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# Alaska Retirement Management Board

Senate Finance Committee

November 1, 2013

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# Alaska Retirement Management Board

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- Role of the Alaska Retirement Management Board
- ARMB Actions (and Limitations) to Address Unfunded Liability
- Funding Request
- Outcomes of Anchorage Stakeholder Workshop

# Role of ARMB

## Alaska Retirement Management Board (2005-present)

1. Manage/invest assets to meet liabilities & pension obligations of the systems, plan, program, and trusts.
2. Set employer contribution rates
3. Greater duty w/respect to pension liabilities & obligations
4. Recommend to budget-setting and appropriations arms of gov't, but cannot appropriate or submit a budget
5. Adopt investment policies for each of the Funds; approve investment options for DC plans after consulting with Plan Administrator

## Role of ARMB, contd.

6. Approve investment objectives for DB Plans
7. Annual actuarial evaluation to determine assets, accrued liabilities, funding ratios and certify appropriate contribution rate for normal cost and liquidating past service liability
8. Annually report to Governor, legislature, employers valuation of trust fund assets and liabilities and other statistical data to understand system
9. Quarterly report of investment performance to Legislative Budget and Audit
10. Contract for services to execute boards powers and duties

## ARMB Powers and Duties

- AS 37.10.071(a)(7): “In making investments under this section, the fiduciary of a state fund shall ... perform all acts, not prohibited by this section, whether or not expressly authorized, that the fiduciary considers necessary or proper in administering the assets;”
- 071(c): “In exercising investment, custodial, or depository powers or duties under this section, the fiduciary of a state fund shall apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the fund entrusted to the fiduciary. Among beneficiaries of the fund, the fiduciaries shall treat beneficiaries with impartiality.”

# Limited Ability to Impact Unfunded Liability

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## ARMB Responsibilities:

- ❖ Determine asset allocation and investment objectives
- ❖ Determine amortization methodology
- ❖ Set investment return assumption
- ❖ Set employer contribution rates
- ❖ Provide input on actuarial assumptions

# Limited Ability to Impact Unfunded Liability

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ARMB cannot:

- ❖ Appropriate funds
- ❖ Submit budgets
- ❖ Authorize issuance of POBs
- ❖ Authorize loans or funding into the retirement system

# Where We Have Been

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The Alaska Retirement Management Board has taken actions to address the pension systems' unfunded liability and other issues over the past seven years including:

- ❖ Supported cost-sharing multiple employer system for PERS
- ❖ Supported direct appropriations to PERS and TRS
- ❖ Supported pension obligation bonds (2007 and 2011)
- ❖ Reduced earnings assumption rate to 8% (2011)
- ❖ Adopted level-dollar amortization to fund costs sooner rather than later (2012; effective FY15)
- ❖ Stakeholder meeting
- ❖ Outreach to Legislature

# Impact of Reduced Earnings Assumption

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- Reduced earnings assumption 8.25% to 8.00%
- 3.12% inflation assumption = 4.88% real return
- Return is consistent with asset allocation
- Reduces funded ratio due to lower assumed future assets
- Increased ER rate by 1.53% PERS; 1.77% TRS (2012)

# Investment Returns (PERS and TRS)\*

## PERS

2013 = 12.5%  
2012 = 0.2%  
2011 = 20.4%  
2010 = 10.2%  
2009 = (20.5%)  
2008 = (3.1%)  
2007 = 18.5%  
2006 = 11.4%  
2005 = 8.5%

## TRS

2013 = 12.5%  
2012 = 0.2%  
2011 = 20.5%  
2010 = 10.6%  
2009 = (21.0%)  
2008 = (3.0%)  
2007 = 18.5%  
2006 = 11.4%  
2005 = 8.5%

\*Fair Value

Source: State of Alaska PERS Actuarial Valuation Report @ 6/30/12 p. 38 and TRS p. 29.

## Impact of change from Level % of Pay to Level Dollar Amortization

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- Reduces overall contributions by nearly \$2 Billion
- Reduces State Assistance by \$1.26 Billion
- Reduces overall State payments by \$1.64 Billion \*
- Reduces Muni payments by \$285 Million
- Level % of Pay delays contributions to future

