Segal Consulting

Government of the Virgin Islands Retirement System

Actuarial Valuation and Review as of October 1, 2014

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August 24, 2015

Board of Trustees
Government of the Virgin Islands Retirement System
GERS Complex
St. Thomas, Virgin Islands, 00802

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of October 1, 2014. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal year ending September 30, 2015 and later years and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census information and financial information on which our calculations were based was prepared by the staff of the Government Employees Retirement System (GERS) under the supervision of Mr. Austin L. Nibbs, CPA. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

The actuarial calculations were directed under our supervision. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By: ______________________________ ______________________________

Leon F. (Rocky) Joyner, ASA, FCA, MAAA, EA
Vice President and Actuary

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Senior Vice President and Actuary

SECTION 1

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SECTION 2

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Purpose

This report has been prepared by Segal Consulting to present a valuation of the Government of the Virgin Islands Retirement System as of October 1, 2014. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Pension Plan, as administered by the Board as of October 1, 2014;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of October 1, 2014, provided by the GERS;
- The assets of the Plan as of September 30, 2014, provided by the Fund Auditor;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

1. The data collection process has improved significantly compared to prior years. However, efforts to continue improving the quality of the data being provided for valuation purposes must be maintained in order to make sure that the underlying basis of the actuarial assumptions and the resulting projections shown in this valuation and subsequent presentations are developed with the utmost quality. Segal is available to provide assistance to the GERS in continuing to improve the quality of the data. For purposes of this valuation, we have made the following adjustments to the data in order to reflect the potential exposure of the Fund with regards to data issues.
   - Active participants with missing salary information were assumed to have the same salary as reported in the 2013 active data. If salary information was still unknown, participants were excluded from the valuation.
   - Service information for inactive vested participants was determined based on date of hire and termination if available. If not available, inactive vested participants were assumed to have ten years of service as of the valuation date. Vested benefit amounts were estimated based on participants' salary and assumed service.
   - For retirees where no employee contribution information is provided, we assumed that the contributions would guarantee benefit payments for 4 years.

In addition, the following issues related to the data were identified:

- There was a significant number of new retirees this year who were previously unreported in prior valuations.
- The number of deaths reported this year were significantly less that what was expected for the year and reported in prior valuations.
- These issues resulted in actuarial losses for the System and are the primary reason for the overall loss during the year ended September 30, 2014.
- We recommend that the Board consider an experience review study that evaluates the actuarial assumptions relative to actual experience over an extended period of time. Segal includes a high level assumptions review with each valuation but the recommended best practice is to perform an extensive study every five to seven years.

2. There was an overall actuarial loss during the year ended September 30, 2014. The loss was a combination of an actuarial investment loss, a net loss due to demographic experience that was different than expected and a loss due to inclusion of previously unreported pensioners.
3. This valuation reflects the increase in the employer contribution rate from 17.5% to 20.5% of payroll effective January 1, 2015 and the increases in the employee contribution rates of 1% per year over the next three years starting January 1, 2015.
4. The total actuarially determined contribution increased from $220.9 million for the year beginning October 1, 2013 to $232.7 million for the year beginning October 1, 2014. This increase is mainly due to the continuing shortfall in the actual contributions relative to the actuarially determined contributions and the experience loss incurred over the past year. Projected contributions for the year beginning October 1, 2014 amount to $102.9 million, resulting in a shortfall of $129.9 million.
5. The Plan has a funded percentage of 36.9% as of October 1, 2014 as compared to 40.2% as of October 1, 2013. This decrease is also a result of actual contributions less than the actuarially determined contribution and the actuarial experience loss.
6. The actuarial valuation report as of October 1, 2014 is based on draft financial information provided as of that date. Changes in the value of assets subsequent to that date are not reflected. Unfavorable asset experience will increase the actuarial cost of the Plan, while favorable experience will decrease the actuarial cost of the Plan. Based on all assumptions being exactly met, including the 7.5% investment return assumption, a level active population and a total payroll of $355.6 million assumed to increase 2.5% per year, the plan is projected to be insolvent by the year ending September 30, 2025. This is the same as what was reported in the last valuation. The increases in the employer and employee contribution rates effective January 1, 2015 were offset by the actuarial experience loss due to previously unreported pensioners.

