



## **PAPERS**

### **GASB 67 | 68 : What to Expect?**



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**Ryan Labs Asset Management**

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- I. GASB 67 | 68 Defined
- II. Impact
- III. Benefits
- IV. Recommendation

# Ryan Labs Asset Management: Alignment of Interests

Ryan Labs Asset Management is primarily an fixed income money manager focused on Corporate ERISA pensions and Public Pension plans.

We believe that the defined benefit structure provides a high probability of success in providing annuity cash flows to plan participants.

Our interests are aligned with the plan participants, taxpayers and bondholders.

# State & Local Governments: Importance of Public Pension Funds

State and local government spending makes up 1/8th of the U.S. economy

Municipal entities employ one out of seven

Municipal workers generally participate defined benefit (DB) pension

Many of these workers have no savings, and roughly 30% (mostly public safety workers) are not enrolled in Social Security;

**Public DB plan structures represent many public employees' sole source of postretirement income.**

*Source: Robert Novy-Marx, 2013, Logical Implications of the GASB's Methodology for Valuing Pension Liabilities*

**Governmental Accounting Standards Board (GASB):**

Public Pension valued at ~\$1 Trillion according to GASB

Valuations are used in planning and budgeting

Decisions are based on how things get measured

GASB 25/26 transitioned to GASB 67/68

**What gets measured gets managed**

## **Why do we accumulate Assets in Pension Trusts?**

1. Ensure we meet our obligations when they come due
2. Equitable to the current and future taxpayer
3. Meet or outgrow liabilities

## Three Levers in Pension Plans

1. Asset Allocation
2. Contribution Strategy
3. Benefit Management

# Public Pension Funds: Solution Framework

## Objectives

**Fund liabilities at lowest relative cost**

**Fund liabilities at lowest relative risk**

**Enhance Financial Statements**

**Enhance Credit Rating**

## Rules

**GASB 67 | GASB 68 (new) | GASB 25 | GASB 45 (old)**

## Teams

**Assets v. Liabilities**

## Playing field

**Present Value**

## Time

**Annual Financial Statements**

## Scoreboard

**Custom Liability Index**

**Statements 67 & 68 reporting for pensions**

GASB 67: financial reporting for pension plans replaces GASB 25

GASB 68: financial reporting for employers replaces GASB 27

Apply to retirement income

Also apply to other benefits (ie death and disability benefits)

GASB 45 still apply to post-employment healthcare benefits

**Interest rate = Expected Return on Assets**

Discounts projected benefit payments at the expected return on plan assets

## Interest rates = Blended Rate

Pension plan will project the number of future years in which assets on hand. The payments made in those years are discounted by the expected return on assets (EROA).

Meanwhile, benefit payments that occur in years after assets have run out will be discounted by the high-grade municipal bond yield.