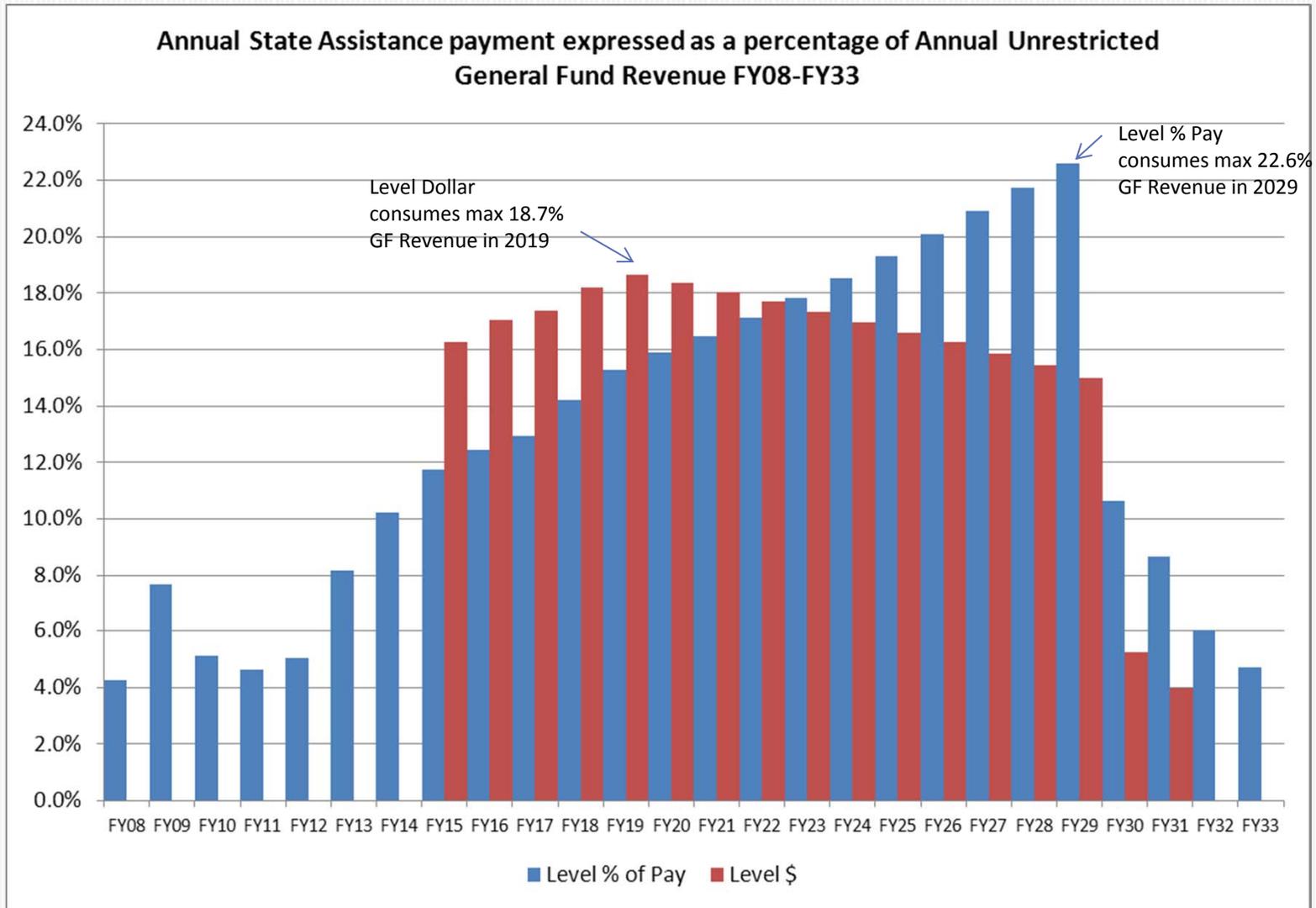
\* Includes State Assistance and State payments as an employer

## Impact of change from Level % of Pay to Level Dollar Amortization

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- Level Dollar results in higher contributions in early years, reduced contributions later
- Increased contribution rates for PERS by 7.21% of pay and for TRS by 13.07% of pay
- Since 2006, Level Dollar would have added \$623 Million addtl to PERS; \$351 Million addtl to TRS