Summary of Key Valuation Results

	2014	% of Pay	2013	% of Pay
Contributions for fiscal year beginning October 1:				
Actuarially determined contribution	$232,709,497	65.44%	$220,878,254	59.68%
Expected contributions:				
Employer	70,231,718	19.75%	64,773,076	17.50%
Employee	32,619,706	9.17%	31,163,003	8.42%
Shortfall	$129,858,073	36.52%	$124,942,175	33.76%
Funding elements for plan year beginning October 1:				
Normal cost, including administrative expenses	$52,619,530		$52,684,229	
Market value of assets	1,152,791,325		1,252,509,113	
Actuarial value of assets	1,154,728,837		1,237,213,473	
Actuarial accrued liability	3,128,348,875		3,080,464,945	
Unfunded actuarial accrued liability	1,973,620,038		1,843,251,472	
Funded ratio	36.91%		40.16%	
Projected insolvency in plan year ending September 30,	2025		2025	
Demographic data for plan year beginning October 1:				
Number of retired members and beneficiaries	8,465		8,024	
Number of active members	9,227		9,393	
Projected covered payroll	$355,603,633		$370,131,865	
Projected average payroll	$38,539		$39,405	
GASB 67 information as of September 30:				
Total pension liability	$4,228,909,387		$3,982,566,780	
Plan fiduciary net position	1,152,791,375		1,252,509,113	
Net pension liability	3,076,118,012		2,730,057,667	
Plan fiduciary net position as a percentage of the total pension liability	27.26%		31.45%	

Important Information About Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** The valuation is based on the market value of assets as of the valuation date, as provided by the Fund Auditor. The System uses an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the Government of the Virgin Islands Retirement System. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If GERS is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board of Trustees should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, retired members and beneficiaries.This section presents a summary of significant statistical data on these member groups.

The significant decline in the ratio of actives to retirees over the last 20 years indicates a smaller contribution base supporting the payment of benefits and expenses.

In addition, there are inactive members with a right to deferred vested pensions that are not shown in the chart below. For purposes of our valuation, the potential liabilities for such inactive members were estimated and reflected in the valuation.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, and B.

A historical perspective of how the member population has changed over the past twenty valuations can be seen in this chart.

CHART 1

Member Population: 1994 – 2014

Year Ended September 30	Active Members	Retired Members and Beneficiaries	Ratio of Actives to Retirees
1994	12,116	3,751	3.2
1995	11,493	4,438	2.6
1997	11,572	4,682	2.5
1999	10,763	6,212	1.7
2001	9,303	5,581	1.7
2003	10,037	6,093	1.6
2006	10,739	7,282	1.5
2011	10,376	7,592	1.4
2013	9,393	8,024	1.2
2014	9,227	8,465	1.1

Active Members

Plan costs are affected by the age, years of credited service and payroll of active members. In this year's valuation, there were 9,227 active members with an average age of 46.2, average years of credited service of 14.4 years and average payroll of $38,539. The 9,393 active members in the prior valuation had an average age of 46.3, average service of 14.6 years and average payroll of $39,405.

These graphs show a distribution of active members by age and by years of credited service.

