

Review and Follow Up

Dec. 13, 2011



Defined Contribution and Retirement Study Committee

Follow-up Questions

- Legacy Defined Benefit Costs in Other States
- Summary of Funded Status
- Follow-up on Salary Spiking
- Multi-Employer Plan Consolidation
- Disability Claim History

Legacy Defined Benefit Costs in Other States

Legacy DB Costs

- Michigan: Funded status of DB plan was 92% at mandatory switch in 1997. State picks up all costs of legacy DB plan.
- Alaska: PERS funding at 62.8%; TRS at 57.3% when plans closed in 2006. Employers pay 17% legacy DB costs for PERS and 5.56% for TRS. State picks up rest of legacy DB costs. \$2 billion since 2008.
- Nebraska & Minnesota: No Legacy Cost
- Montana: 2.64% of ER rate for new DC plan goes to old DB plan costs.

Legacy DB Costs

- Florida: Since DC is optional, DB plan still exists, employers pay actuarial assumed rate.
- Ohio: Funded status was 91.7% for STRS and 103% for PERS when DC option was implemented. Employers pay 3.5% as mitigation rate for STRS legacy DB costs and less than 1% for PERS.
- Georgia: DB plan was funded at 93% at time of optional DC plan creation. New DC employees and employers do not pay into old DB plan
- Utah: 5% of employers cost for new employees rate goes to legacy DB costs

Summary of Funded Status

Defined Contribution and Retirement Study Committee

Funded Status Summary

		2011	2010	\$ change	% change
ASRS	Liabilities	38,942	37,558	1,384	3.68%
	Assets	<u>28,033</u>	<u>23,142</u>	<u>4,891</u>	21.13%
	Unfunded Amount	10,909	14,416	-3,507	-24.33%
PSPRS	Liabilities	9,365	8,492	873	10.28%
	Assets	<u>5,048</u>	<u>4,310</u>	<u>738</u>	17.12%
	Unfunded Amount	4,317	4,182	135	3.23%
CORP	Liabilities	2,009	1,722	287	16.67%
	Assets	<u>1,304</u>	<u>1,094</u>	<u>210</u>	19.20%
	Unfunded Amount	705	628	77	12.26%
EORP	Liabilities	590	536	54	10.07%
	Assets	<u>315</u>	<u>273</u>	<u>42</u>	15.38%
	Unfunded Amount	275	263	12	4.56%
TOTAL	Liabilities	50,906	48,308	2,598	5.38%
	Assets	<u>34,700</u>	<u>28,819</u>	<u>5,881</u>	20.41%
	Unfunded Amount	16,206	19,489	-3,283	-16.85%

Note: \$ Million

PROJECTED FUNDING LEVELS

(Represents the probability that the funded ratio will be at least this percent – based on June 30, 2010 valuation results)

	PSPRS		CORP		EORP	
Valuation Date	50% Probability	75% Probability	50% Probability	75% Probability	50% Probability	75% Probability
2010	67.7%	67.7%	83.8%	83.8%	68.2%	68.2%
2015	59.0%	56.5%	66.2%	63.5%	51.7%	49.3%
2020	68.6%	61.7%	73.1%	66.0%	58.6%	51.1%
2025	77.9%	69.3%	79.9%	71.0%	67.6%	59.2%
2030	86.0%	76.6%	86.4%	76.7%	78.2%	70.0%
2035	91.1%	81.7%	91.0%	80.9%	86.2%	77.7%
2040	95.6%	85.0%	96.8%	84.7%	92.3%	82.6%
2045	98.6%	88.2%	102.6%	87.8%	95.7%	86.1%
2050	102.0%	89.2%	108.0%	89.5%	100.6% ⁸	88.0%

PROJECTED CONTRIBUTION RATES

(Represents the probability that employer contributions will be at most this percent of payroll – based on June 30, 2010 valuation results)

	PSPRS		CORP		EORP	
Valuation Date	50% Probability	75% Probability	50% Probability	75% Probability	50% Probability	75% Probability
2010	21.3%	21.3%	8.3%	8.3%	31.2%	31.2%
2015	32.6%	33.7%	12.4%	13.0%	44.4%	45.8%
2020	31.8%	35.4%	12.0%	14.0%	41.4%	45.8%
2025	30.0%	36.4%	11.8%	15.2%	39.8%	45.7%
2030	22.4%	30.9%	9.1%	13.3%	32.2%	38.9%
2035	16.2%	26.0%	6.9%	11.6%	24.6%	33.9%
2040	11.8%	22.3%	6.0%	10.2%	17.5%	30.5%
2045	9.1%	20.0%	6.0%	9.3%	13.7%	27.9%
2050	8.0%	19.8%	6.0%	9.0%	10.0%	27.6%

ASRS Actuarial Assumptions and Methods

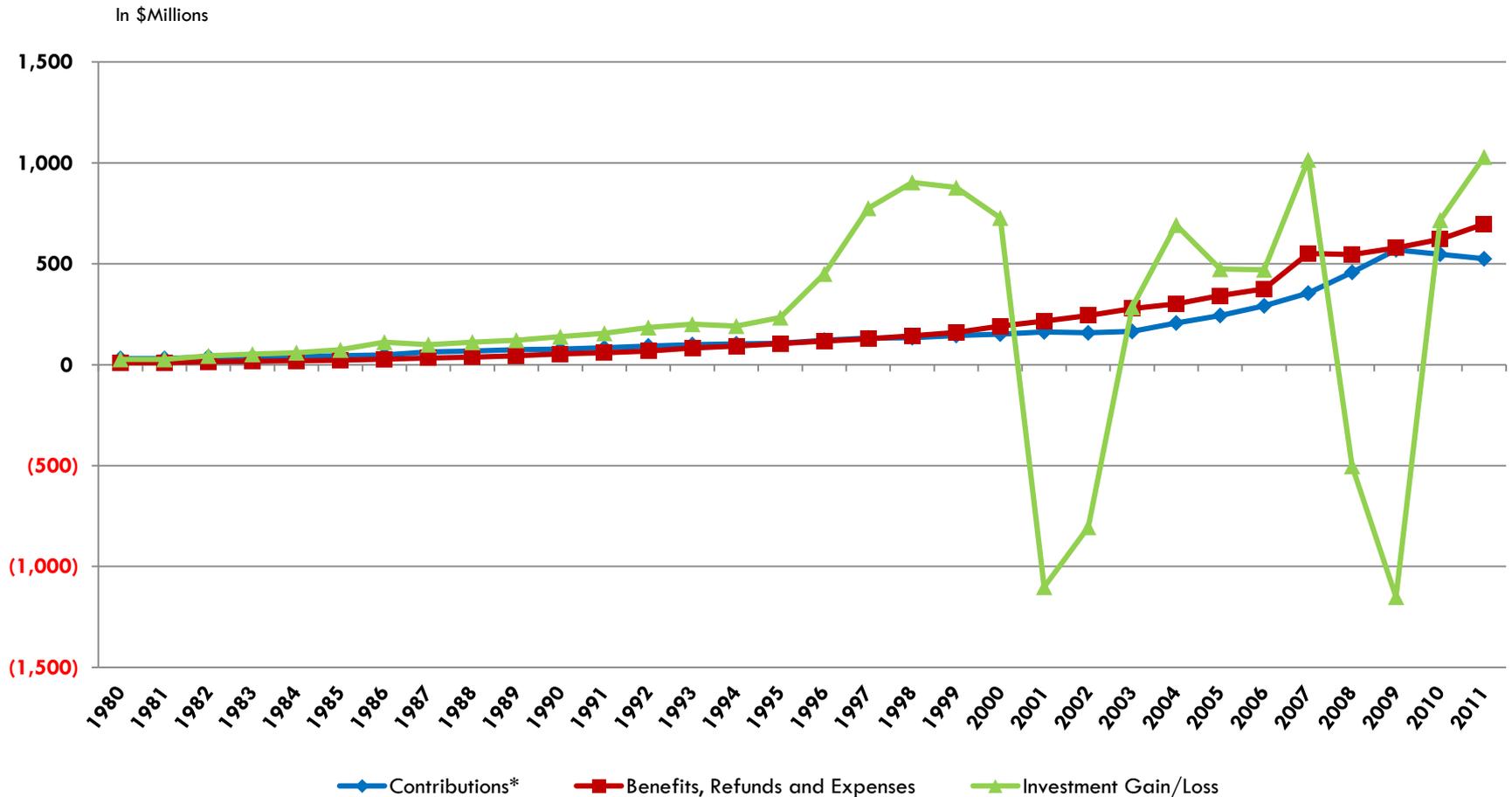
- ❑ **Investment yield: 8% per annum net of all expenses.**
- ❑ **Salary increases: 4.00% - 9.00% based on years of service.**
- ❑ **Mortality rates: 1994 GAM Static Projected to 2011.**
- ❑ **Amortization period: Rolling 30-year (per statute).**
- ❑ **Actuarial value of assets: 10-year smoothing period.**
- ❑ **Projected Unit Credit (PUC): (per statute).**
- ❑ **Level Dollar Amortization**

ASRS PROJECTED FUNDED STATUS

(Represents the probability that the funded ratio will be at least this percent – based on June 30, 2011 valuation results)

	25% rate		29% rate		21.2% (Current)	
Valuation Date	50% Probability	75% Probability	50% Probability	75% Probability	50% Probability	75% Probability
2011	72.13%	72.13%	72.13%	72.13%	72.13%	72.13%
2015	77.63%	65.18%	79.54%	67.01%	76.03%	63.73%
2020	82.50%	63.82%	89.57%	70.40%	77.53%	60.61%
2025	85.02%	62.69%	99.21%	73.28%	77.68%	57.60%
2030	91.16%	61.75%	114.58%	78.68%	79.95%	56.09%
2035	96.91%	62.99%	132.84%	89.01%	82.82%	55.45%
2038	101.38%	61.40%	146.81%	93.12%	84.68%	56.33%
2039	102.42%	60.98%	150.31%	95.46%	84.95%	56.91%
2040	104.05%	61.96%	154.77%	100.05%	84.52%	57.43%

PSPRS TOTAL FUND: Contributions vs. Benefits, Refunds, & Expenses vs. Investment Earnings (Losses)



*Includes employee contributions, employer contributions and service purchases

Follow-up on Salary Spiking

Defined Contribution and Retirement Study Committee

Spiking Issues: ASRS Methodology

- Received information on 403 members representing 74 employers
- Reasons for increases were grouped into like categories
- Members can be included in more than one category

Spiking Issues: ASRS Methodology

- Annual/General Increase: 119
- Promotion: 119
- Termination Pay*: 103
- Market Adjustment: 57
- Increase in Hours: 32
- Cost of Living Adjustment: 30
- Performance Pay: 26

* Termination Pay: Payout of accrued sick and annual leave at termination or retirement.