# Why change Level % of Pay to Level Dollar



# Comparison Level % of Pay and Level Dollar

	Level Percent of Pay				Level Dollar		
	Total GF Unrestricted Revenue **	State Assistance % of Pay	Percent of GF Revenue	Cumulative	State Assistance Level \$	Percent of GF Revenue	Cumulative
				State Assistance % of Pay			State Assistance Level \$ *
FY08	\$ 10,728	\$ 455.0	4.2%	\$ 455			
FY09	\$ 5,831	\$ 447.9	7.7%	\$ 903			
FY10	\$ 5,513	\$ 281.4	5.1%	\$ 1,184			
FY11	\$ 7,693	\$ 356.7	4.6%	\$ 1,541			
FY12	\$ 9,485	\$ 477.1	5.0%	\$ 2,018			
FY13	\$ 7,476	\$ 610.1	8.2%	\$ 2,628			
FY14	\$ 6,163	\$ 629.3	10.2%	\$ 3,258			
FY15	\$ 5,994	\$ 703.2	11.7%	\$ 3,961	\$ 975.6	16.3%	\$ 4,233
FY16	\$ 6,232	\$ 775.9	12.4%	\$ 4,737	\$ 1,062.4	17.0%	\$ 5,296
FY17	\$ 6,207	\$ 804.1	13.0%	\$ 5,541	\$ 1,079.2	17.4%	\$ 6,375
FY18	\$ 5,865	\$ 832.4	14.2%	\$ 6,373	\$ 1,067.4	18.2%	\$ 7,442
FY19	\$ 5,775	\$ 881.6	15.3%	\$ 7,255	\$ 1,077.3	18.7%	\$ 8,519
FY20	\$ 5,775	\$ 917.0	15.9%	\$ 8,172	\$ 1,060.6	18.4%	\$ 9,580
FY21	\$ 5,775	\$ 952.0	16.5%	\$ 9,124	\$ 1,042.0	18.0%	\$ 10,622
FY22	\$ 5,775	\$ 990.0	17.1%	\$ 10,114	\$ 1,022.0	17.7%	\$ 11,644
FY23	\$ 5,775	\$ 1,029.0	17.8%	\$ 11,143	\$ 1,001.0	17.3%	\$ 12,645
FY24	\$ 5,775	\$ 1,070.0	18.5%	\$ 12,213	\$ 980.0	17.0%	\$ 13,625
FY25	\$ 5,775	\$ 1,114.0	19.3%	\$ 13,327	\$ 958.9	16.6%	\$ 14,584
FY26	\$ 5,775	\$ 1,160.0	20.1%	\$ 14,487	\$ 938.3	16.2%	\$ 15,522
FY27	\$ 5,775	\$ 1,207.0	20.9%	\$ 15,694	\$ 915.5	15.9%	\$ 16,438
FY28	\$ 5,775	\$ 1,256.0	21.7%	\$ 16,950	\$ 891.5	15.4%	\$ 17,329
FY29	\$ 5,775	\$ 1,304.0	22.6%	\$ 18,254	\$ 866.4	15.0%	\$ 18,196
FY30	\$ 5,775	\$ 613.0	10.6%	\$ 18,867	\$ 302.7	5.2%	\$ 18,498
FY31	\$ 5,775	\$ 500.0	8.7%	\$ 19,367	\$ 230.0	4.0%	\$ 18,728
FY32	\$ 5,775	\$ 349.0	6.0%	\$ 19,716	\$ -	0.0%	\$ 18,728
FY33	\$ 5,775	\$ 271.0	4.7%	\$ 19,987	\$ -	0.0%	\$ 18,728

Level Dollar  
maxes out at  
18.7% of GF  
Revenue

Level % of Pay  
Consumes up to  
22.6% of GF  
Revenue

# Projected Actuarial Results Revised

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ARMB requested actuaries revise Table of Projected Actuarial Results purporting to show System overfunding (surplus) in excess of \$3 Billion by 2072, as misleading.\*

\* See 2011 PERS Actuarial Valuation Report, p. 57.

# Where We Have Been

The Alaska Retirement Management Board evaluated 40 potential scenarios in 2011.

## Recommended:

- 25-year or 30-year amortization
- Lump-sum contributions with continued State assistance
- Change to level dollar amortization

## Rejected:

- Lump-sum contributions with no further State assistance > 22%
- Cost-shifting from State to municipalities and vice-versa
- Requiring assets outside trust fund be used to set rates
- Extending amortization if significantly higher costs than status quo

## Resolution 2013-02

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At its February 2013 meeting ARMB passed Resolution 2013-02 requesting:

....that the Alaska Legislature, in addition to state assistance, appropriate in each of the next four sessions the sum of \$500 million toward retirement of the unfunded liability of the Alaska Public Employees' Retirement System and Teachers' Retirement System.

\*Resolution included in packet

# Problem Definition

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At \$11.8 Billion as of June 30, 2012, the unfunded liability of the retirement systems creates growing pressures on the state budget as annual contributions exceed \$1 Billion per year under the current amortization schedule

# Problem Definition: Increasing State Contributions

## Growth in Unfunded Liability

- At June 30, 2012
  - PERS - \$7.4 billion
  - TRS - \$4.4 billion
- 2005 - \$6.9B in 2005 to \$11.8B in 2012
- Grew \$4.9B in 7 years (\$700M / year)

## Growth in State Contributions

- 2013 - \$608M;
- 2015 = \$975M;
- Thereafter > \$1B for 8 years; 13 consecutive years > \$900M

# Status Quo

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- FY12 State payroll makes up 61% of total PERS payroll, leading to state paying 81.7% of PERS U/L under SB125
- State pays significant portion of TRS employer contributions
- Employer contribution rate caps: 22% for PERS; 12.56% for TRS
- Retirement System fully funded in 2031 (18 years)

- PERS/TRS unfunded liability grew \$889 Million last year as a result of insufficient assets upon which to earn interest
- It will take \$27 Billion to pay off \$12 Billion Liability
- Approx. 69% of benefits are funded through interest earnings; 23% employer contributions; 9% employee contributions
- When the system is underfunded employer contributions must fill the void.