CHART 2

Distribution of Active Members by Age as of September 30, 2014

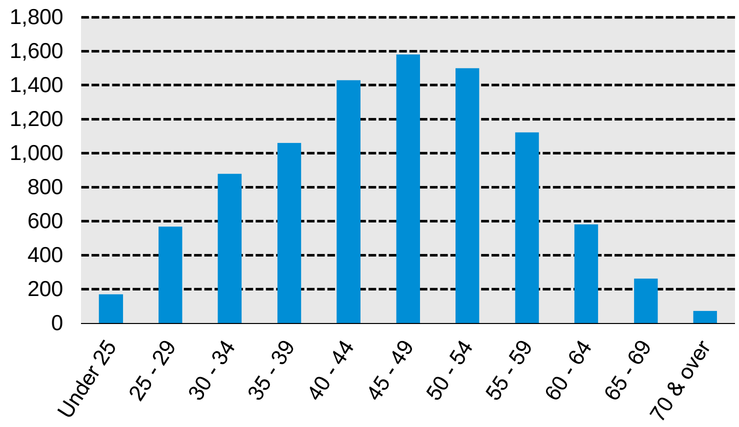
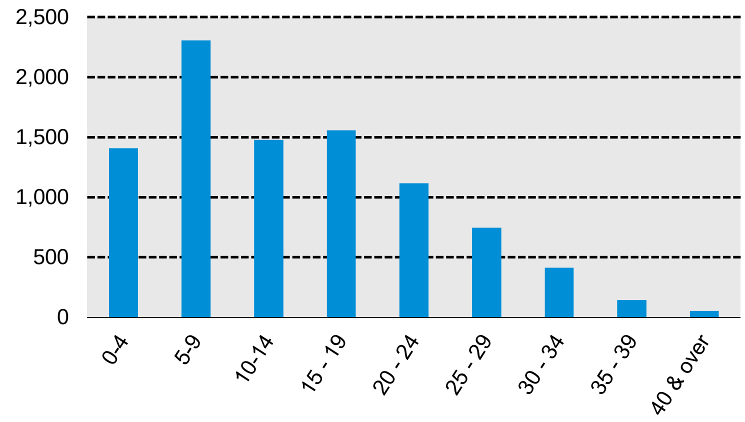


CHART 3

Distribution of Active Members by Years of Credited Service as of September 30, 2014



Retired Members and Beneficiaries

As of September 30, 2014, 8,293 retired members and 172 beneficiaries were receiving total semi-monthly benefits of $9,883,025. For comparison, in the previous valuation, there were 7,845 retired members and 179 beneficiaries receiving semi-monthly benefits of $9,287,519.

These graphs show a distribution of the current retired members based on their semi-monthly amount and age, by type of pension.

CHART 4

Distribution of Retired Members by Type and by Semi-Monthly Amount as of September 30, 2014

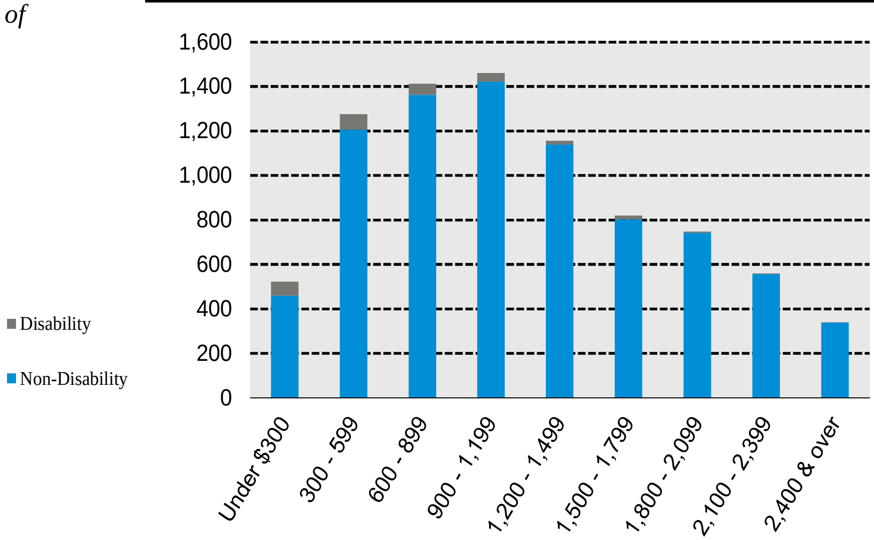
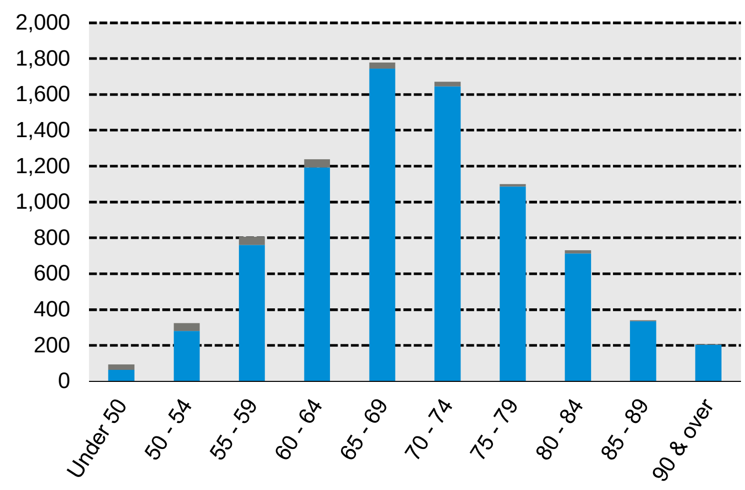