Spiking Issues: ASRS Methodology

- Additional Duties: 26
- Pay Scale Adjustment: 20
- Longevity: 18
- Merit: 14
- Overtime: 11
- Professional Growth: 4

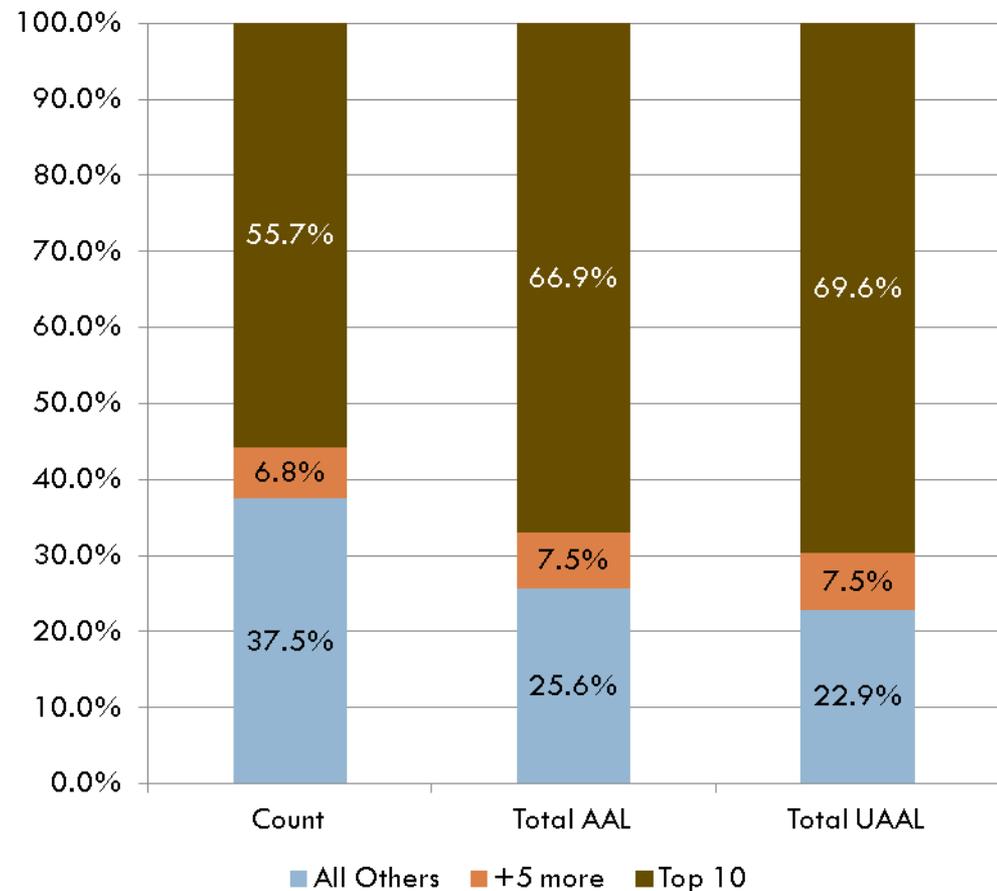
Multi-Employer Plan Consolidation

Defined Contribution and Retirement Study Committee

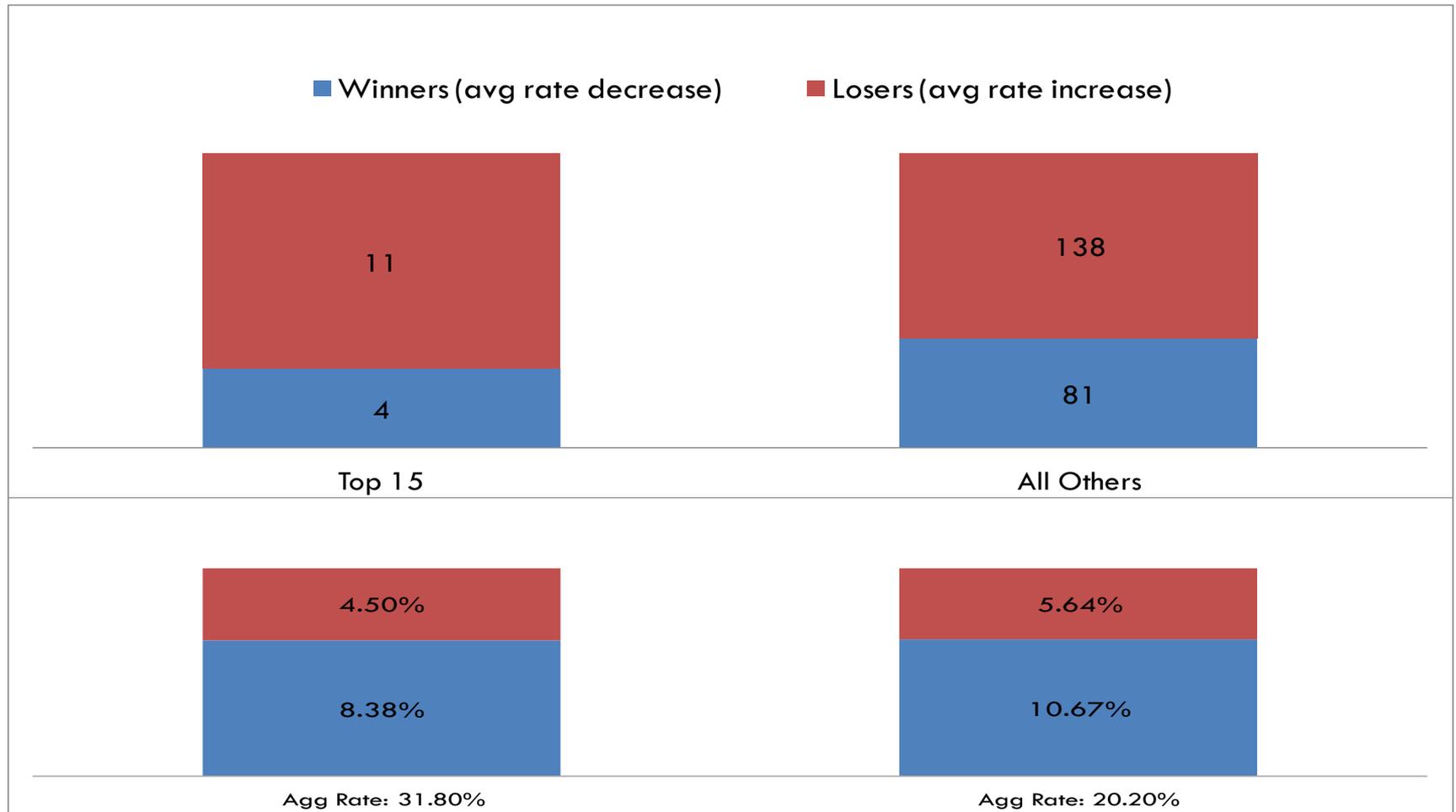
Scenario 1

Top 10-15 Employers v. All Others

1. Phoenix Police Department
2. Phoenix Fire Department
3. Department of Public Safety
4. Tucson Police Department
5. Mesa Police Department
6. Tucson Fire Department
7. Maricopa County Sheriff's Office
8. Pima County Sheriff's Department
9. Mesa Fire Department
10. Scottsdale Police Department
11. Tempe Police Department
12. Glendale Police Department
13. Chandler Police Department
14. Tempe Fire Department
15. Glendale Fire Department

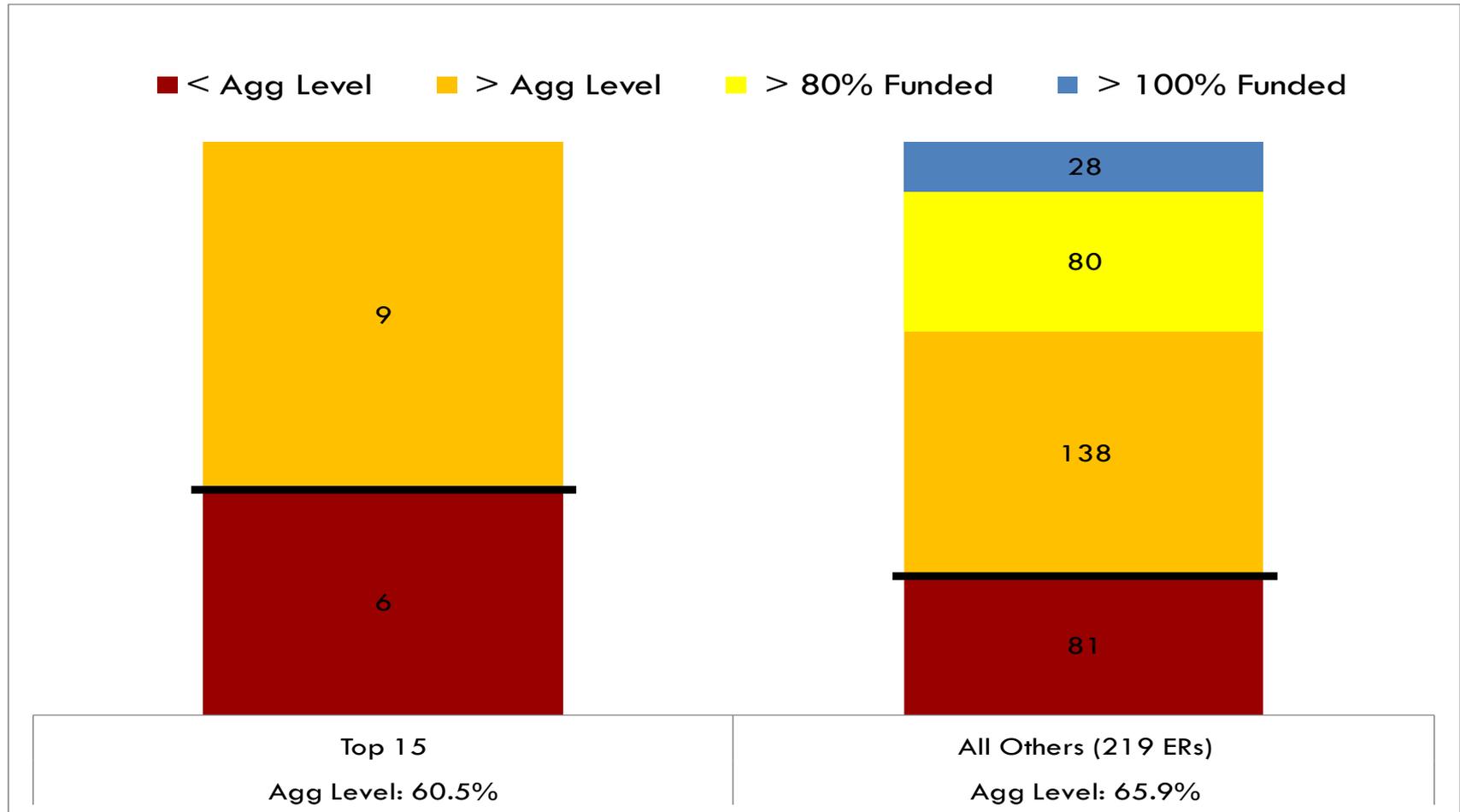


Scenario 1 Winners & Losers: ER Rates



Please note that the results were calculated based upon the actuarial assumptions for the group as a whole. Experience for the various subdivisions may be very different than the current pooled group assumptions. It is important to note that when comparing contribution rates, each group has different demographic characteristics. The ratio of actives to retirees differs from group to group and groups with lower ratios generally have more volatile contribution rates as there is less payroll to spread costs over.

