,332	-	94,384		-		111,450
			178,591	-	93,150		-		112,302
			189,069	-	91,735		-		112,918
			322,779	-	49,236		-		84,503
			-	326,326	-		113,175		81,140
			-	328,997	-		109,713		77,694
			-	330,678	-		106,032		74,168
			-	331,266	-		102,135		70,567
			-	1	-		-		-
			-	-	-		-		-
Total					$ 2,109,333	+	$ 1,724,534	=	$ 3,833,867

The present values of projected benefit payments in the "funded" payment stream are calculated using the long-term eROR.

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Discount Rate Calculation: Step 4 (continued)

Year (a)	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments: "Funded" Portion of Benefit Payments	Projected Benefit Payments: "Unfunded" Portion of Benefit Payments (e)	Actuarial Present Values of Projected Benefit Payments: Present Value of "Funded" Benefit Payments (f) = (d) ÷ (1 + 7.5%)[a]	Actuarial Present Values of Projected Benefit Payments: Present Value of "Unfunded" Benefit Payments (g) = (e) ÷ (1 + 4%)[a]	Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) ÷ (1 + 5.29%)[a]
1	$		9,951	$ -	$ 102,280	$ -	$ 104,427
2			6,500	-	100,811	-	105,088
3			3,749	-	99,613	-	106,019
4			1,690	-	98,610	-	107,154
5			0,229	-	97,678	-	108,370
6			9,168	-	96,655	-	109,487
7			8,466	-	[illegible]	-	110,468
8			8,332	-	94,384	-	111,450
9			8,591	-	93,150	-	112,302
10			9,069	-	91,735	-	112,918
26			2,779	-	49,236	-	84,503
27			-	326,326	-	113,175	81,140
28			-	328,997	-	109,713	77,694
29			-	330,678	-	106,032	74,168
30			-	331,266	-	102,135	70,567
96	-	1	-	1	-	-	-
97	-	-	-	-	-	-	-
Total					$ 2,109,333	+ $ 1,724,534	= $ 3,833,867

The present values of projected benefit payments in the "unfunded" payment stream are calculated using the bond index rate.

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Discount Rate Calculation: Steps (continued)

Step 5:

Calculate the sum of:

(a) The present values of projected benefit payments discounted using the LTRR

(b) The present values of projected benefit payments discounted using the bond index rate

Discount Rate Calculation: Step 5

			Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments		
Year (a)	Projected Beginning Fiduciary Net Position (b)	Projected Benefit Payments (c)	"Funded" Portion of Benefit Payments (d)	"Unfunded" Portion of Benefit Payments (e)	Present Value of "Funded" Benefit Payments (f) = (d) ÷ (1 + 7.5%)[a]	Present Value of "Unfunded" Benefit Payments (g) = (e) ÷ (1 + 4%)[a]	Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) ÷ (1 + 5.29%)[a]
1	$ 1,431,956	$ 109,951	$ 109,951	$ -	$ 102,280	$ -	$ 104,427
2	1,500,197	116,500	116,500	-	100,811	-	105,088
3	1,565,686	123,749	123,749	-	99,613	-	106,019
4	1,628,547	131,690	131,690	-	98,610	-	107,154
5	1,687,890	140,229	140,229	-	97,678	-	108,370
6	1,742,722	149,168	149,168	-	96,655	-	109,487
7	1,792,194	158,466	158,466	-	95,516	-	110,468
8	1,835,463	168,332	168,332	-	94,384	-	111,450
9	1,871,402	178,591	178,591	-	93,150	-	112,302
10	1,898,930	189,069	189,06				112,918
26	547,880	322,779	322,77				84,503
27	316,985	326,326					81,140
28	64,800	328,997					77,694
29	-	330,678					74,168
30	-	331,266	-	331,266	-	102,135	70,567
96	-	1	-	1	-	-	-
97	-	-	-	-			
Total					$ 2,109,333	+ $ 1,724,534	= $ 3,833,867

The sum of the present values of the two benefit payment streams is calculated.

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Discount Rate Calculation: Steps (continued)

Step 6:

Determine the single discount rate that, if applied to all projected benefit payments, will result in a present value equal to the result of step 5

