

# Actuarial Update On The State Retirement Plans

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Presentation at the Finance and Administration Seminar  
Washington Public Ports Association



## Today's Presentation

- Overview of the Office of the State Actuary (OSA)
- 2015 Actuarial Valuation results
- Contribution rate adoption process
- Governmental Accounting Standards Board (GASB) updates
- Upcoming special projects at OSA



## What Is OSA?

- OSA is a small agency
  - Within the Legislative Branch
  - Eighteen-person staff
- In-house actuaries
  - Mixture of certified actuaries and actuarial students
  - Unique among the states
- Three policy analysts focused on pension practice

## Principal Duties

- *“Supporting financial security for generations.”*
- Support the state retirement plans
  - Perform annual actuarial valuations
  - Calculate required contribution rates
  - Perform experience studies to set assumptions
  - Prepare actuarial fiscal notes on pension legislation
  - Staff the Select Committee on Pension Policy (SCPP)
- Advise the Guaranteed Education Tuition (GET) program
- Provide actuarial support for the Higher Education Supplemental Retirement Plan
- Provide assistance to the Legislature with Healthcare actuarial work



# OSA Clients

OSA Clients	
<b>Legislative Branch</b>	Pension Funding Council, Select Committee on Pension Policy, Legislators and Legislative Staff, GET Legislative Advisory Committee, and Fiscal Committees.
<b>Executive Branch</b>	Governor's Office, Office of the State Treasurer, Health Care Authority, Department of Retirement Systems, Office of Financial Management, and Office of the Attorney General.
<b>Boards</b>	Volunteer Fire Fighters' and Reserve Officers' Relief and Pension Fund, State Investment Board, LEOFF Plan 2 Retirement Board, Public Employees' Benefits Board, GET Committee, and Institutions of Higher Education.
<b>Public</b>	Pension community, local governments, and citizens at large.

## Highlights Of The 2015 Actuarial Valuation

- 4.93% return on market value of assets
  - July 1, 2014, through June 30, 2015
- Assumed long-term investment return reduced from 7.8% to 7.7%
- Contribution rate increases adopted by the Pension Funding Council (PFC) for 2017-19
- Funded Status (FS) for all plans combined is 86%, compared to 87% in the prior valuation

## Funded Status Compares Assets To Liabilities

- FS equals Actuarial Value of Assets divided by Accrued Liabilities
- FS more than 100%
  - More than \$1 of assets for every \$1 of earned benefits
  - On track with systematic actuarial funding plan
  - Does not necessarily mean no future contributions are needed
- FS less than 100%
  - Plan needs additional assets to get it back on track to full funding



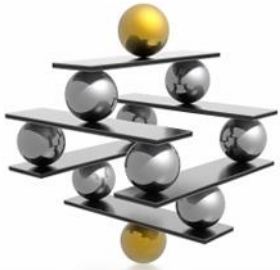
## Actuarial Value Of Assets Is Less Volatile Than Market Value

- Start with Market Value of Assets (MVA) reported by Washington State Investment Board (WSIB)
- Calculate 2015 asset gain (or loss) based on expected return
- Develop Actuarial Value of Assets (AVA) by smoothing past and current asset gains (or losses)
  - Smooth gain (or loss) over a period up to eight years
  - AVA limited to 30% “corridor” around MVA
  - Smoothing method reduces contribution rate and funded status volatility



## Actuarial Liabilities Of The Plan

- Present Value of Future Benefits (PVFB)
  - Today's value of all future expected benefits for current members
- Accrued Liabilities or “earned” benefits
  - Today's value of all future expected benefits for current members that have been “earned” as of the measurement date



# Washington Plans Well-Funded Overall

Funded Status		
<i>(Dollars in Millions)</i>		
All Systems	2015	2014
a. Accrued Liability*	\$83,477	\$78,800
b. Market Value of Assets	74,476	72,553
c. Deferred Gains/(Losses)	3,016	3,776
d. Actuarial Value of Assets (b-c)	71,460	68,777
Unfunded Liability (a-d)	\$12,017	\$10,023
Funded Ratio (d/a)	86%	87%