Scenario 1 Winners & Losers: Funding Levels

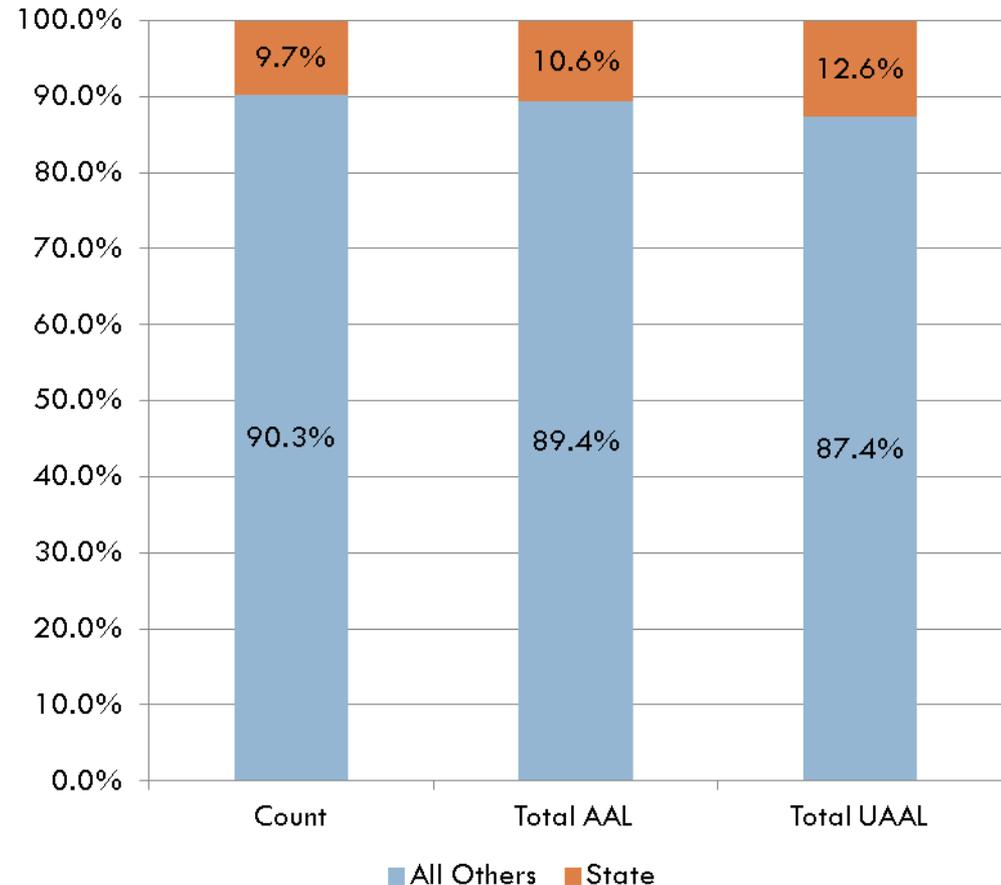


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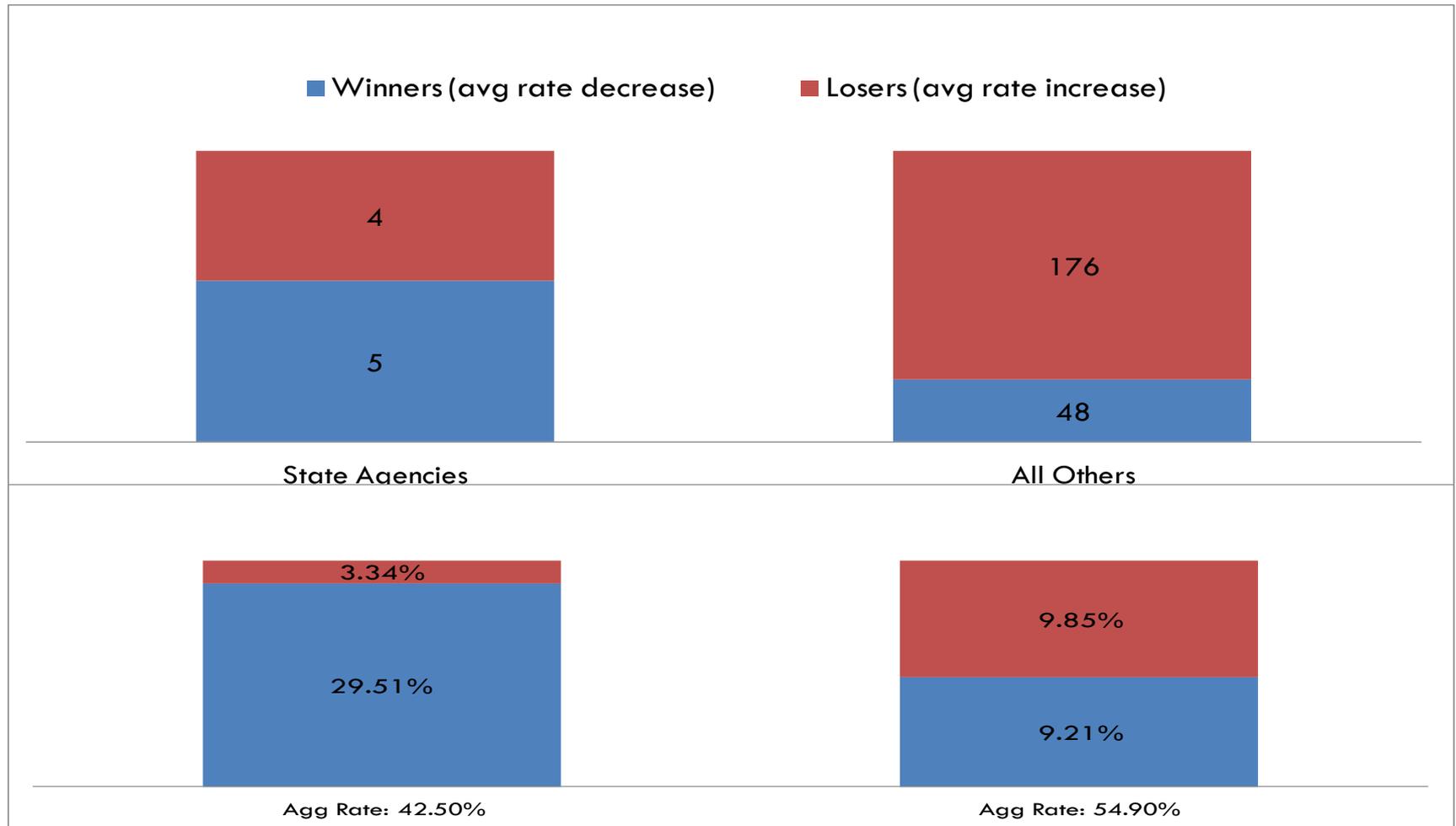
Scenario 2

State Agencies v. All Others

- ASU Campus Police
- AZ Attorney General Investigators
- AZ Department of Emergency & Military Affairs
- AZ Department of Liquor License & Control Investigators
- AZ Department of Public Safety
- AZ Game and Fish Department
- AZ State Park Rangers
- NAU Campus Police
- U of A Campus Police Department

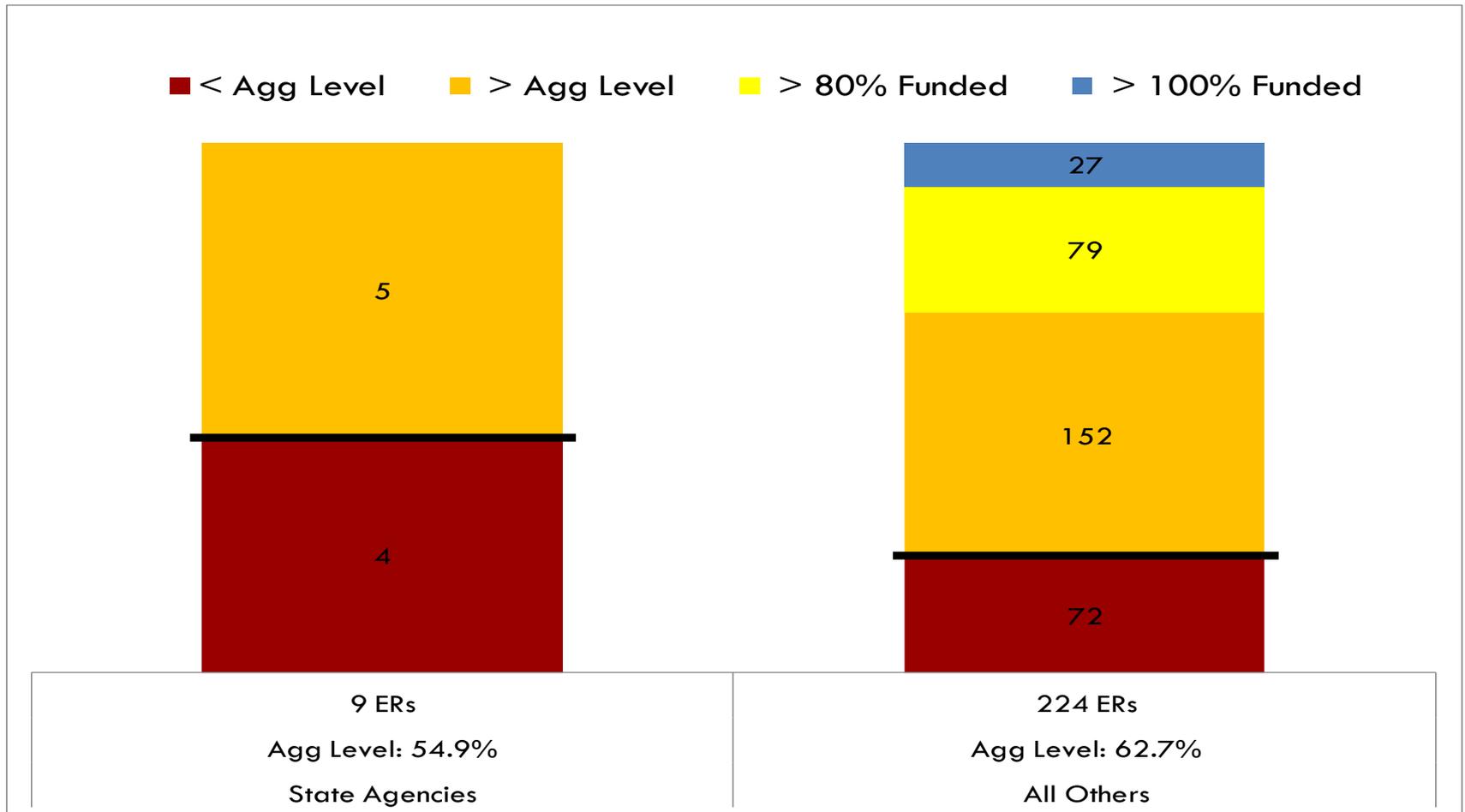


Scenario 2 Winners & Losers: ER Rates



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Scenario 2 Winners & Losers: Funding Levels