# Pension Valuation: GASB 25 | 27

Cell	Future Value (\$)	Weight (%)	RL PPA Yield (%)	IRR (%)	Market Value (\$)	GASB 67 Yield (%)	IRR (%)	GASB 67 Value (\$)	Actuarial EROA (%)	Actuarial Funding Value (\$)
Short (0 - 0.5)	620,292,353	2.15	0.37	4.10	619,627,032	7.75	4.13	606,968,758	7.75	606,968,758
0.51 - 01.5	1,259,323,156	4.34	0.72	4.10	1,249,278,383	7.75	4.13	1,165,518,137	7.75	1,165,518,137
01.51 - 02.5	1,324,969,584	4.48	1.30	4.10	1,289,987,090	7.75	4.13	1,138,073,935	7.75	1,138,073,935
02.51 - 03.5	1,386,817,595	4.56	1.76	4.10	1,314,726,405	7.75	4.13	1,105,520,073	7.75	1,105,520,073
03.51 - 04.5	1,443,399,618	4.60	2.14	4.10	1,324,917,818	7.75	4.13	1,067,865,600	7.75	1,067,865,600
04.51 - 05.5	1,494,719,405	4.59	2.46	4.10	1,322,212,848	7.75	4.13	1,026,295,452	7.75	1,026,295,452
Limited (0.51 - 5.5)	6,909,229,357	22.56	1.69	4.10	6,501,122,544	7.75	4.13	5,503,273,197	7.75	5,503,273,197
05.51 - 06.5	1,542,082,880	4.54	2.74	4.10	1,309,458,500	7.75	4.13	982,659,753	7.75	982,659,753
06.51 - 07.5	1,584,331,026	4.47	2.99	4.10	1,287,303,540	7.75	4.13	936,966,581	7.75	936,966,581
07.51 - 08.5	1,621,272,943	4.36	3.21	4.10	1,257,385,368	7.75	4.13	889,850,462	7.75	889,850,462
08.51 - 09.5	1,653,347,278	4.24	3.40	4.10	1,221,696,718	7.75	4.13	842,185,386	7.75	842,185,386
09.51 - 10.5	1,680,593,171	4.10	3.57	4.10	1,181,761,283	7.75	4.13	794,490,909	7.75	794,490,909
Intermediate (5.51 - 10.5)	8,081,627,298	21.71	3.17	4.10	6,257,605,409	7.75	4.13	4,446,153,090	7.75	4,446,153,090
10.51 - 11.5	1,703,180,219	3.95	3.71	4.10	1,138,848,314	7.75	4.13	747,256,434	7.75	747,256,434
11.51 - 12.5	1,720,540,276	3.79	3.84	4.10	1,093,572,296	7.75	4.13	700,578,207	7.75	700,578,207
12.51 - 13.5	1,732,317,724	3.63	3.94	4.10	1,046,518,237	7.75	4.13	654,639,264	7.75	654,639,264
13.51 - 14.5	1,738,288,114	3.46	4.03	4.10	998,241,895	7.75	4.13	609,647,760	7.75	609,647,760
14.51 - 15.5	1,738,628,197	3.29	4.11	4.10	949,294,699	7.75	4.13	565,909,080	7.75	565,909,080
15.51 - 16.5	1,732,856,362	3.12	4.17	4.10	899,763,584	3.76	4.13	903,396,527	7.75	523,462,084
16.51 - 17.5	1,721,819,443	2.95	4.23	4.10	850,349,684	2.57	4.13	1,118,100,740	7.75	482,717,444
17.51 - 18.5	1,704,794,089	2.78	4.28	4.10	800,928,197	2.57	4.13	1,079,346,169	7.75	443,567,827
18.51 - 19.5	1,682,322,656	2.61	4.32	4.10	751,944,069	2.66	4.13	1,021,051,480	7.75	406,237,604
19.51 - 20.5	1,654,257,134	2.44	4.36	4.10	703,501,988	2.70	4.13	970,321,693	7.75	370,729,005
Long (10.51 - 20.5)	17,129,004,214	32.04	4.07	4.10	9,232,962,960	4.74	4.13	8,370,247,353	7.75	5,504,744,708
20.51 - 21.5	1,620,892,811	2.28	4.39	4.10	655,873,899	2.70	4.13	925,774,513	7.75	337,124,695
21.51 - 22.5	1,582,040,042	2.11	4.43	4.10	609,122,152	2.70	4.13	879,845,862	7.75	305,377,098
22.51 - 23.5	1,538,352,702	1.96	4.45	4.10	563,592,447	2.70	4.13	833,073,353	7.75	275,586,305
23.51 - 24.5	1,490,563,696	1.80	4.48	4.10	519,611,272	2.70	4.13	785,988,269	7.75	247,819,213
24.51 - 25.5	1,438,927,384	1.66	4.51	4.10	477,282,519	2.87	4.13	708,450,009	7.75	222,027,124
25.51 - 26.5	1,384,043,730	1.52	4.53	4.10	436,807,161	2.87	4.13	662,414,929	7.75	198,198,192
26.51 - 27.5	1,326,258,760	1.38	4.55	4.10	398,252,380	2.87	4.13	617,047,408	7.75	176,262,880
27.51 - 28.5	1,266,259,505	1.26	4.57	4.10	361,769,096	2.87	4.13	572,694,421	7.75	156,184,538
28.51 - 29.5	1,204,636,523	1.14	4.59	4.10	327,440,417	2.87	4.13	529,622,257	7.75	137,896,761
29.51 - 30.5	1,141,787,381	1.02	4.61	4.10	295,276,155	2.93	4.13	479,390,448	7.75	121,301,452
Very Long (20.51 - 30.5)	13,993,762,533	16.12	4.49	4.10	4,645,027,499	2.79	4.13	6,994,301,469	7.75	2,177,778,257
Ultra Long (30.51 + )	7,503,776,892	5.42	4.66	4.10	1,561,334,634	2.93	4.13	2,771,978,253	7.75	578,898,714
<b>Total</b>	<b>54,237,692,646</b>	<b>100.00</b>	<b>3.35</b>	<b>4.10</b>	<b>28,817,680,078</b>	<b>5.19</b>	<b>4.13</b>	<b>28,692,922,119</b>	<b>7.75</b>	<b>18,817,816,725</b>