*Note: Totals may not agree due to rounding.*

*\*Liabilities valued using EAN cost method.*

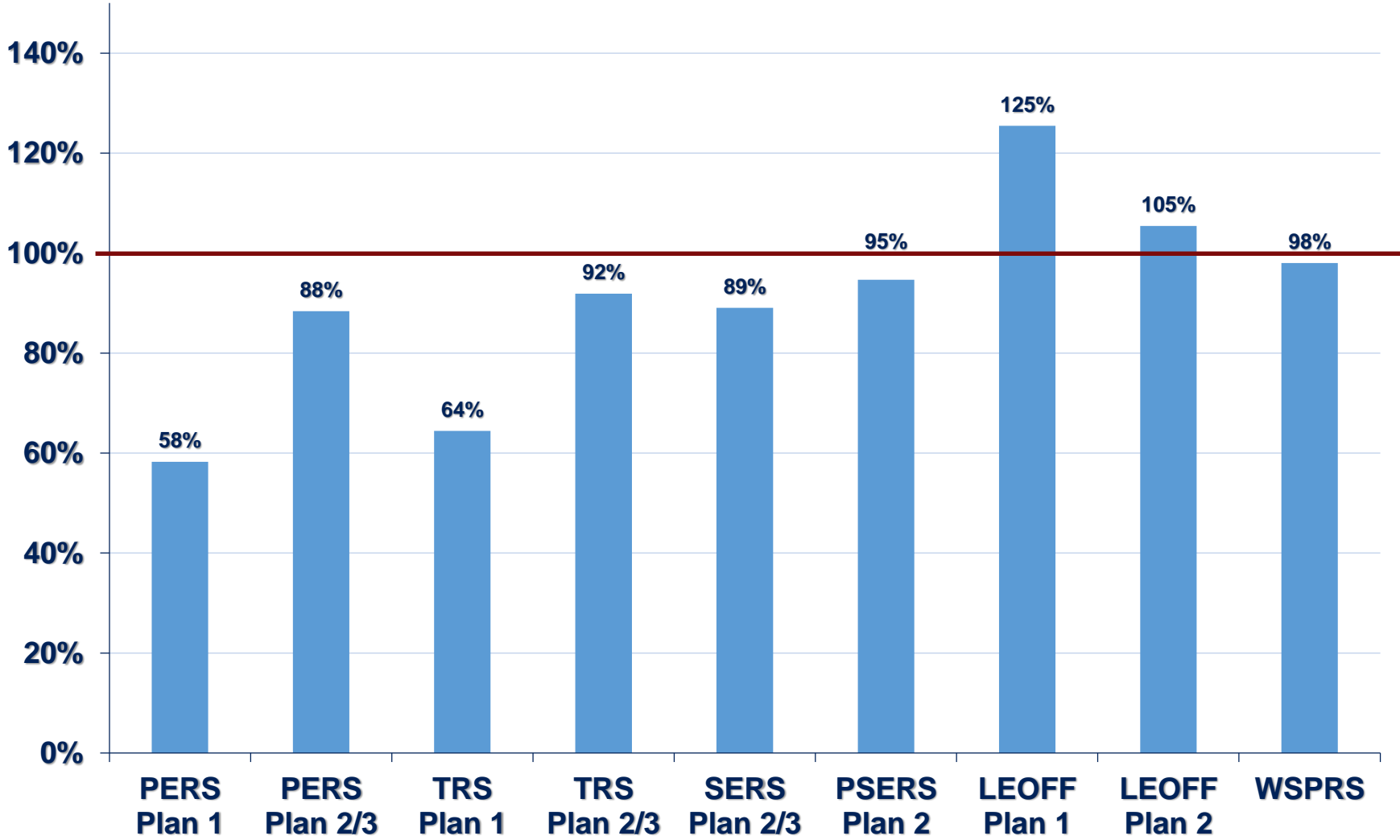
## PERS 2/3 Higher Funded Status Than PERS 1