Discount Rate Calculation: Step 6

Year (a)	Projected Beginning Fiduciary Net Position (b)	Projected Benefit Payments (c)	Projected Benefit Payments: "Funded" Portion of Benefit Payment (d)	Projected Benefit Payments: "Unfunded" Portion of Benefit	Actuarial Present Values of Projected Benefit Payments: Present Value of "Funded" Benefit	Actuarial Present Values of Projected Benefit Payments: Present Value of "Unfunded" Benefit	Present Value of Benefit Payments Using the Single Discount Rate (h) = (c) ÷ (1 + 5.29%)[a]
1	$ 1,431,956	$ 109,951	$ 109,9			-	$ 104,427
2	1,500,197	116,500	116,5			-	105,088
3	1,565,686	123,749	123,7			-	106,019
4	1,628,547	131,690	131,6			-	107,154
5	1,687,890	140,229	140,2			-	108,370
6	1,742,722	149,168	149,1			-	109,487
7	1,792,194	158,466	158,4			-	110,468
8	1,835,463	168,332	168,3			-	111,450
9	1,871,402	178,591	178,5			-	112,302
10	1,898,930	189,069	189,0			-	112,918
26	547,880	322,779	322,7			-	84,503
27	316,985	326,326	-	326,326	-	113,175	81,140
28	64,800	328,997					77,694
29	-	330,678	-	330,678		106,032	74,168
30	-	331,266	-			102,135	70,567
96	-	1	-			-	-
97	-	-	-			-	-
Total					$ 2,109,333	+ $ 1,724,534 =	$ 3,833,867

Through a process of interpolation, the single discount rate is determined such that, when applied to the projected benefit payments in column c, the result is the same present value as the sum of columns f and g.

In this example, that rate is 5.29%.

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Determining TPL

- Single and Agent Employers
  - EAN used to attribute actuarial PV of projected benefit payments
    - Attribution made on individual employee basis
    - Employee's service costs should be level as a percentage of that employee's project pay
    - Attribution begins with first period the employee's service accrues benefit

Determining TPL

- EAN used to attribute actuarial PV of projected benefit payments
  - Service cost should be attributed through all assumed exit ages, through retirement
  - Service cost determined on same benefit terms reflected in employee's actuarial PV of projected benefit payments

Changes in NPL

- Statement of Changes in NPL
  - Changes in NPL recognized in pension expense
    - PV of attributed benefit accruals
    - Interest on NPL
    - PV of change resulting from plan amendment

Changes in NPL

- Changes in NPL recognized in pension expense
  - Amortization of liability gains/losses and assumption change
    - Amortized over expected remaining service lives (actives and inactives)
    - Remaining service life for inactive is zero
    - Changes not recognized in pension expense are reported as deferred inflow/outflow

Changes in NPL

- Changes in NPL recognized in pension expense
  - Five-year amortization of asset gains/losses
    - Asset gains/losses not recognized in pension expense should be reported as deferred inflow/outflow

Pension Expense

- Service Cost
- Interest on TPL
- Amortization
  - Amortization of experience gain/loss
  - Amortization of asset gain/loss
  - Amortization of assumption changes

Pension Expense

- Impact of change in benefit structure
- Employee contributions
- Expected return on assets
- Administrative expense
- Other changes in FNP

Cost Sharing Multiple-Employer Plans

- Cost Sharing Employers
  - Suggested employer proportionate share of collective NPL = (1) ÷ (2) × (3) as follows:

(1) = Employer's projected long-term contribution effort to the plan

(2) = Long-term contribution effort to the plan of all employers

(3) = Collective NPL

Cost Sharing Multiple-Employer Plans

- Cost Sharing Employers
  - Proportionate share of collective NPL determined at measurement date. Use valuation date if contribution is actuarially determined.

Cost Sharing Multiple-Employer Plans

- Cost Sharing Employers
  - Proportionate share of pension expense, deferred outflows and deferred inflows should be determined using employer's proportion of collective NPL

Cost Sharing Multiple-Employer Plans

- Cost Sharing Employers
  - Changes in employer's proportion of collective NPL since prior measurement date should be amortized in employer's pension expense
    - Amortization period is the expected remaining service lives of all employees (active and inactive)

Cost Sharing Multiple-Employer Plans

- Cost Sharing Employers
  - Following are determined using same methodologies as single and agent employers:
    - Collective NPL
    - Timing and frequency of valuations
    - Selection of assumptions
    - Projection of benefit payments
    - Discount rate

Example

Example–Sample County FYE 6/X9

	Increase (Decrease)		
	Total Pension Liability (a)	**Plan Fiduciary Net Position (b)**	**Net Pension Liability (a) - (b)**
Balances at 6/30/X8	$2,853,455	$2,052,589	$800,866
Changes for the year:			
Service cost	73,034		73,034
Interest	219,345		219,345
Experience (gain)/loss	(37,539)		(37,539)
Contributions—employer		79,713	(79,713)
Contributions—employee		31,451	(31,451)
Net investment income		196,154	(196,154)
Benefit payments, including refunds of ee contribs	(119,434)	(119,434)	–
Administrative expense		(3,373)	3,373
Other changes		8	(8)
Net changes	135,406	184,519	(49,113)
Balances at 6/30/X9	$2,988,861	$2,237,108	$751,753

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Pension Expense for FYE 6/X9

	Amount
Components:	
Service cost	73,034
Interest on TPL	219,345
Amortization of experience (gain)/loss	3,454
Change in assumptions	20,101
Contributions—employee	(31,451)
Projected earnings on plan investments	(158,625)
Differences between projected and actual earnings on plan investments	29,155
Administrative expense	3,373
Other changes in FNP	(8)
Total Pension Expense	158,378