Assumptions:

Projected benefit schedule provided by GRS as of June 30, 2014

# Pension Valuation: GASB 67 | 68

Cell	Future Value (\$)	Weight (%)	RL PPA Yield (%)	IRR (%)	Market Value (\$)	GASB 67 Yield (%)	IRR (%)	GASB 67 Value (\$)	Actuarial EROA (%)	Actuarial Funding Value (\$)
Short (0 - 0.5)	620,292,353	2.15	0.37	4.10	619,627,032	7.75	4.13	606,968,758	7.75	606,968,758
0.51 - 01.5	1,259,323,156	4.34	0.72	4.10	1,249,278,383	7.75	4.13	1,165,518,137	7.75	1,165,518,137
01.51 - 02.5	1,324,969,584	4.48	1.30	4.10	1,289,987,090	7.75	4.13	1,138,073,935	7.75	1,138,073,935
02.51 - 03.5	1,386,817,595	4.56	1.76	4.10	1,314,726,405	7.75	4.13	1,105,520,073	7.75	1,105,520,073
03.51 - 04.5	1,443,399,618	4.60	2.14	4.10	1,324,917,818	7.75	4.13	1,067,865,600	7.75	1,067,865,600
04.51 - 05.5	1,494,719,405	4.59	2.46	4.10	1,322,212,848	7.75	4.13	1,026,295,452	7.75	1,026,295,452
Limited (0.51 - 5.5)	6,909,229,357	22.56	1.69	4.10	6,501,122,544	7.75	4.13	5,503,273,197	7.75	5,503,273,197
05.51 - 06.5	1,542,082,880	4.54	2.74	4.10	1,309,458,500	7.75	4.13	982,659,753	7.75	982,659,753
06.51 - 07.5	1,584,331,026	4.47	2.99	4.10	1,287,303,540	7.75	4.13	936,966,581	7.75	936,966,581
07.51 - 08.5	1,621,272,943	4.36	3.21	4.10	1,257,385,368	7.75	4.13	889,850,462	7.75	889,850,462
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11.51 - 12.5	1,720,540,276	3.79	3.84	4.10	1,093,572,296	7.75	4.13	700,578,207	7.75	700,578,207
12.51 - 13.5	1,732,317,724	3.63	3.94	4.10	1,046,518,237	7.75	4.13	654,639,264	7.75	654,639,264
13.51 - 14.5	1,738,288,114	3.46	4.03	4.10	998,241,895	7.75	4.13	609,647,760	7.75	609,647,760
14.51 - 15.5	1,738,628,197	3.29	4.11	4.10	949,294,699	7.75	4.13	565,909,080	7.75	565,909,080
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17.51 - 18.5	1,704,794,089	2.78	4.28	4.10	800,928,197	2.57	4.13	1,079,346,169	7.75	443,567,827
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23.51 - 24.5	1,490,563,696	1.80	4.48	4.10	519,611,272	2.70	4.13	785,988,269	7.75	247,819,213
24.51 - 25.5	1,438,927,384	1.66	4.51	4.10	477,282,519	2.87	4.13	708,450,009	7.75	222,027,124
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26.51 - 27.5	1,326,258,760	1.38	4.55	4.10	398,252,380	2.87	4.13	617,047,408	7.75	176,262,880
27.51 - 28.5	1,266,259,505	1.26	4.57	4.10	361,769,096	2.87	4.13	572,694,421	7.75	156,184,538
28.51 - 29.5	1,204,636,523	1.14	4.59	4.10	327,440,417	2.87	4.13	529,622,257	7.75	137,896,761
29.51 - 30.5	1,141,787,381	1.02	4.61	4.10	295,276,155	2.93	4.13	479,390,448	7.75	121,301,452
Very Long (20.51 - 30.5)	13,993,762,533	16.12	4.49	4.10	4,645,027,499	2.79	4.13	5,994,301,469	7.75	2,177,778,257
Ultra Long (30.51 + )	7,503,776,892	5.42	4.66	4.10	1,561,334,634	2.93	4.13	2,771,978,253	7.75	578,898,714
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Assumptions: Projected benefit schedule provided by GRS as of June 30, 2014