# Details of Funding Request

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FY 2014-2017 appropriation cycle = \$2B infusion

- \* \$250 Million to PERS x 4 years
- \* \$250 Million to TRS x 4 years

Current Actuarial Assumptions Remain in Place

- \* 8% Earnings Assumption
- \* Level Dollar Amortization

# Details of Funding Request (continued)

Baseline State Assistance  
PERS and TRS  
Contributions (2013-2031)

\$16.7 Billion

State Assistance after  
FY14-17 Appropriations  
\$250 Million Each to  
PERS/TRS

\$14.9 Billion

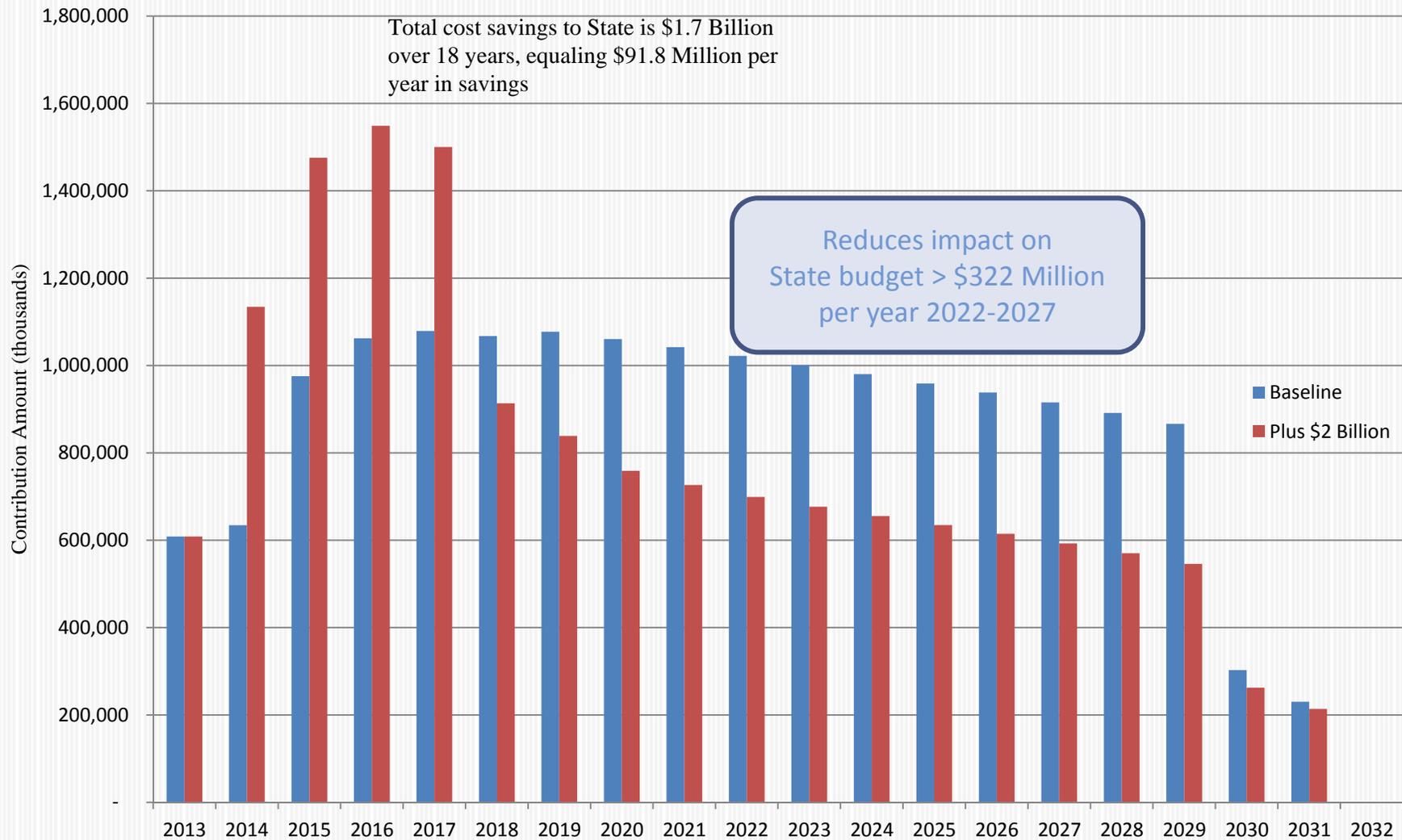
**\$1.7 Billion Savings** in State of Alaska Assistance Contributions

[\$91.8 Million Savings Each Year]