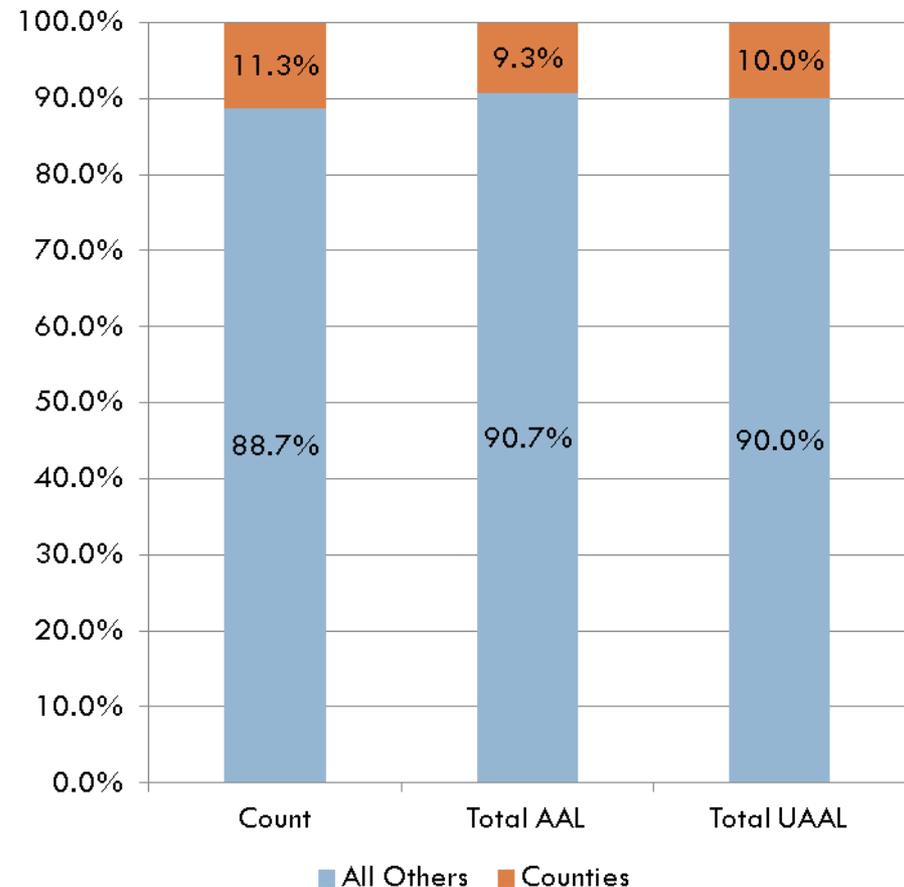


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Scenario 3

County Employers v. All Others

- Apache Co. Sheriff's Dept.
- Cochise Co. Sheriff's Dept.
- Coconino Co. Sheriff's Dept.
- Gila Co. Sheriff's Dept.
- Graham Co. Attorney Investigators
- Graham Co. Sheriff's Dept.
- Greenlee Co. Attorney Investigators
- Greenlee Co. Sheriff's Dept.
- La Paz Co. Attorney Investigators
- La Paz Co. Sheriff's Dept.
- Maricopa County Attorney Investigators
- Maricopa Co. Park Rangers
- Maricopa Co. Sheriff's Office
- Mohave Co. Sheriff's Dept.
- Navajo Co. Attorney Investigators
- Navajo Co. Sheriff's Dept.
- Pima Co. Attorney Investigators
- Pima Co. Comm. College Police
- Pima Co. Sheriff's Dept.
- Pinal Co. Sheriff's Dept.
- Santa Cruz Co. Sheriff's Dept.
- Yavapai Co. Attorney Investigators
- Yavapai Co. Sheriff's Dept.
- Yuma Co. Sheriff's Dept.

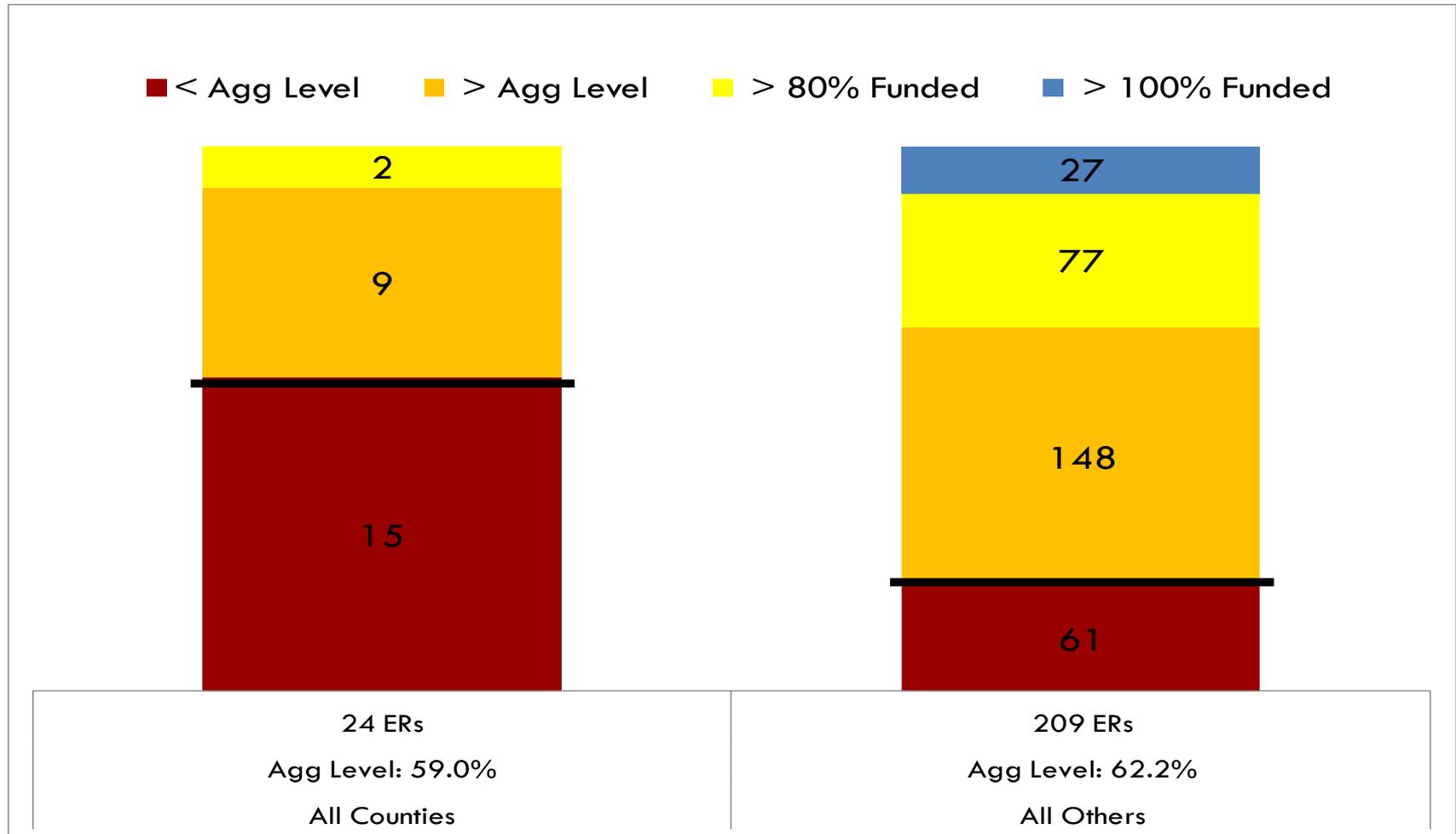


Scenario 3 Winners & Losers: ER Rates



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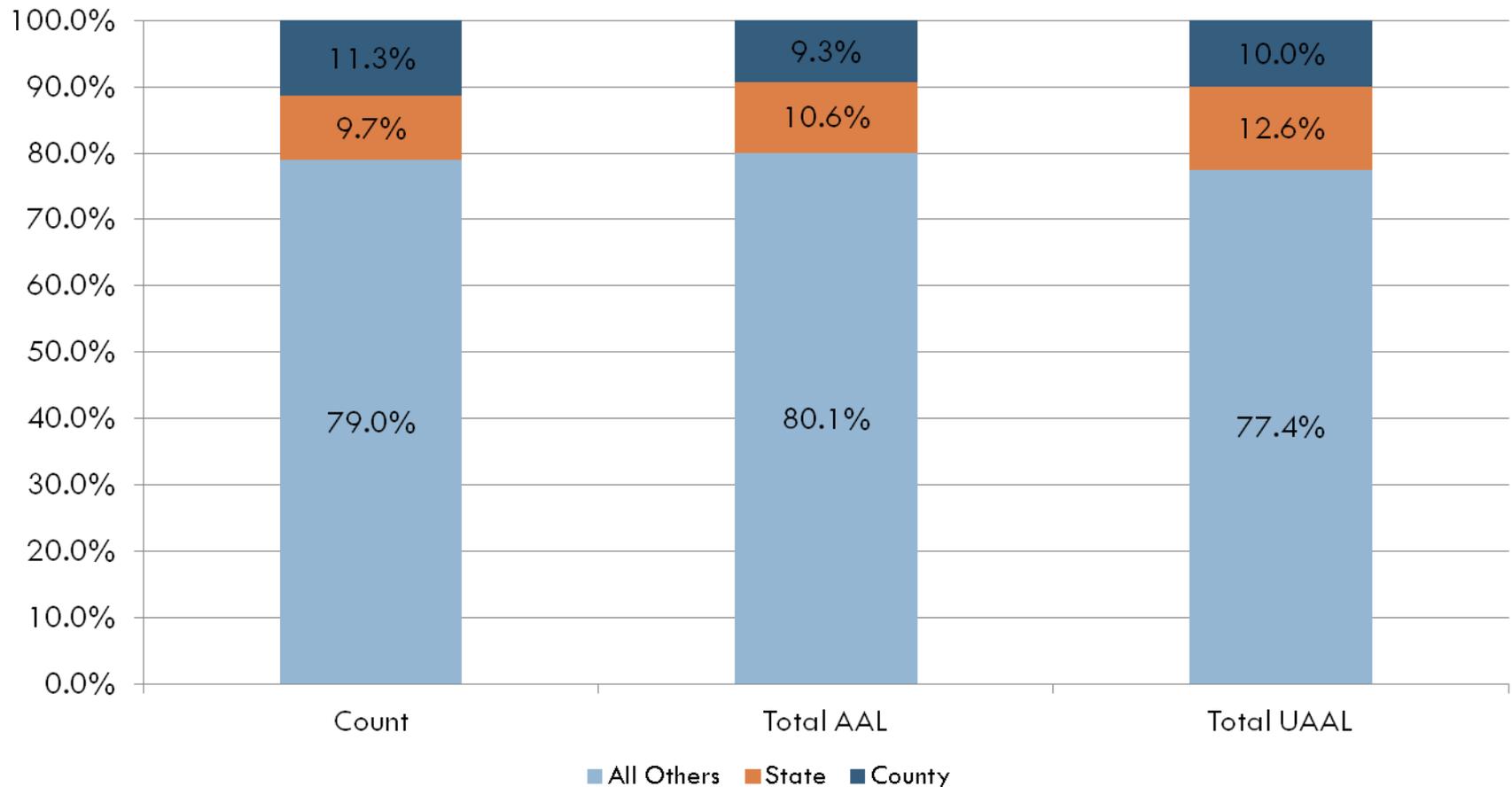
Scenario 3 Winners & Losers: Funding Levels