# Pension Valuation: Moody's Corporate Yield Curve

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Very Long (20.51 - 30.5)	13,993,762,533	16.12	4.49	4.10	4,645,027,499	2.79	4.13	6,994,301,469	7.75	2,177,778,257
Ultra Long (30.51 + )	7,503,776,892	5.42	4.66	4.10	1,561,334,634	2.93	4.13	2,771,978,253	7.75	578,898,714
<b>Total</b>	<b>54,237,692,646</b>	<b>100.00</b>	<b>3.35</b>	<b>4.10</b>	<b>28,817,680,078</b>	<b>5.19</b>	<b>4.13</b>	<b>28,692,922,119</b>	<b>7.75</b>	<b>18,817,816,725</b>

Assumptions:

Projected benefit schedule provided by GRS as of June 30, 2014

## Reporting vs. Funding

GASB 67 | 68 will only govern the accounting and reporting of pension funding

Higher reported Liability valuation and volatility

Pressure to contribute based on the accounting

Actuary will still use the expected rate of return for the purpose of contributions

# New Rule | GASB 67 | 68: Still not hedgeable in the capital markets

## Risk Management

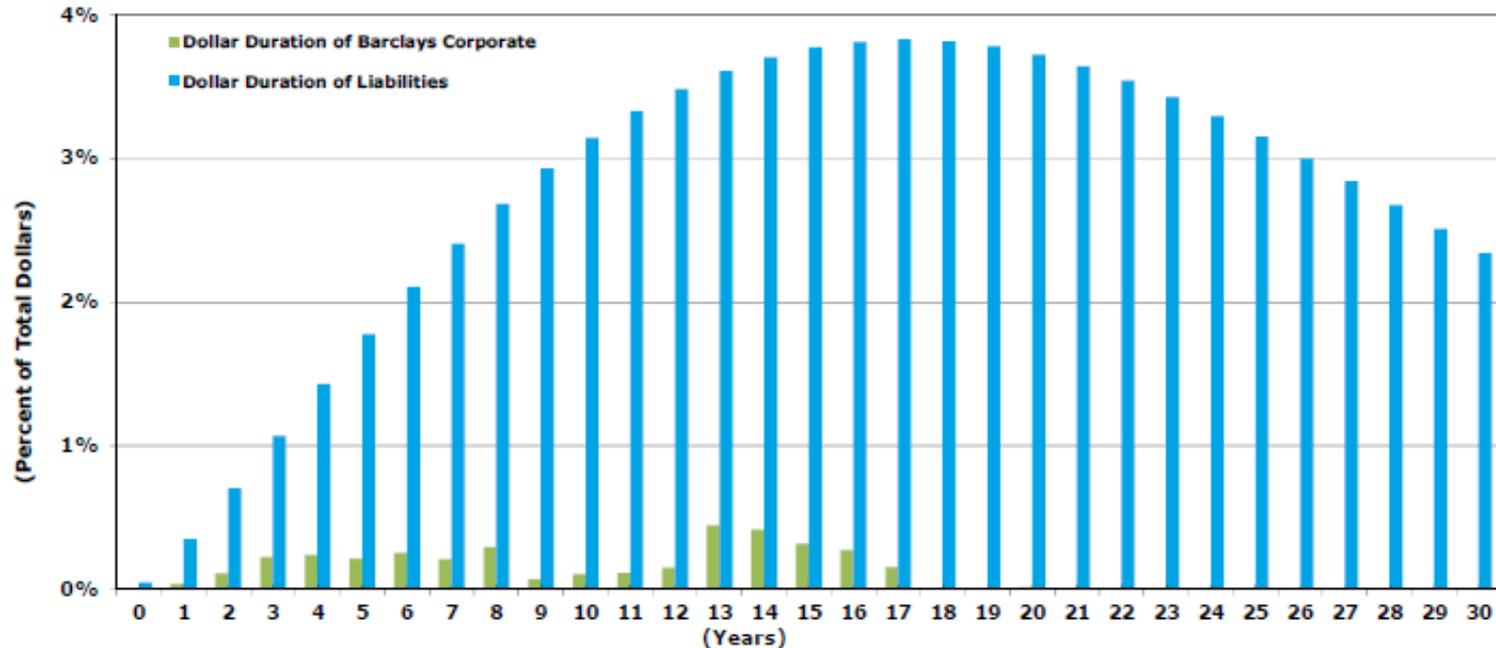
GASB 67 | 68 is not hedgeable to the capital markets