CHART 5

Distribution of Retired Members by Type and by Age as of September 30, 2014



B. FINANCIAL INFORMATION

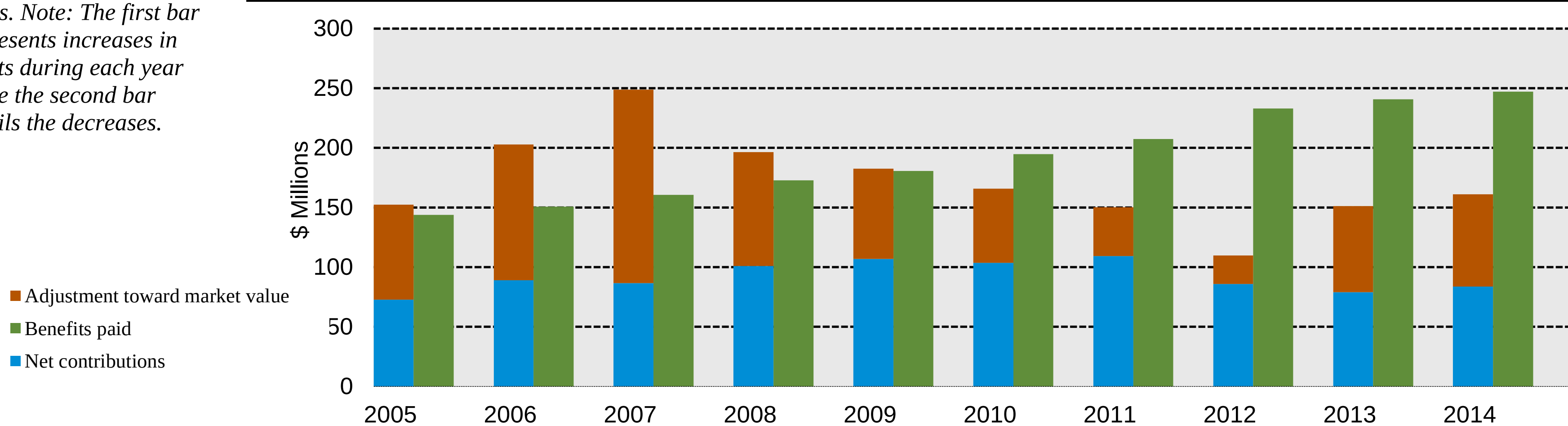
Retirement plan funding anticipates that, over the long term, both contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits C, D and E.

The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

CHART 6

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended September 30, 2005 – 2014



It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 7

Determination of Actuarial Value of Assets for Year Ended September 30, 2014

1. Market value of assets, September 30, 2014			$1,154,312,972*
	Original	Unrecognized	
2. Calculation of unrecognized return	Amount **	Return***	
(a) Year ended September 30, 2014	-$25,327,513	-$20,262,010	
(b) Year ended September 30, 2013	18,086,329	10,851,797	
(c) Year ended September 30, 2012	70,822,106	28,328,842	
(d) Year ended September 30, 2011	-96,672,474	-19,334,494	
(e) Year ended September 30, 2010	-14,988,487	0	
(f) Total unrecognized return			-415,865
3. Preliminary actuarial value: (1) - (2f)			1,154,728,837
4. Adjustment to be within 20% corridor			0
5. Final actuarial value of assets as of September 30, 2014: (3) + (4)			$1,154,728,837
6. Actuarial value as a percentage of market value: (5) ÷ (1)			100.0%
7. Amount deferred for future recognition: (1) - (5)			-$415,865