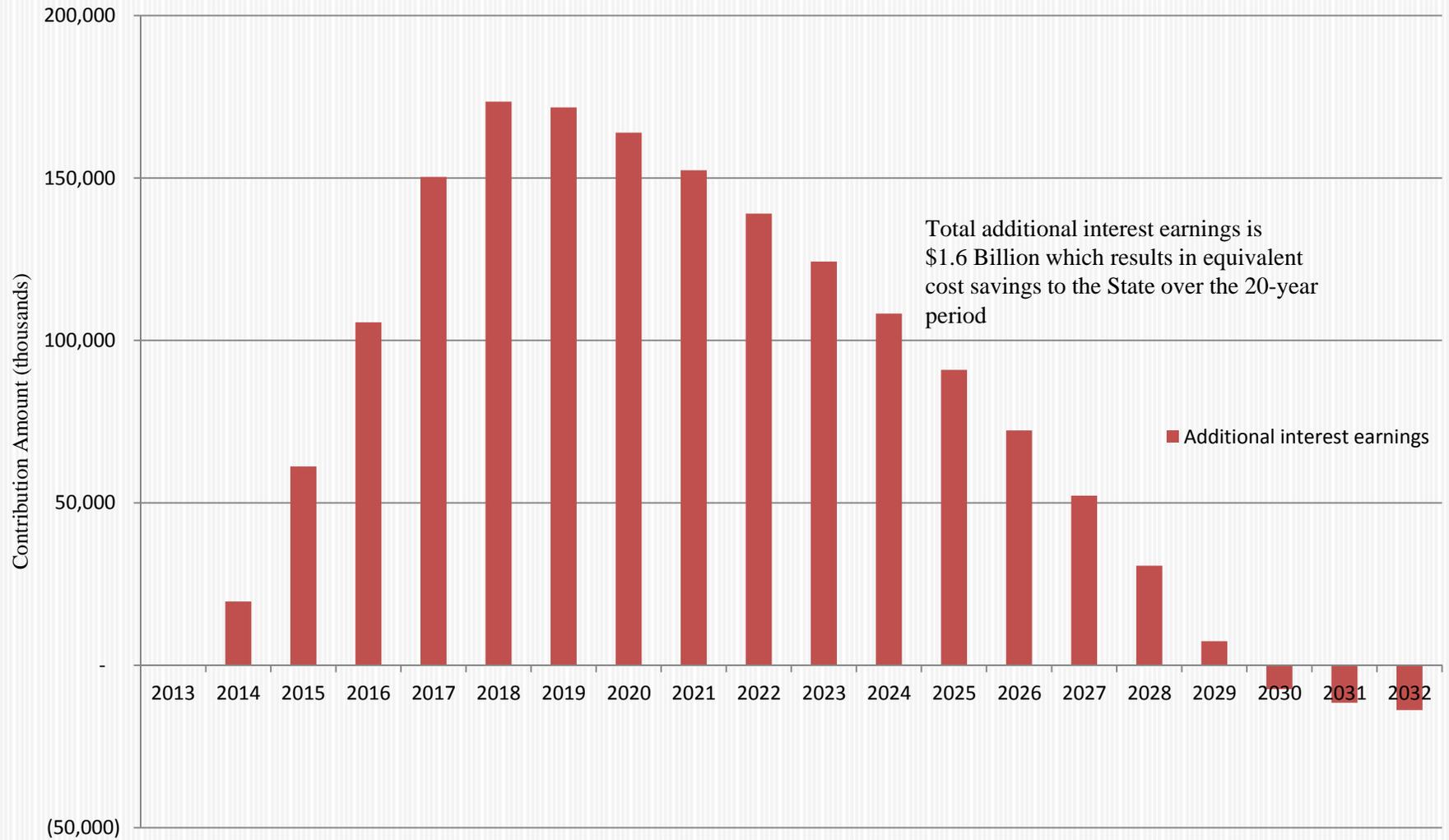
**\$33 Million Savings** in Employer Contributions 2013-2031

[\$1.65 Million Savings Each Year – Includes Savings to State as an Employer]