Actuarial Rate is not hedgeable in the capital markets

Impossible to derisk and protect surplus over time with GASB or actuarial valuations

# Asset/Liability Mismatch: Fixed Income Asset Management

## Term Structure of Interest Rate Risk (Current) August 31, 2015



	MDuration	Market Value (\$)	Dollar Duration (\$)
<b>Total Assets</b>	<b>1.00 Years</b>	<b>14,080,677,757</b>	<b>141,059,205</b>
Bond (Core)	5.55 Years	1,962,509,446	108,969,727
Bond (Multi-verse)	6.37 Years	503,607,210	32,089,478
Non-bond	0 Years	11,614,561,101	0
<b>Total Liabilities</b>	<b>12.87 Years</b>	<b>28,817,680,078</b>	<b>3,708,562,961</b>
<b>Difference (Assets - Liabilities)</b>	<b>- 11.87 Years</b>	<b>(14,737,002,321)</b>	<b>(3,567,503,755)</b>
<b>Interest Rate Hedge ( Asset \$Duration/Liability \$Duration )</b>			<b>3.80%</b>

Equities are assumed to have zero duration due to the uncertainty of equity duration.

# Custom Liability Index: Liability Returns:

Date	Future Value	Market Value	Price	RL Corp YTW	Modified Duration	Quarterly Return
6/30/2012	\$ 56,452,109,662	\$ 26,920,948,137	\$ 62.31	3.52	13.55	
9/30/2012	\$ 56,181,966,017	\$ 28,131,340,576	\$ 63.94	3.19	13.74	5.50%
12/31/2012	\$ 55,911,822,372	\$ 27,869,947,376	\$ 64.42	3.19	13.45	0.02%
3/31/2013	\$ 55,641,678,727	\$ 27,009,579,648	\$ 64.20	3.31	13.03	-2.12%
6/30/2013	\$ 55,371,535,083	\$ 25,249,183,629	\$ 62.23	3.79	12.51	-5.56%
9/30/2013	\$ 55,085,978,883	\$ 25,151,125,897	\$ 62.25	3.79	12.42	0.74%
12/31/2013	\$ 54,800,422,684	\$ 25,186,680,564	\$ 62.14	3.81	12.42	0.14%
3/31/2014	\$ 54,514,866,485	\$ 26,302,815,332	\$ 63.14	3.59	12.67	5.19%
6/30/2014	\$ 54,857,984,999	\$ 28,234,331,283	\$ 64.08	3.38	12.80	4.70%
9/30/2014	\$ 54,547,838,823	\$ 28,026,506,912	\$ 63.79	3.48	12.71	0.35%
12/31/2014	\$ 54,237,692,646	\$ 28,817,680,078	\$ 64.53	3.35	12.87	3.94%
<b>2014 Yearly Return:</b>						<b>14.88%</b>