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Interest on TPL – 7.75 Percent

	Amount for Period	Portion of Period	Interest on TPL
TPL	2,853,455	100%	221,143
Service Cost	73,034	50%	2,830
Benefit Payments, Including Employee Contributions	(119,434)	50%	(4,628)
Total Interest on TPL			219,345

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Amortization of Experience (Gain)/Loss

Year	Experience (Gain)/Loss	Recognition Period	Amortized Amount
20X0	35,780	8.3	-
20X1	30,981	8.3	1,117
20X2	13,464	8.3	1,622
20X3	34,335	8.3	4,137
20X4	(28,228)	8.2	(3,442)
20X5	19,927	8.2	2,430
20X6	38,438	8.2	4,688
20X7	(3,562)	8.0	(445)
20X8	(15,211)	8.0	(1,901)
20X9	(37,539)	7.9	(4,752)
Amortized Amount			$3,454

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Amortization of Assumption Changes

Year	Increase in TPL	Recognition Period	Amortized Amount
20X0	-	8.3	-
20X1	32,979	8.3	1,195
20X2	-	8.3	-
20X3	-	8.3	-
20X4	92,500	8.2	11,280
20X5	-	8.2	-
20X6	-	8.2	-
20X7	61,011	8.0	7,626
20X8	-	8.0	-
20X9	-	7.9	-
Amortized Amount			20,101

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Projected Earnings on Plan Assets–7.75 Percent

	Amount for Period	Portion of Period	Interest on TPL
Beginning FNP	2,052,589	100%	159,076
Employer Contributions	79,713	50%	3,089
Employee Contributions	31,451	50%	1,219
Benefit Payments (With Refund of EE Contribs)	(119,434)	50%	(4,628)
Administrative Expense and Other	3,365	50%	(130)
Total Projected Earnings			158,625

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Amortization of Asset (Gain)/Loss

Year	Asset (Gain)/Loss	Recognition Period	Amortized Amount
20X5	(43,058)	5.0	(8,610)
20X6	(159,517)	5.0	(31,903)
20X7	179,327	5.0	35,865
20X8	206,546	5.0	41,309
20X9	(37,529)	5.0	(7,506)
Amortized Amount			$29,155

Deferrals of Experience (Gain)/Loss

Year	Experience Losses (a)	Experience Gains (b)	Amount Recognized in Pension Expense Thru 6/30/X9 (c)	Deferred Outflows of Resources at 6/30/X9 (a) - (c)	Deferred Inflows of Resources at 6/30/X9 (b) - (c)
20X2	13,464		12,976	488	
20X3	34,335		28,959	5,376	
20X4		(28,228)	(20,652)		(7,576)
20X5	19,927		12,150	7,777	
20X6	38,438		18,752	19,686	
20X7		(3,562)	(1,335)		(2,227)
20X8		(15,211)	(3,802)		(11,409)
20X9		(37,539)	(4,752)		(32,787)
Total				33,327	(53,999)

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Deferrals of Assumption Changes

Year	Increase in TPL (a)	Decrease in TPL (b)	Amount Recognized in Pension Expense Thru 6/30/X9 (c)	Deferred Outflows of Resources at 6/30/X9 (a) - (c)	Deferred Inflows of Resources at 6/30/X9 (b) - (c)
20X4	92,500		67,680	24,820	
20X7	61,011		22,878	38,133	
Total				62,953	

Deferrals of Asset (Gain)/Loss

Year	Asset Loss (a)	Asset Gain (b)	Amount Recognized in Pension Expense Thru 6/30/X9 (c)	Deferred Outflows of Resources at 6/30/X9 (a) - (c)	Deferred Inflows of Resources at 6/30/X9 (b) - (c)
20X6		(159,517)	(127,612)		(31,905)
20X7	179,327		107,595	71,732	
20X8	206,546		82,618	123,928	
20X9		(37,529)	(7,506)		(30,023)
Total				195,660	(61,928)

Accounting for NPL

	Net Pension Liability	Pension Expense	Experience Gain/(Loss) Deferred Outflows of Resources	Experience Gain/(Loss) Deferred Inflows of Resources
Balances at 6/30/X8	$800,866		47,321	(27,000)
Changes for the year:				
Service cost	73,034	73,034		
Interest	219,345	219,345		
Experience gain/(loss)	(37,539)			(37,539)
Amort of exp gain/(loss)		3,454	(13,994)	10,540
Amort of assum change		20,101		
Contributions—Er	(79,713)			
Contributions—Ee	(31,451)	(31,451)		
Net investment income	(196,154)	(158,625)		
Amort of asset gain/(loss)		29,155		
Benefit payments	–			
Administrative Expense	3,373	3,373		
Other Changes	(8)	(8)		
Net Changes	(49,113)	158,378	(13,994)	(26,999)
Balances at 6/30/X9	$751,753		33,327	(53,999)

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Questions?

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