2015 Funded Status		
<i>(Dollars in Millions)</i>	PERS	
	Plan 1	Plan 2/3
a. Accrued Liability*	\$12,553	\$32,008
b. Market Value of Assets	7,558	29,512
c. Deferred Gains/(Losses)	243	1,220
d. Actuarial Value of Assets (b-c)	7,315	28,292
Unfunded Liability (a-d)	\$5,239	\$3,715
Funded Ratio (d/a)	58%	88%

*Note: Totals may not agree due to rounding.*

*\*Liabilities valued using EAN cost method.*

# Funded Status By Plan At June 30, 2015



*Note: Liabilities valued using Entry Age Normal Cost method.*

## Overview Of System Membership At June 30, 2015

	PERS			TRS			SERS	
	Plan 1	Plan 2	Plan 3	Plan 1	Plan 2	Plan 3	Plan 2	Plan 3
2015 Actives	3,927	117,768	31,602	1,353	15,342	52,125	24,479	31,326
2015 Annuitants	50,270	38,693	3,186	35,239	4,305	7,453	6,562	5,750
<b>Total</b>	<b>54,197</b>	<b>156,461</b>	<b>34,788</b>	<b>36,592</b>	<b>19,647</b>	<b>59,578</b>	<b>31,041</b>	<b>37,076</b>
<b>Percent of Total</b>	<b>12%</b>	<b>34%</b>	<b>7%</b>	<b>8%</b>	<b>4%</b>	<b>13%</b>	<b>7%</b>	<b>8%</b>

	PSERS	LEOFF		WSPRS		All
	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	Systems
2015 Actives	5,202	82	17,019	560	475	<b>301,260</b>
2015 Annuitants	80	7,507	3,710	1,033	0	<b>163,788</b>
<b>Total</b>	<b>5,282</b>	<b>7,589</b>	<b>20,729</b>	<b>1,593</b>	<b>475</b>	<b>465,048</b>
<b>Percent of Total</b>	<b>1%</b>	<b>2%</b>	<b>4%</b>	<b>&lt;1%</b>	<b>&lt;1%</b>	<b>100%</b>

## Summary Of Plan Participants

PERS At June 30, 2015				
	Number	Average Age	Average Service	Average Salary/Benefits*
<b>Actives</b>				
<b>Plan 1</b>	3,927	64	25	\$58,748
<b>Plan 2</b>	117,768	48	13	\$61,176
<b>Plan 3</b>	31,602	43	9	\$56,320
<b>Annuitants</b>				
<b>Plan 1</b>	50,270	75	24	\$23,611
<b>Plan 2</b>	38,693	71	17	\$17,220
<b>Plan 3</b>	3,186	67	19	\$9,874

\*Annualized.

## Looking “Ahead” To The 2016 Actuarial Valuation

- 2.65% return on market value of assets
  - July 1, 2015, through June 30, 2016
- Preliminary funded status and actuarial liabilities posted this month to OSA’s website
- Final valuation published late August
  - Not relied on to adopt contribution rates

# Questions On The 2015 Actuarial Valuation?





## 2017-19 PFC Contribution Rate Adoption

- Last summer, the PFC adopted contribution rates for 2017-19
  - Rates subject to revision by the Legislature
- Adopted rates include
  - Lowering assumed rate of return from 7.8% to 7.7%
  - Second of three planned steps to phase-in budget impacts from new mortality assumptions
- Includes PERS and TRS Plans 1 additional rate to address unfunded



## Plan For Getting PERS 1 And TRS 1 Back On Track

- New funding method adopted in 2009
- Requires higher rates to address the Unfunded Actuarial Accrued Liability (UAAL)
- Employer pays UAAL rates, no member payments to UAAL
  - PERS 1 UAAL paid by PERS, SERS, and PSERS employers
  - TRS 1 UAAL paid by TRS employers
- Phasing in higher UAAL rate requirements
  - Full requirements began in 2015