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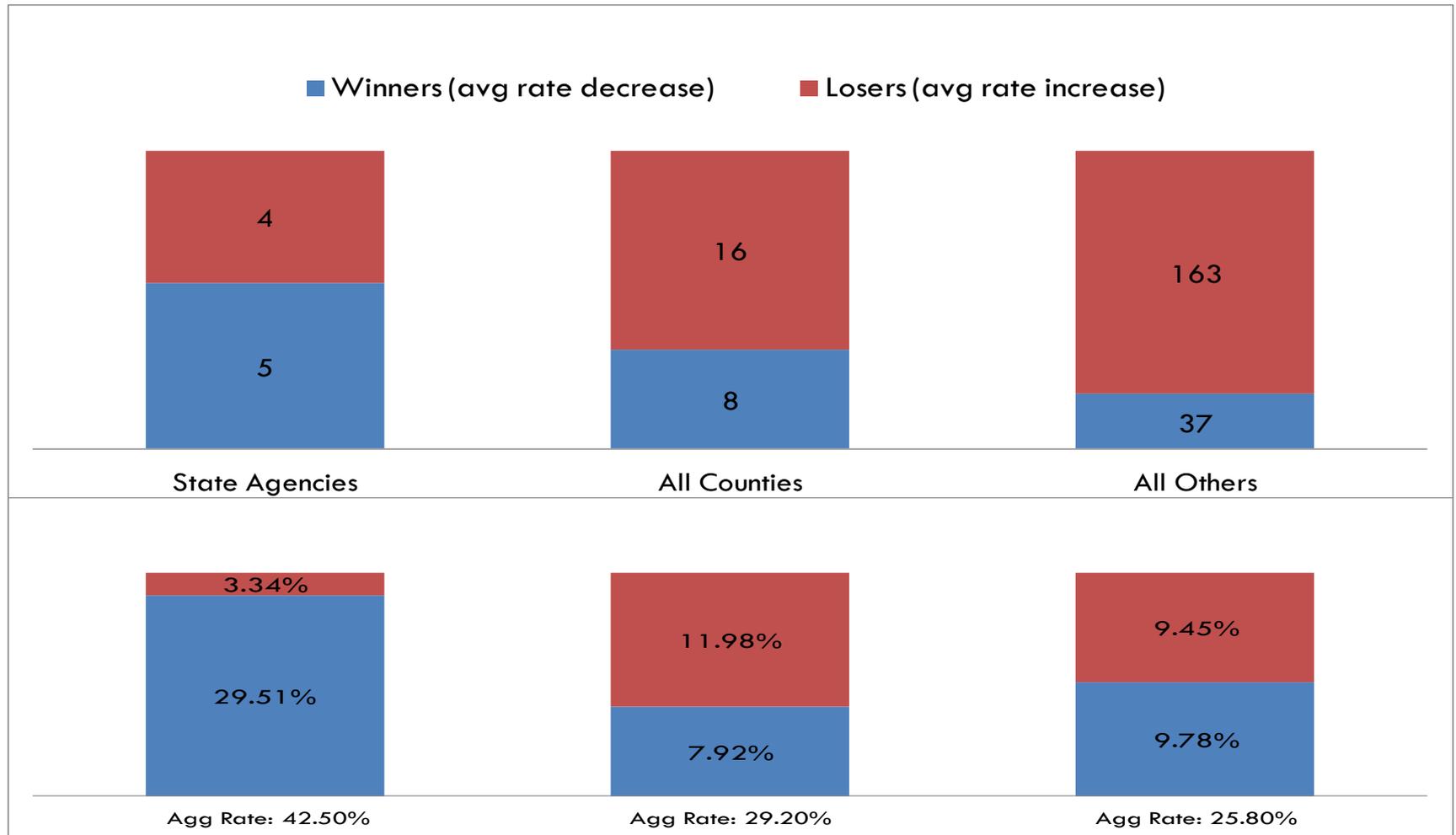
Scenario 4

State Agencies v. County Employers v. All Others



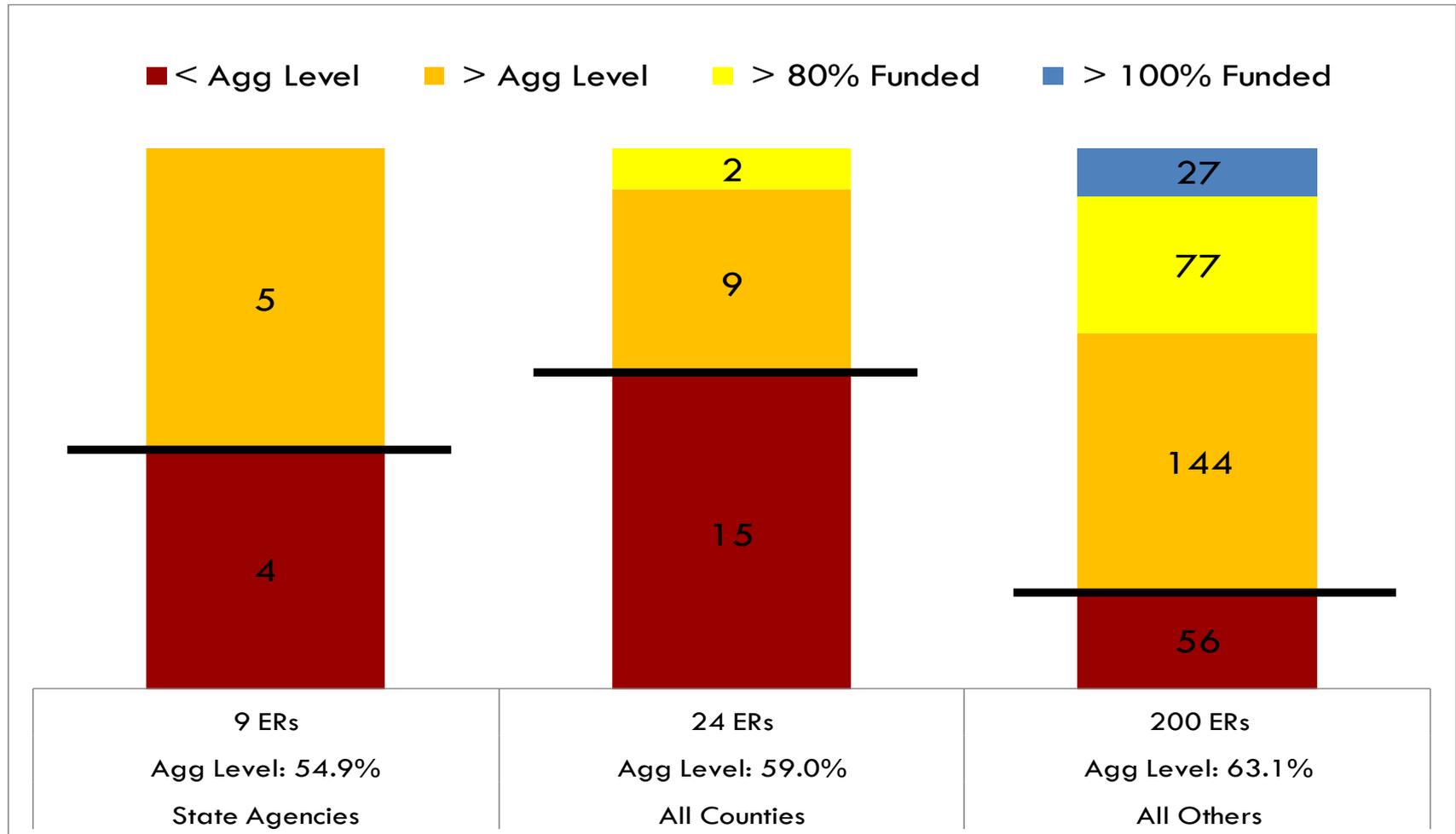
Percentages are based on June 30, 2011 valuations. Count is total membership (actives, vested, DROP, retired). AAL = Actuarial Accrued Liability. UAAL = Unfunded AAL.

Scenario 4 Winners & Losers: ER Rates



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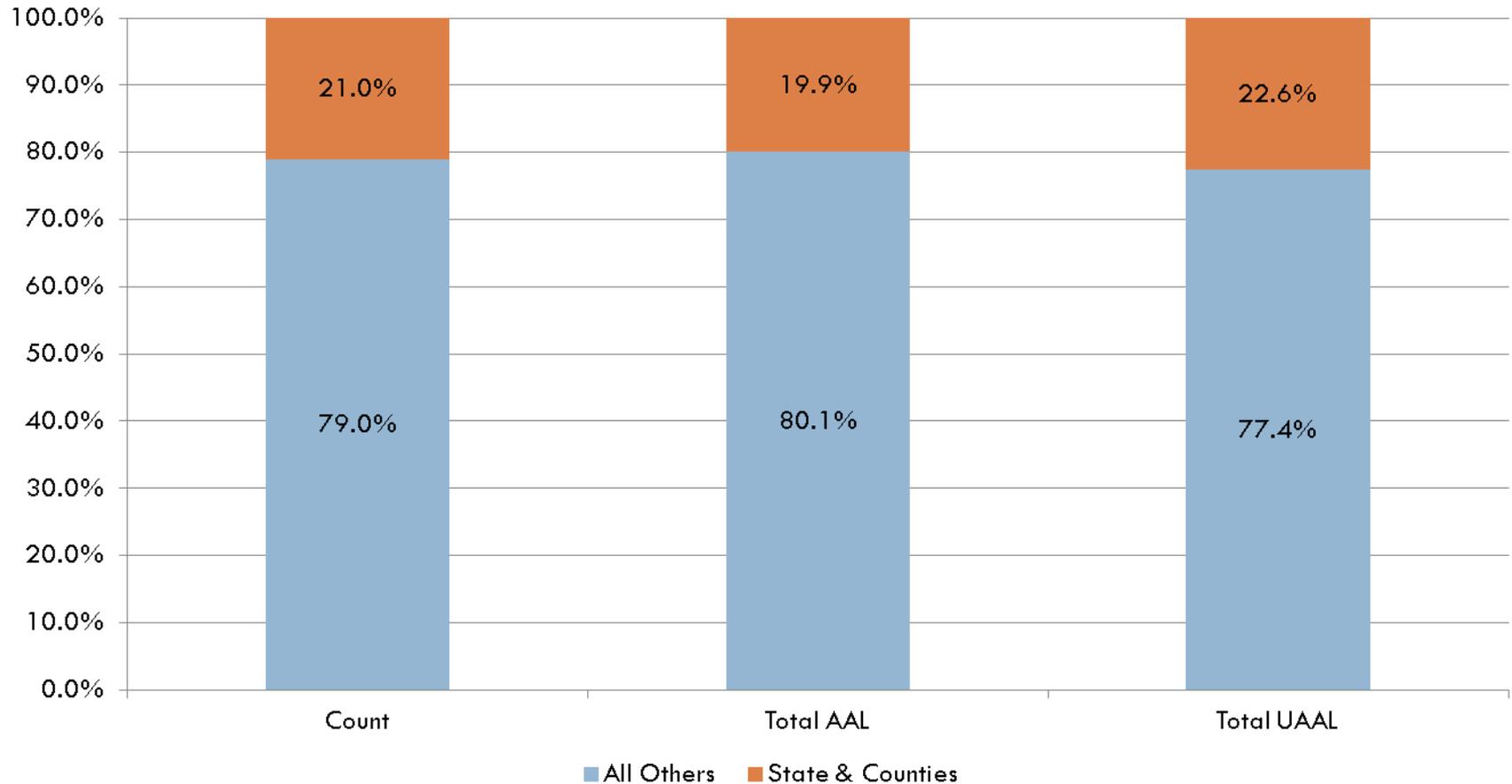
Scenario 4 Winners & Losers: Funding Levels