Liability valuation at RL Corporate curve (AAA to A- US corporate bond)  
Projected benefit schedule provided by XYZ

# Assets vs. Liabilities:

## Time Period Returns & Dollar Weighted Returns

### Total Assets vs. Total Liabilities (RL Corp) August 31, 2015

Total Assets				Total Liabilities (RL Corp)			Difference		
Interest Rate Risk	Weight (%)	Present Value	Return Since 12/2013	Weight (%)	Present Value	Return Since 12/2013	Weight (%)	Present Value	Return Since 12/2013
SHORT	82.5%	11,614,561,101		2.2%	619,627,032		80.3%	10,994,934,069	
LMTD	13.9%	1,962,509,446		22.6%	6,501,122,544		-8.6%	-4,538,613,097	
INT	3.6%	503,607,210		21.7%	6,257,605,409		-18.1%	-5,753,998,200	
LONG	0.0%			32.0%	9,232,962,960		-32.0%	-9,232,962,960	
VLONG	0.0%			16.1%	4,645,027,499		-16.1%	-4,645,027,499	
ULTRA	0.0%			5.4%	1,561,334,634		-5.4%	-1,561,334,634	
<b>TOTAL</b>	<b>100.0%</b>	<b>14,080,677,757</b>	<b>6.59%</b>	<b>100.0%</b>	<b>28,817,680,078</b>	<b>14.88%</b>	<b>0.0%</b>	<b>-14,737,002,321</b>	<b>-8.29%</b>

## Key Take Aways: Recommendations

1. Request the projected benefit schedule from your actuary
2. Create a custom liability index
3. Connect your asset allocation with the liabilities
4. Develop risk management strategies around your liabilities
5. Report asset and liability returns in your reports  
Generate time period and dollar weighted returns
6. Document solvency, sustainability based on coherent frameworks

The information contained herein employs proprietary projections of expected returns of assets and liabilities, as well as estimates of their future volatility. The relative relationships and forecasts contained herein are based upon proprietary research and are developed through analysis of historical data and capital markets theory. These estimates have certain inherent limitations, and unlike an actual performance record, they do not reflect actual trading, liquidity constraints, fees and other costs. References to future returns are not promises or even estimates of actual returns a client portfolio may achieve. The forecasts contained herein are for illustrative purposes only and are not to be relied upon as advice or interpreted as a recommendation. Performance results represent the investment performance record for a size-weighted composite of similarly managed, unconstrained discretionary accounts.

Performance results are gross of investment management fees. The deduction of an advisory fee reduces an investor's return. Actual account performance will vary depending on individual portfolio security selection and the applicable fee schedule. Past performance is not a guarantee of comparable future results. Fees are described in Part II of the Advisor's ADV which is available upon request.

The following is an example of the effect of compounded advisory fees over a period of time on the value of a client's portfolio: A portfolio with a beginning value of \$100 million, gaining an annual return of 10% per annum would grow to \$259 million after 10 years, assuming no fees have been paid out. Conversely, a portfolio with a beginning value of \$100 million, gaining an annual return of 10% per annum, but paying a fee of 1% per annum, would only grow to \$235 million after 10 years. The annualized returns over the 10 year time period are 10.00% (gross of fees) and 8.91% (net of fees). If the fee in the above example was 0.25% per annum, the portfolio would grow to \$253 million after 10 years and return 9.73% net of fees. The fees were calculated on a monthly basis, which shows the maximum effect of compounding. The investment strategy described in this presentation is managed by Ryan Labs Asset Management's opinions and estimates offered constitute our judgment and are subject to change without notice, as are statements of financial market trends, which are based on current market conditions.

We believe the information provided here is reliable, but do not warrant its accuracy or completeness. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The views and strategies described may not be suitable for all investors. This material has been prepared for informational purposes only, and is not intended to provide, and should not be relied on for, accounting, legal or tax advice.