## 2017-19 PFC Adopted Contribution Rates - Member

Member Contribution Rates <sup>1</sup>			
System	Current	Adopted 2017-19	Projected <sup>2</sup> 2019-21
<b>PERS<sup>3</sup></b>	6.12%	7.38%	8.19%
<b>TRS<sup>3</sup></b>	5.95%	7.06%	7.63%
<b>SERS<sup>3</sup></b>	5.63%	7.27%	8.15%
<b>PSERS</b>	6.59%	6.73%	6.98%
<b>LEOFF 2<sup>4</sup></b>	8.41%	8.75%	8.75%
<b>WSPRS</b>	6.84%	7.34%	7.34%

<sup>1</sup>Rates do not reflect any changes from the 2017 Legislative Session.

<sup>2</sup>Rates shown for 2019-21 are projections based on the results of the 2015 Actuarial Valuation. Actual results may vary.

<sup>3</sup>Plan 1 members' contribution rate is statutorily set at 6.0%. Members in Plan 3 do not make contributions to their defined benefit.

<sup>4</sup>No member or employer contributions are required for LEOFF Plan 1 when the plan is fully funded.

## 2017-19 PFC Adopted Contribution Rates - Employer\*

Employer Contribution Rates <sup>1</sup>			
System	Current	Adopted 2017-19	Projected <sup>2</sup> 2019-21
<b>PERS</b>	11.00%	12.52%	13.05%
<b>TRS</b>	12.95%	15.02%	15.09%
<b>SERS</b>	11.40%	13.30%	12.97%
<b>PSERS</b>	11.36%	11.76%	11.80%
<b>LEOFF 2<sup>3</sup></b>	8.41%	8.75%	8.75%
<b>WSPRS</b>	8.16%	12.81%	18.32%

<sup>1</sup>Rates do not reflect any changes from the 2017 Legislative Session.

<sup>2</sup>Rates shown for 2019-21 are projections based on the results of the 2015 Actuarial Valuation. Actual results may vary.

<sup>3</sup>No member or employer contributions are required for LEOFF Plan 1 when the plan is fully funded.

\*Excludes current administrative expense rate of 0.18%.

## Conclusions For State Retirement Plans

- Among best funded systems nationally
- Future contribution increases expected
  - 2019-21 rates reflect final phase-in step of increases resulting from new mortality assumption
  - Creates short-term pressure on state and local government budgets
- Stay on track with the funding plan
  - Funding shortfalls today increase future contribution requirements
- Regularly review assumptions used to model plan experience



# Questions On Funding The State Retirement Systems?



## **GASB Financial Reporting Differs From Funding**

- **7.5% discount rate used for all plans**
  - Based on OSA's recommendation of long-term expected return on assets
  - Currently under review
- **Asset sufficiency test required to determine discount rate**
  - All plans passed test in 2016
- **Accrued Liability compared to MVA**
  - Referred to as Total Pension Liability and Plan Fiduciary Net Position
- **GASB 68: Employer share based on allocation percentage**
  - DRS publishes Participating Employer Financial Information (PEFI)

# GASB 67 Plan Level Financial Reporting

GASB 67 Plan Level Financial Reporting*		
<i>(Dollars in Millions)</i>	PERS 2/3	
	2016	2015
a. Total Pension Liability (TPL)**	\$35,518	\$33,085
b. Plan Fiduciary Net Position (PFNP)	<u>30,483</u>	<u>29,512</u>
Net Pension Liability (a-b)	\$5,035	\$3,573
PFNP as a % of TPL (b/a)	85.82%	89.20%
<b>Pension Expense</b>	<b>\$687</b>	<b>\$423</b>