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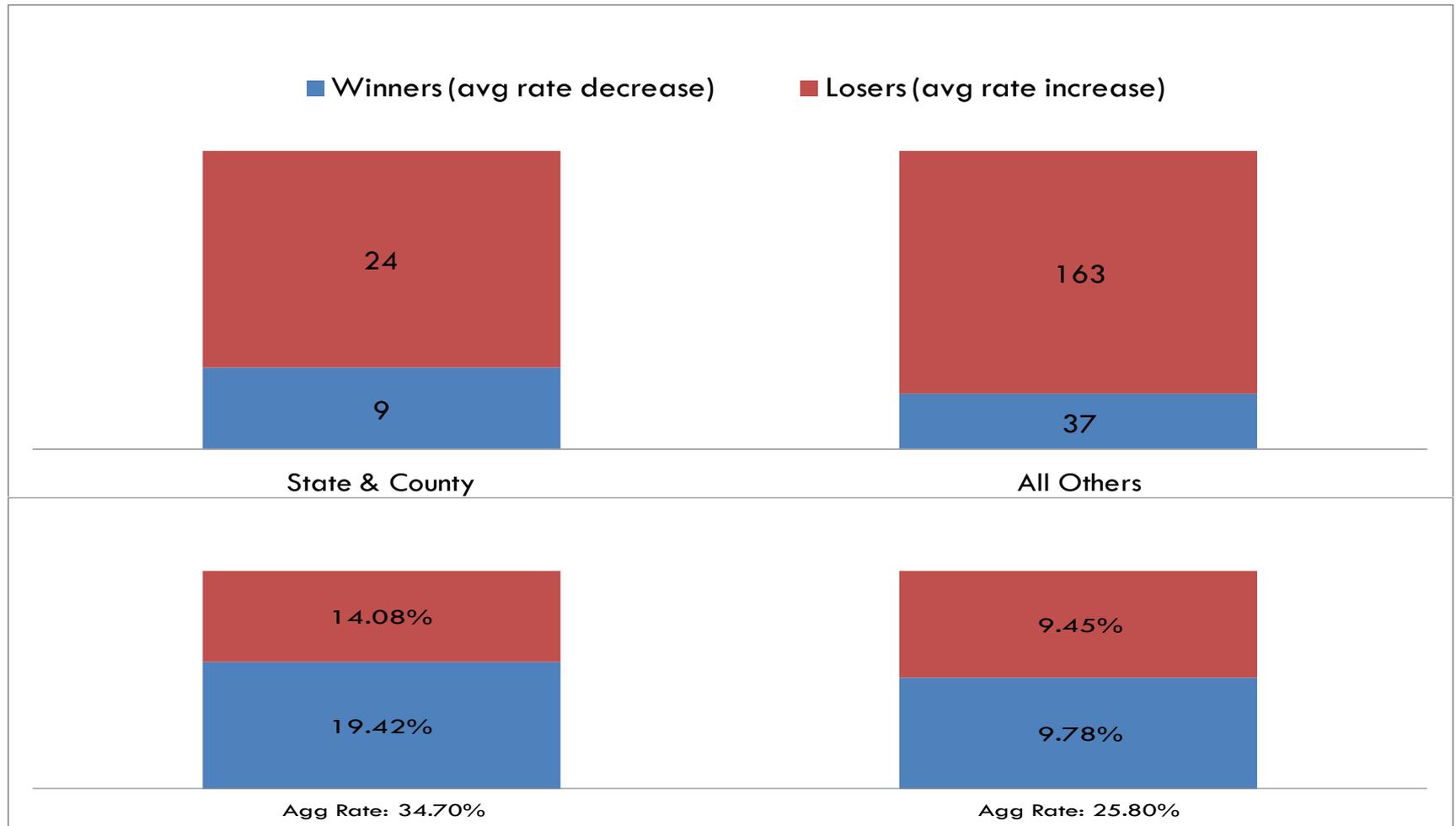
Scenario 5

State Agencies & County Employers v. All Others



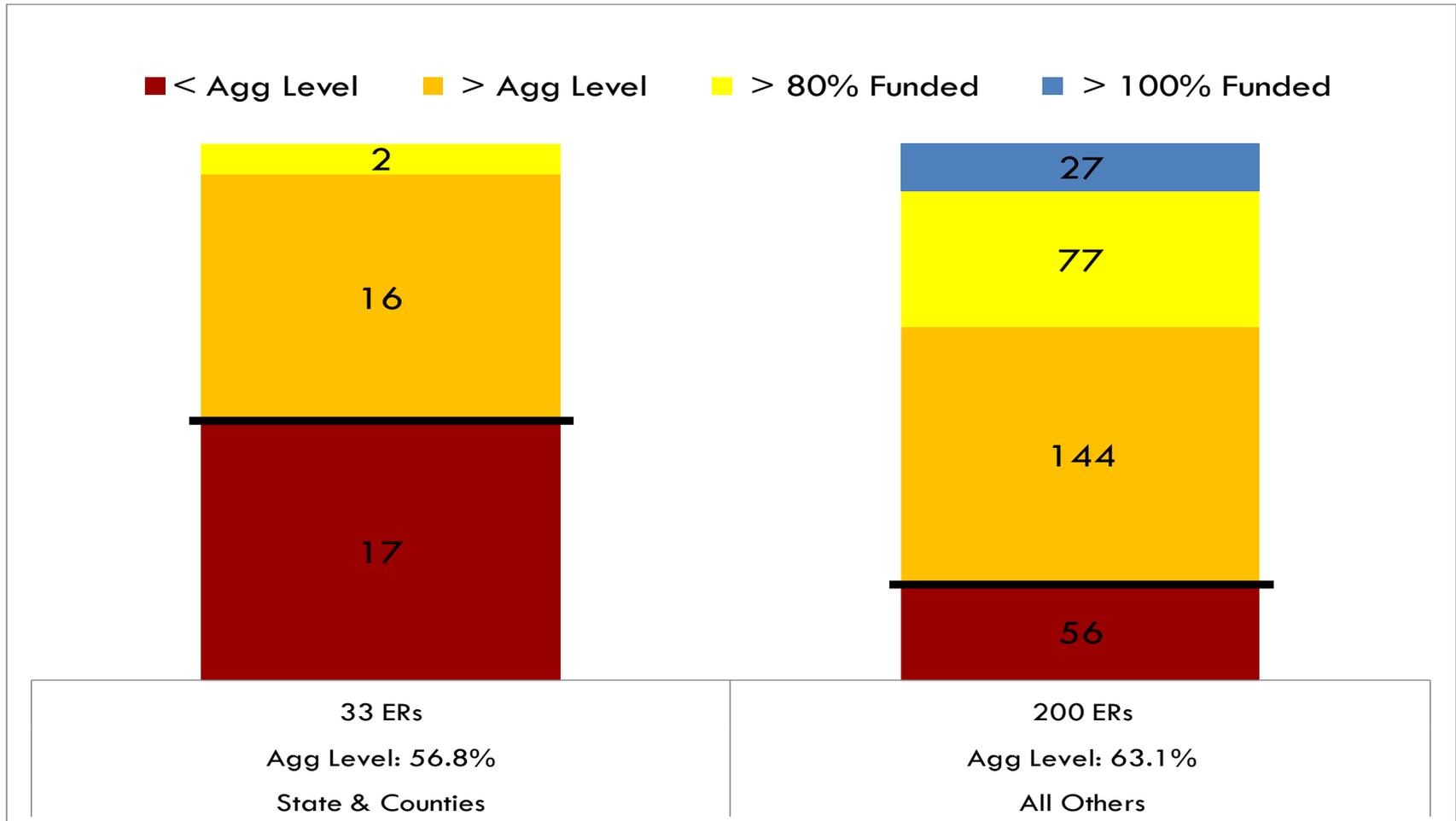
Percentages are based on June 30, 2011 valuations. Count is total membership (actives, vested, DROP, retired). AAL = Actuarial Accrued Liability. UAAL = Unfunded AAL.

Scenario 5 Winners & Losers: ER Rates



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Scenario 5 Winners & Losers: Funding Levels



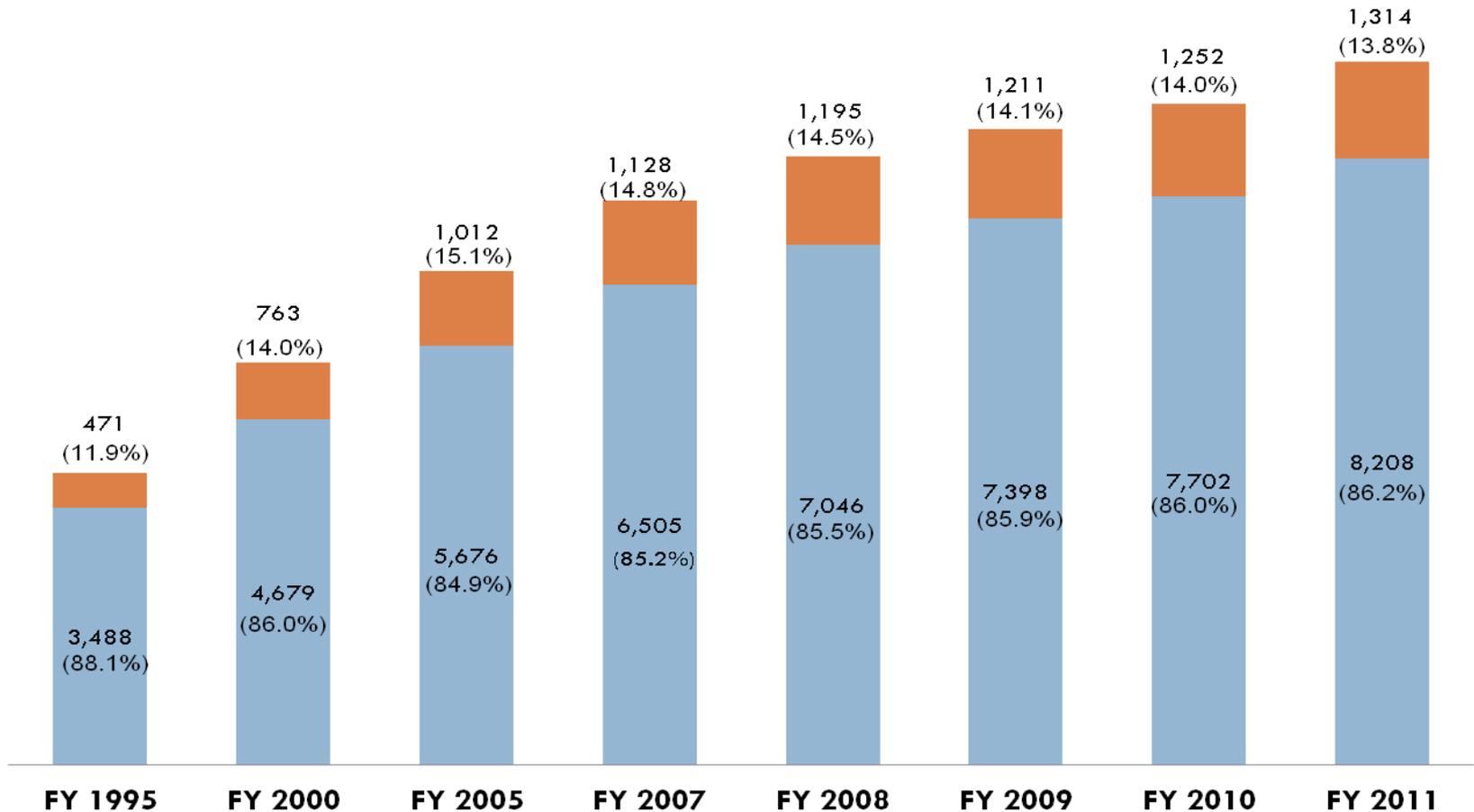
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Disability Claim History