# State Assistance: Baseline vs. \$2B injection



# Additional Fund Earnings with \$2B Injection



## Annual State Assistance Savings in thousands from \$2B Injection\* (vs. status quo)

	Level Dollar and 8% return PLUS \$250M to PERS and \$250M to TRS						Annual Savings
	Baseline - Level Dollar and 8% return			each year FY14 - FY17			
	PERS	TRS	PERS + TRS	PERS	TRS	PERS + TRS	
2013	310,528	298,101	608,629	310,528	298,101	608,629	-
2014	319,456	315,053	634,509	569,456	565,053	1,134,509	(500,000)
2015	519,676	455,904	975,580	769,676	705,904	1,475,580	(500,000)
2016	572,439	489,935	1,062,374	815,639	733,165	1,548,804	(486,430)
2017	576,925	502,245	1,079,170	787,294	712,891	1,500,185	(421,015)
2018	563,734	503,650	1,067,384	486,636	426,968	913,604	153,780
2019	566,220	511,074	1,077,294	446,414	392,443	838,857	238,437
2020	549,597	510,979	1,060,576	397,960	360,845	758,805	301,771
2021	530,984	511,071	1,042,055	372,455	354,025	726,480	315,575
2022	511,130	510,919	1,022,049	348,993	350,213	699,206	322,843
2023	490,148	510,769	1,000,917	327,713	349,007	676,720	324,197
2024	469,924	510,255	980,179	307,485	347,931	655,416	324,763
2025	449,483	509,478	958,961	287,253	347,339	634,592	324,369
2026	429,310	508,993	938,303	267,492	347,179	614,671	323,632
2027	407,509	508,033	915,542	245,981	346,594	592,575	322,967
2028	384,751	506,783	891,534	224,501	345,865	570,366	321,168
2029	360,954	505,441	866,395	201,123	344,827	545,950	320,445
2030	10,870	291,874	302,744	-	262,474	262,474	40,270
2031	-	230,333	230,333	-	213,718	213,718	16,615
2032	-	-	-	-	-	-	-
	8,023,638	8,690,890	16,714,528	7,166,599	7,804,542	14,971,141	1,743,387
Savings:	857,039	886,348	1,743,387				

\* \$500M/year x 4 years

# Funding Request (continued)

- For every \$1 contributed today, the State saves an *additional* \$1 in required future State assistance
- \$500M added contribution for four years saves > \$300M per year over ten years, at a time when oil production is declining and the State budget is strained
- Level Dollar reduces pressure on State budget when oil production is declining and State budget is even more strained
- Cash infusion allows investment earnings to replace employer contributions and state assistance

# Where Do We Go From Here

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The Alaska Retirement Management Board recognizes that funding for the retirement systems and the increasing amounts to pay down the unfunded liability compete with other needs for the residents of Alaska

# Stakeholder Meeting Held

*Purpose: Provide a forum for stakeholders to discuss potential solutions to pay down the retirement systems' unfunded liability and mitigate the impact of increasing retirement system contributions on future state budgets.*

Attendees included: Legislators and/or staff; OMB, DOR, DOA; NEA, RPEA, APEA, Firefighters; AGFOA, AML, AASB

# Primary Outcomes

- **Borrow from ourselves**
  - Mitigates risks of borrowing from capital markets
  - Provides guaranteed return to reserves
  - Prefer to borrow from CBR since SBR earnings are swept into GF
  - State's bond rating not adversely affected if we borrow from ourselves
  - Demonstrates that Alaska has a plan to address U/L
  - Leverages significant reserves without consuming them
- **Direct appropriation**
  - Prefer a single lump-sum rather than spread over multiple years
- **Pension Obligation Bonds as a partial solution**

Majority agreed on the need for substantial injection into system now.

# Summary

- ARMB believes up-front cash infusion is critical to sustainability of retirement system
- Lack of infusion will exacerbate problems when liquidity of System becomes a concern in approx. 7 years
- Continued State Assistance payments are also a critical component of stable system
- Bottom line: Pay now or pay much more later

# Thank You

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The Alaska Retirement Management Board thanks the Alaska State Legislature for its commitment to fund the State's retirement system, and for its consistent annual contributions to the Systems.

Thank you also for the opportunity to present this information to you.

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# APPENDIX

# Chronology of ARMB actions re: Unfunded Liability

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- October 11, 2005 - First meeting of the Alaska Retirement Management Board (Board).
- April 10, 2006 - Board presented a report to the legislature which included the Board's preliminary assessment of the financial health of the retirement plans.
- February 9, 2007 - Board adopted Resolution 2007-04 in support of a cost-sharing multiple employer arrangement for the Public Employees' Retirement System (PERS).
- February 9, 2007 - Board adopted Resolution 2007-05 in support of appropriations to pay funds directly into the Teachers' Retirement System (TRS) defined benefit plan.
- April 27, 2007 - Board adopted Resolution 2007-17 in support of enabling public employers access to capital markets, with pension obligation bonds (POBs) being one such potential means of access.

## Chronology, contd.

- February 11, 2011 - Board adopted Resolution 2011-01 relating to the experience analysis assumption changes for the PERS and TRS Defined Contribution System.
- May 2, 2007 - Board adopted resolution 2007-19 in support of SB 125, converting PERS to a cost-share plan and establishing a 22% contribution rate for employers.
- February 14, 2008 - Board adopted Resolution 2008-04 in support of the administration's request for an appropriation of \$450 million to the TRS fund.
- November 18-19, 2010 - ARMB Working Group met; participants included trustees, staff from DOR and DOA, Buck Consultants, OMB, Senator Stedman, Representative Munoz, Legislative Finance and legislative staff.