*Note: Totals may not agree due to rounding.*

*\*From DRS PEFI.*

*\*\*Liabilities valued using EAN cost method.*



## Other Post-Employment Benefit Reporting Rules Are Changing

- GASB 75 addresses employer level OPEB reporting
  - Effective for fiscal years beginning after June 15, 2017
- GASB workgroup meeting regularly to prepare for changes
- OSA to continue preparing “OPEB tool” on our website
  - Less than 100 employees (active and inactive) provided with OPEB
- Discount rate equal to bond index that meets GASB criteria
  - “Bond Buyer 20”
  - June 30, 2017, rate used for beginning balance in FYE 2018 reporting
    - Early June 2017, rate: 3.61%
  - Bond rate changes annually

## State Auditor's Office Contact for GASB 75 Questions

- Debra Burleson

- Email: [debra.burleson@sao.wa.gov](mailto:debra.burleson@sao.wa.gov)

- Phone: 253.593.2047, ext. 121



# Questions on GASB?



## Upcoming Special Projects At OSA

- **Economic Experience Study (EES) and Recommendations on Long-Term Economic Assumptions**
  - Report and recommendations due in September
  - Includes review and recommendations of long-term expected rate of return on plan assets, inflation, general salary growth, and growth in plan membership
- **Report on Financial Condition**
  - In conjunction with the EES
  - Focuses on health of pension systems

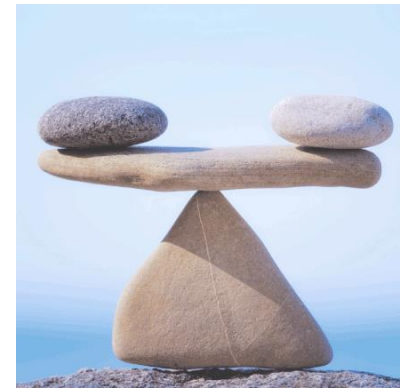


## Web Reports Allow User Interaction

- OSA has moved some elements from the [Actuarial Valuation Report](#) to our website
- Provides the ability to use different inputs to see how the results change
- Current reports include:
  - [Funded Status](#)
  - [Future Value and Present Value of Benefit Payments](#)
- New reports in the queue:
  - Contribution Rates (expected 2017)
  - Age/Service Distributions (expected 2018)

# Contacting The Office Of The State Actuary

- Website
  - [leg.wa.gov/OSA](http://leg.wa.gov/OSA)
- E-mail address
  - [state.actuary@leg.wa.gov](mailto:state.actuary@leg.wa.gov)
- Phone
  - 360.786.6140



# Questions?



# Appendix





## Historical CTF Investment Returns

Investment Returns of the Commingled Trust Funds*			
Year	ROR	Year	ROR
1997	20.18%	2007	21.33%
1998	17.12%	2008	(1.24%)
1999	11.76%	2009	(22.84%)
2000	13.56%	2010	13.22%
2001	(6.75%)	2011	21.14%
2002	(5.15%)	2012	1.40%
2003	3.02%	2013	12.36%
2004	16.72%	2014	18.89%
2005	13.05%	2015	4.93%
2006	16.69%	2016	2.65%

*\*Returns are calculated for fiscal years ending June 30 as reported by DRS.*

## Funded Status By Plan At June 30, 2015

Funded Status on an Actuarial Value Basis*										
(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
<b>Accrued Liability</b>	\$12,553	\$32,008	\$9,107	\$10,831	\$4,381	\$357	\$4,307	\$8,838	\$1,093	<b>\$83,477</b>
<b>Actuarial Value of Assets</b>	\$7,315	\$28,292	\$5,870	\$9,953	\$3,901	\$338	\$5,404	\$9,320	\$1,067	<b>\$71,460</b>
<b>Unfunded Accrued Liability</b>	\$5,239	\$3,715	\$3,237	\$879	\$481	\$19	(\$1,097)	(\$482)	\$26	<b>\$12,017</b>
<b>Funded Ratio</b>										
<b>2015</b>	<b>58%</b>	<b>88%</b>	<b>64%</b>	<b>92%</b>	<b>89%</b>	<b>95%</b>	<b>125%</b>	<b>105%</b>	<b>98%</b>	<b>86%</b>

Note: Totals may not agree due to rounding.