PSPRS Distribution

PSPRS Pension Distribution by Numbers

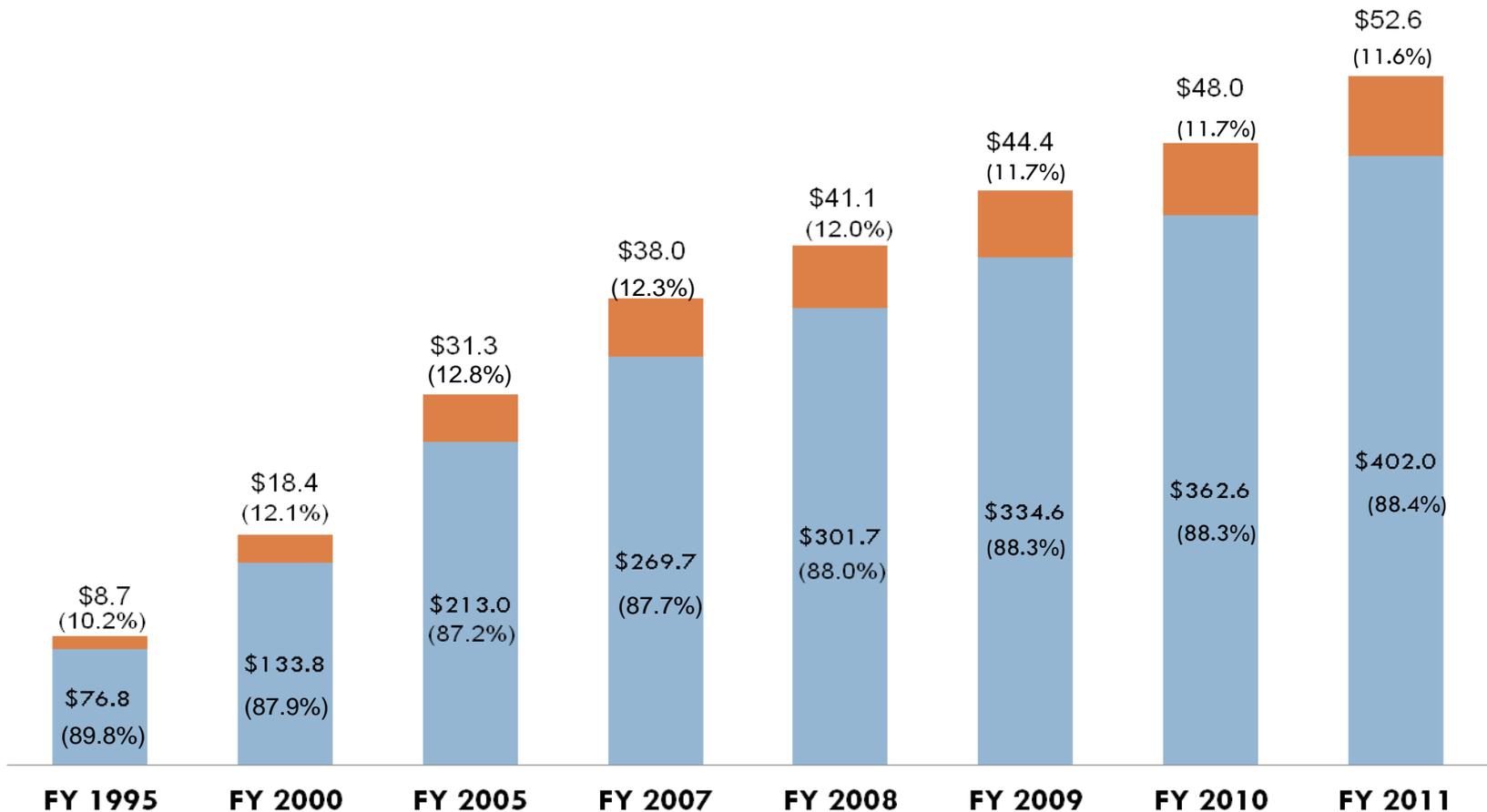
■ Normal (includes survivors) ■ Disability



PSPRS Distribution

PSPRS Pension Distribution by Dollars (in millions)

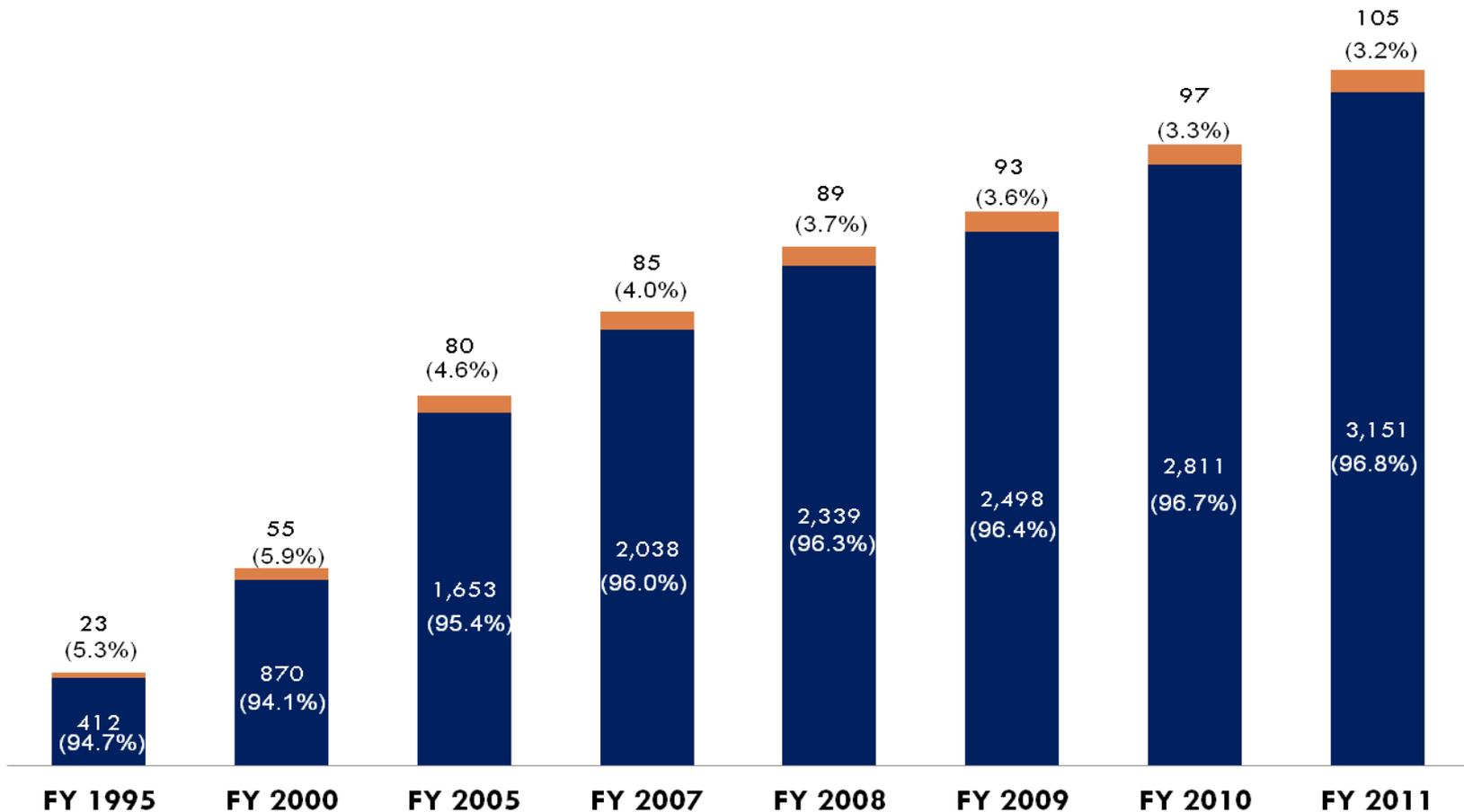
■ Normal (includes survivors) ■ Disability