## Chronology, contd.

- December 3, 2010 - Board adopted Resolution 2010-31. The resolution reduced the earnings assumption, comprised of a real rate of return of 4.88% and an inflation rate of 3.12%, resulting in a Rate of Return expectation of 8%.
- September 21, 2011 - Governor Sean Parnell addressed the Board and provided suggested solutions. He asked the board to consider a number of options.
- December 2, 2011 - Board adopted Resolution 2011-23, recommending consideration of various funding scenarios prepared by Buck.
- January 11, 2012 - Trustees and staff appeared before the Senate leadership to “Provide Legislators a clear understanding of Resolution 2011-23.”
- February 17, 2012 - Board adopted Resolution 2012-02 in opposition to legislation that required assets held outside the trust funds to be used in determining employer contribution rates.

## Chronology, contd.

- June 21, 2012 - Board adopted Resolution 2012-19 setting forth the level dollar amortization method.
- September 19, 2012 - Board convened its first Legislative Committee meeting.
- March 15, 2013 – Letter transmitted to Senate President Charlie Huggins and Speaker Mike Chenault with a chronology of Board actions and resolution 2013-02 requesting additional appropriations to PERS and TRS.
- April 1, 2013 – Board Chair Gail Schubert testified before House Finance Committee in support of additional appropriations to PERS and TRS.
- August 8, 2013 – ARMB convenes stakeholder meeting to address Unfunded Liability.

# ARMB Role

## **ARMB Statutes 2005 – AS 37.10.210-390**

- Legislative intent: fiduciary responsibility investment and management of funds with attention to liabilities and obligations rest with ARMB
- Major differences between ASPIB and ARMB

## **ARMB Scope of Mandate:**

- “Consistent with the standards of prudence, the [ARMB] board has the fiduciary obligation to manage and invest these assets in a manner that is sufficient to meet the liabilities and pension obligations of the systems, plan, program, and trusts.”
- Duty to set employer contribution rates (previously PERS/TRS Boards)
- Greater fiduciary responsibility than ASPIB particularly re: unfunded status and liabilities and obligations of the funds
- ARMB can make recommendations to and advise budget-setting and appropriating arms of government, but cannot appropriate funds or submit a budget

# ARMB Role

## ARMB powers and duties:

- “AS 37.10.220(a)(2): “after reviewing recommendations from the Department of Revenue, adopt investment policies for each of the funds entrusted to the board.”
- 220(a)(3): “determine the appropriate investment objectives for the defined benefit plans..”
- 220(a)(4): “assist in prescribing the policies for the proper operation of the systems and take other actions necessary to carry out the intent and purpose of the systems in accordance with AS 37.10.210 – 37.10.390.”
- 220(a)(8): “coordinate with the retirement system administrator to have an annual actuarial evaluation...prepared to determine system assets, accrued liabilities, and funding ratios and to certify to the appropriate budgetary authority of each employer in the system (A) an appropriate contribution rate for normal costs; and (B) an appropriate contribution rate for liquidating any past service liability.”

# ARMB Role

## ARMB powers and duties:

- 220(a)(13): “[annually]...report to the governor, the legislature, and the individual employers...on the financial condition of the systems in regard to (A) the valuation of trust fund assets and liabilities....and (G) other statistical data necessary for proper understanding of the financial status of the system.”
- 220(a)(14): “Submit quarterly updates of the investment performance reports to the Legislative Budget and Audit Committee.”
- 220(b)(3): “contract for other services necessary to execute the board’s powers and duties.”

# Actuarial Oversight

- Primary actuary: Responsible for conducting annual actuarial valuation to determine assets, accrued liabilities, funding ratios; certify contribution rate for normal cost and rate for liquidating past service liability; experience analysis performed once every four years
- Review Actuary: Responsible for reviewing and certifying all actuarial assumptions contained in primary actuary valuation and experience analysis before presentation to Board; health cost assumptions reviewed annually
- Auditing Actuary: Responsible for conducting an independent audit of the state's actuary not less than once every four years

# Role of Review Actuaries

- AS 37.10.220(a):
- 220(a)(8): Coordinate with the retirement system administrator to have an annual actuarial valuation of each retirement system prepared to determine system assets, accrued liabilities, and funding ratios and to certify to the appropriate budgetary authority of each employer in the system (A) an appropriate contribution rate for normal costs; and (B) an appropriate contribution rate for liquidating any past service liability
- 220(a)(9): Review actuarial assumptions prepared and certified by a member of the American Academy of Actuaries and conduct experience analyses of the retirement systems not less than once every four years, except for health cost assumptions, which shall be reviewed annually; the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the board;
- 220(a)(10): Contract for an independent audit of the state's actuary not less than once every four years;
- 220(a)(11): Contract for an independent audit of the state's performance consultant not less than once every four years;
- 220(a)(12): Obtain an external performance review to evaluate the investment policies of each fund entrusted to the board and report the results of the review to the appropriate fund fiduciary;