\*Liabilities valued using the EAN cost method at an interest rate of 7.7% (7.5% for LEOFF 2).

## Funded Status By Plan With -1% Interest Rate Assumption

### Funded Status on an Actuarial Value Basis Liabilities Discounted @ Statutory Rate for Funding -1%\*

(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
<b>Accrued Liability</b>	\$13,631	\$36,983	\$9,882	\$12,630	\$5,033	\$435	\$4,716	\$10,299	\$1,250	<b>\$94,859</b>
<b>Actuarial Value of Assets</b>	\$7,315	\$28,292	\$5,870	\$9,953	\$3,901	\$338	\$5,404	\$9,320	\$1,067	<b>\$71,460</b>
<b>Unfunded Accrued Liability</b>	\$6,316	\$8,691	\$4,011	\$2,677	\$1,133	\$97	(\$688)	\$979	\$182	<b>\$23,399</b>
<b>Funded Ratio</b>										
<b>2015</b>	<b>54%</b>	<b>77%</b>	<b>59%</b>	<b>79%</b>	<b>77%</b>	<b>78%</b>	<b>115%</b>	<b>90%</b>	<b>85%</b>	<b>75%</b>

Note: Totals may not agree due to rounding.

\*Liabilities valued using the EAN cost method at an interest rate of 7.7% (7.5% for LEOFF 2).

# Funded Status By Plan With +1% Interest Rate Assumption

Funded Status on an Actuarial Value Basis										
Liabilities Discounted @ Statutory Rate for Funding +1%*										
(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plan 1	Plan 2/3	Plan 1	Plan 2/3	Plan 2/3	Plan 2	Plan 1	Plan 2		
<b>Accrued Liability</b>	\$11,622	\$27,936	\$8,438	\$9,371	\$3,845	\$296	\$3,957	\$7,649	\$966	<b>\$74,080</b>
<b>Actuarial Value of Assets</b>	\$7,315	\$28,292	\$5,870	\$9,953	\$3,901	\$338	\$5,404	\$9,320	\$1,067	<b>\$71,460</b>
<b>Unfunded Accrued Liability</b>	\$4,307	(\$357)	\$2,568	(\$582)	(\$56)	(\$42)	(\$1,447)	(\$1,671)	(\$101)	<b>\$2,620</b>
<b>Funded Ratio</b>										
<b>2015</b>	<b>63%</b>	<b>101%</b>	<b>70%</b>	<b>106%</b>	<b>101%</b>	<b>114%</b>	<b>137%</b>	<b>122%</b>	<b>110%</b>	<b>96%</b>

Note: Totals may not agree due to rounding.

\*Liabilities valued using the EAN cost method at an interest rate of 7.7% (7.5% for LEOFF 2).

## Components Of Pension Expense

<b>PERS 2/3 Components of Pension Expense*</b>		
<i>(Dollars in Thousands)</i>	<b>PERS 2/3</b>	
	<b>2016</b>	<b>2015</b>
Service Cost	893,404	864,319
Interest Cost	2,506,824	2,302,454
<b>Amortization of</b>		
Differences in Experience	59,770	111,711
Changes of Assumptions	16,686	1,693
Differences in Investment Return	(72,978)	(372,376)
Changes in Benefit Terms	0	0
Employee Contributions	(497,274)	(374,825)
Expected Earnings on Plan Assets	(2,222,428)	(2,111,750)
Administrative Expenses	759	581
Other Changes	2,103	1,617
<b>Total Pension Expense</b>	<b>686,866</b>	<b>423,424</b>

*Note: Totals may not agree due to rounding.*

*\*From DRS PEFI.*