CORP Distribution

CORP Pension Distribution by Numbers

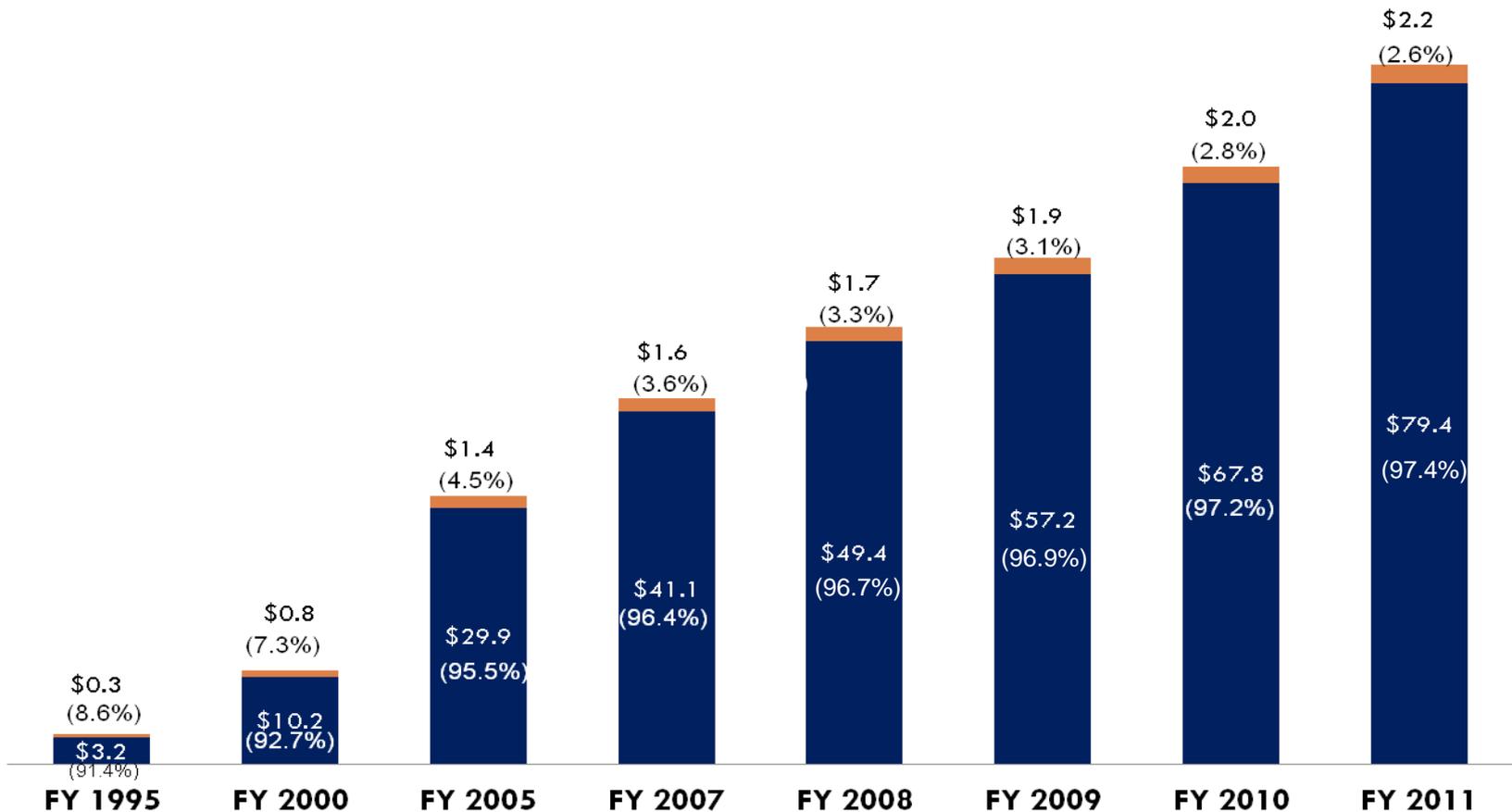
■ Normal (includes survivors) ■ Disability



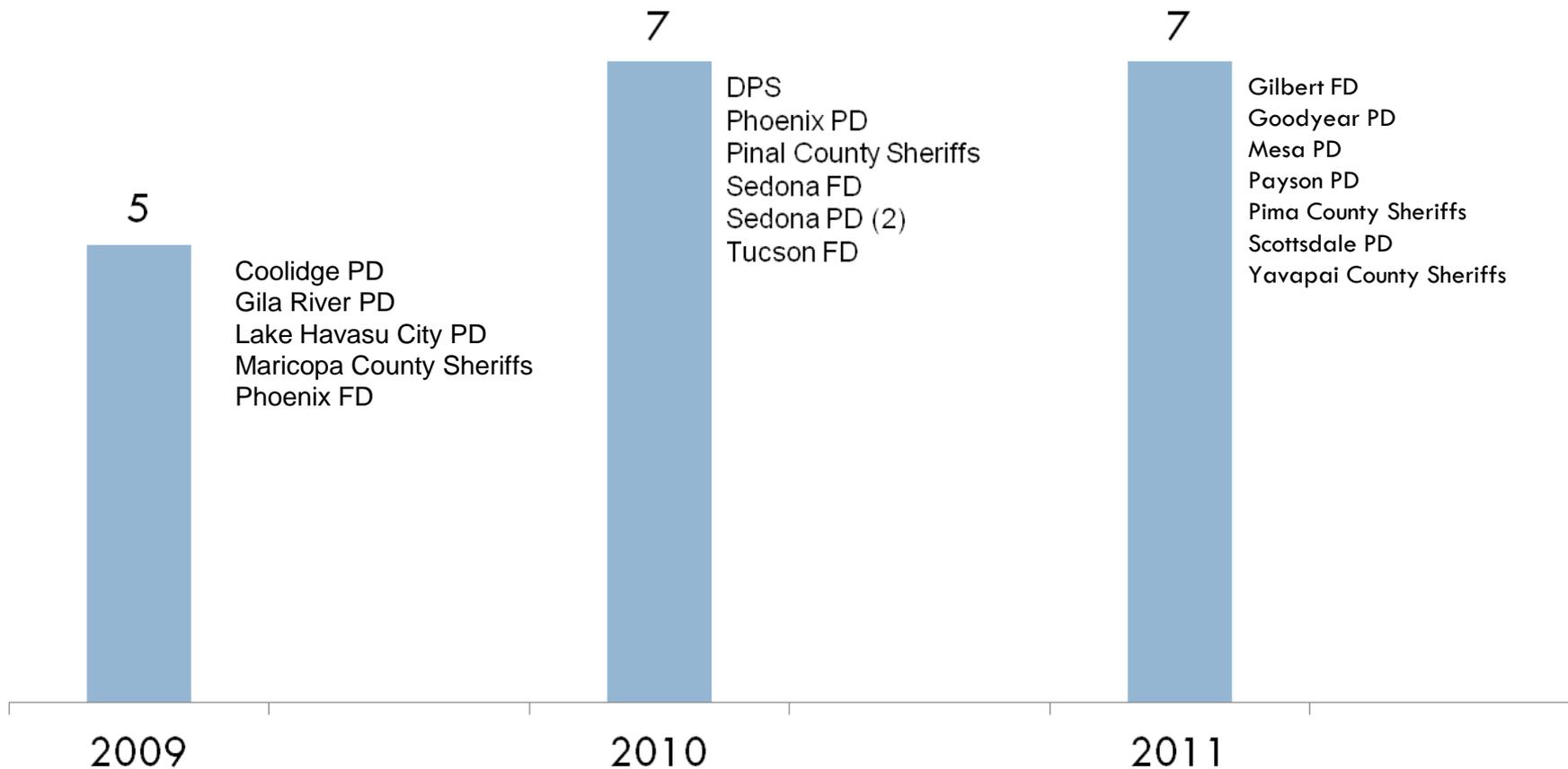
CORP Distribution

CORP Pension Distribution by Dollars (in millions)

■ Normal (includes survivors) ■ Disability

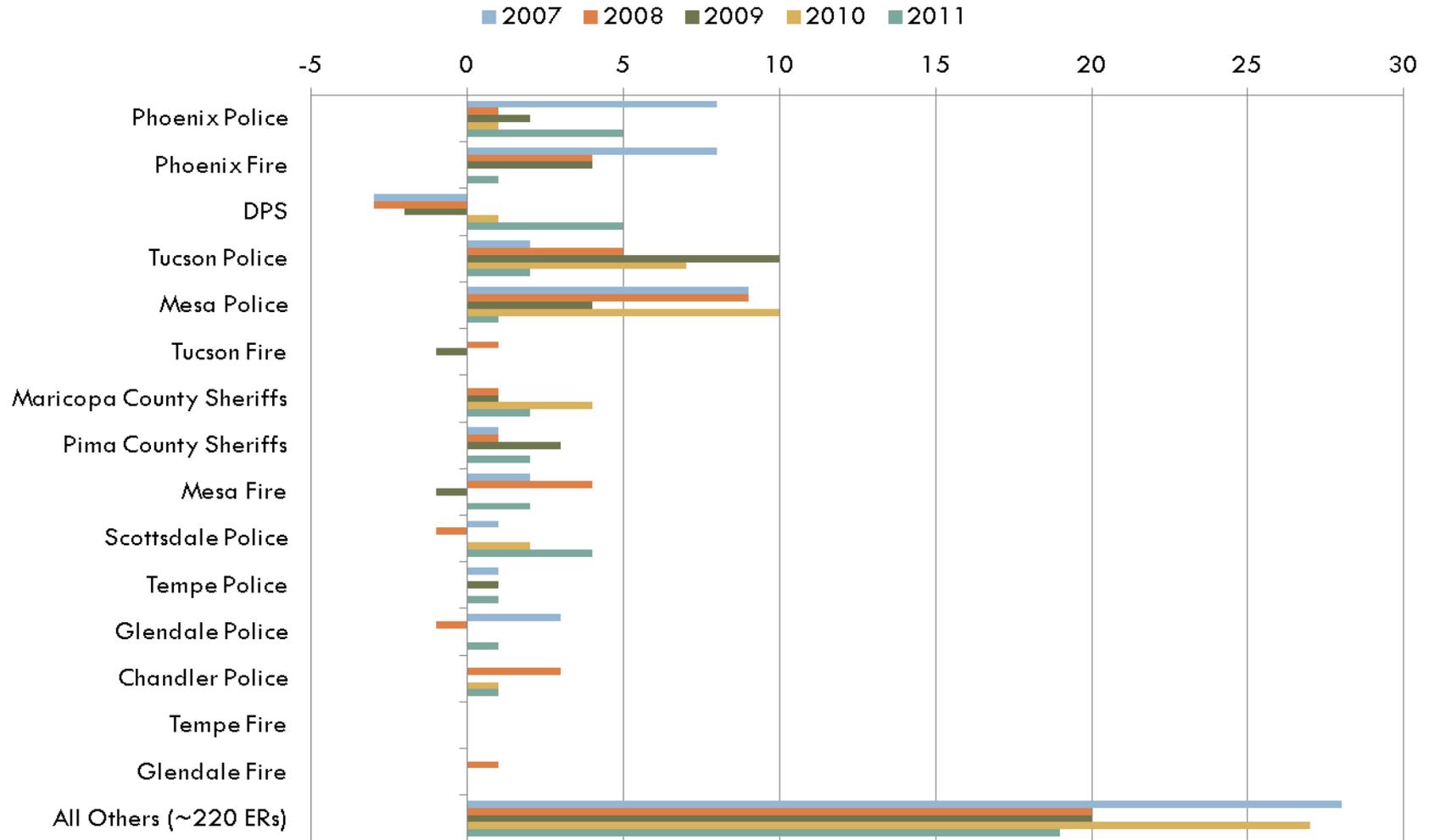


Disabilities Denied by Local Boards



This graph represents disabilities ultimately denied by various Local Boards based on a review of their minutes submitted to the PSPRS Administrative Office. The practice of logging these denials was not in place prior to 2009. It should also be noted that very few, if any, disabilities granted by the Local Boards are denied by the Administrative Office. The more likely scenario is that the information provided to our office is insufficient to support the Local Board decision and is therefore returned for clarification that must be addressed in their meeting and minutes.

5-Year Disability Claims by PSPRS Top 15



This graph represents the change in disabilities from year-to-year to represent the annual claims granted by each respective Local Board. A negative claim, as indicated above, can represent either a member coming off temporary disability or a disability no longer being paid due to death.