# PERS: 2012 increase in Unfunded Liability

## Public Employees' Retirement System Changes in Unfunded Liability Since Last Year (\$ in millions)

Development of Change in Unfunded Liability during FY12		
1. 2011 Unfunded Liability		\$6,927
a. Interest on unfunded liability	\$554	
b. Normal cost	289	
c. Employee contributions	(113)	
d. Employer contributions	(406)	
e. State relief under SB 125	(243)	
f. Medicare Part D subsidy	(32)	
g. Interest on b., c., d., e., and f.	(8)	
h. Expected change in unfunded liability during FY12		41
2. Expected 2012 Unfunded Liability		\$6,968
a. Liability (gains)	\$(540)	
b. Assets losses	805	
c. Change in healthcare assumptions	227	
d. Other changes in unfunded liability during FY12		492
3. Actual 2012 Unfunded Liability		\$7,460

+ 533M

buckconsultants

# PERS: 2012 change in Employer/State Contribution Rate

## Public Employees' Retirement System Peace Officer/Firefighter and Others Combined Change in Total Employer/State Contribution Rate

Normal cost: 6.82%;  
Past service cost: 33.03%  
Total Rate: 39.85%

	Pension	Healthcare	Total
1. Last year's total Employer/State contribution rate	16.47%	15.84%	32.31%
2. Change due to:			
• Change in amortization method	4.89%	2.32%	7.21%
• New healthcare assumptions	N/A	0.75%	0.75%
• Effect of two-year delay in the contribution rate	0.25%	(0.04%)	0.21%
• Asset experience	2.40%	0.71%	3.11%
• Salary increases	0.23%	N/A	0.23%
• Demographic experience and other*	(1.00%)	(1.23%)	(2.23%)
• Claims costs	N/A	(1.74%)	(1.74%)
• Total change	6.77%	0.77%	7.54%
3. Total Employer/State contribution rate this year	23.24%	16.61%	39.85%

\*Includes data and programming changes.

# TRS: 2012 increase in Unfunded Liability

## Teachers' Retirement System Changes in Unfunded Liability Since Last Year (\$ in millions)

Development of Change in Unfunded Liability during FY12		
1. 2011 Unfunded Liability		\$4,191
a. Interest on unfunded liability	\$335	
b. Normal cost	98	
c. Employee contributions	(52)	
d. Employer contributions	(74)	
e. State relief under SB 125	(235)	
f. Medicare Part D subsidy	(13)	
g. Interest on b., c., d., e., and f.	(7)	
h. Expected change in unfunded liability during FY12		52
2. Expected 2012 Unfunded Liability		\$4,243
a. Liability (gains)	\$(192)	
b. Assets losses	359	
c. Change in healthcare assumptions	87	
d. Other changes in unfunded liability during FY12		234
3. Actual 2012 Unfunded Liability		\$4,477

+ \$286 M

buckconsultants

# TRS: 2012 change in Employer/State Contribution Rate

## Teachers' Retirement System Change in Total Employer/State Contribution Rate

Normal cost: 6.40%;  
Past service cost: 59.91%  
Total Rate: 66.31%

	Pension	Healthcare	Total
1. Last year's total Employer/State contribution rate	31.40%	18.70%	50.10%
2. Change due to:			
• Change in amortization method	9.52%	3.55%	13.07%
• New healthcare assumptions	N/A	0.63%	0.63%
• Effect of two-year delay in the contribution rate	0.52%	0.19%	0.71%
• Asset experience	3.47%	0.71%	4.18%
• Salary increases	0.00%	N/A	0.00%
• Demographic experience and other <sup>a</sup>	(0.36%)	(0.29%)	(0.65%)
• Claims costs	N/A	(1.73%)	(1.73%)
• Total change	13.15%	3.06%	16.21%
3. Total Employer/State contribution rate this year	44.55%	21.76%	66.31%

<sup>a</sup>Includes data and programming changes.

# Unfunded Liability and Funded Ratio (PERS)

At June 30:

Valuation Date	Funded Ratio	Unfunded Liability (Billion)
2012	61.3%	\$7.46
2011	63.0%	\$6.93
2010	61.5%	\$6.98
2009	61.8%	\$6.34
2008	69.5%	\$4.85
2007	68.0%	\$4.67
2006	62.8%	\$5.35
2005	65.7%	\$4.40

Source: State of Alaska Public Employees Retirement System Actuarial Valuation Report as of June 30, 2012, p.32;  
Based on Valuation Assets.

# Unfunded Liability and Funded Ratio (TRS)

At June 30:

Valuation Date	Funded Ratio	Unfunded Liability (Billion)
2012	52.1%	\$4.48
2011	54.1%	\$4.19
2010	53.6%	\$4.11
2009	57.0%	\$3.37
2008	64.8%	\$2.68
2007	61.5%	\$2.77
2006	57.3%	\$3.08
2005	60.9%	\$2.54

Source: State of Alaska Teacher Retirement System Actuarial Valuation Report as of June 30, 2012, p.23;  
Based on Valuation Assets