* *Based on draft financial statement received on June 5, 2015*

** *Total return on market value basis minus expected return on actuarial basis*

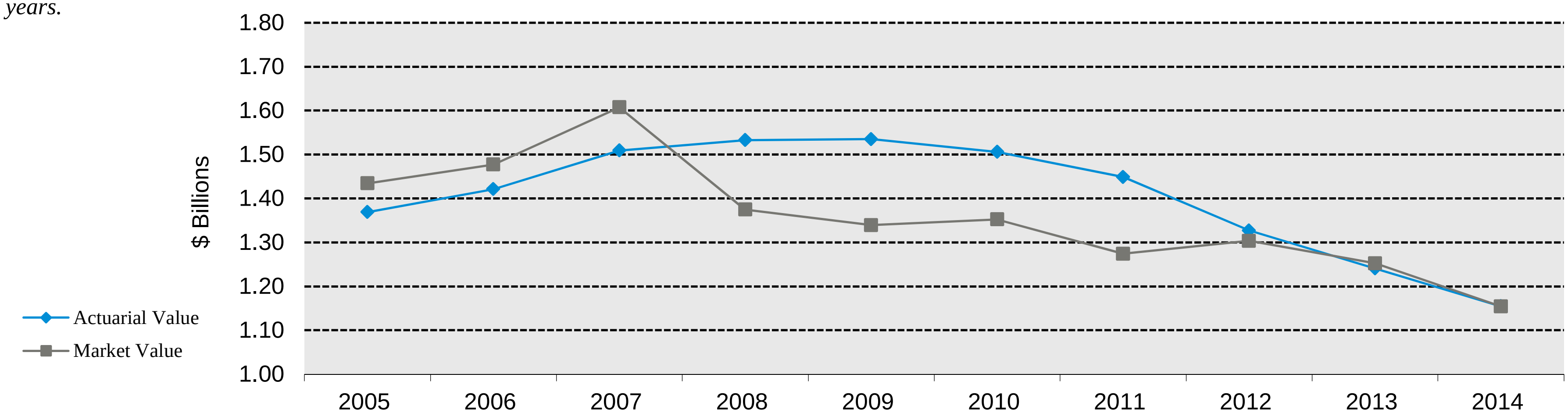
*** *Recognition at 20% per year over five years*

Both the actuarial value and market value of assets are representations of the Retirement System's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Retirement System's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in the actuarial value of assets versus the market value over the past ten years.

CHART 8

Actuarial Value of Assets vs. Market Value of Assets as of September 30, 2005 – 2014



C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

As shown below, the total loss is $51 million. The net experience variation from individual sources was approximately 1.6% of the expected actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

CHART 9

Actuarial Experience for Year Ended September 30, 2014

1.	Net loss from investments*	-$9,616,008
2.	Net loss from administrative expenses	-1,922,230
3.	Net loss from other experience	-39,519,778
4.	Net experience loss: (1) + (2) + (3)	-$51,058,016

** Details in Chart 10*

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Retirement System's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets is 7.50%. The actual rate of return on an actuarial basis for the plan year ending September 30, 2014 was 6.67%. Since the actual return for the year was less than the assumed return, the Retirement System experienced an actuarial loss during the year ended September 30, 2014 with regard to its investments.

This chart shows the loss due to investment experience.

CHART 10

Actuarial Value Investment Experience for Year Ended September 30, 2014

1. Actual return	$77,187,305
2. Average value of assets	1,157,377,503
3. Actual rate of return: (1) ÷ (2)	6.67%
4. Assumed rate of return	7.50%
5. Expected return: (2) x (4)	$86,803,313
6. Actuarial loss: (1) – (5)	-$9,616,008

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last thirteen years, including five-year and thirteen-year averages.

Based upon this experience and future expectations, we have maintained the assumed rate of return of 7.50%.

CHART 11

Investment Return – Actuarial Value vs. Market Value: 2002 - 2014

Year Ended September 30	Actuarial Value Investment Return Amount	Actuarial Value Investment Return Percent	Market Value Investment Return Amount	Market Value Investment Return Percent
2002	$47,652,769	3.62%	-$24,338,277	-2.05%
2003	65,092,552	4.97%	194,663,983	17.55%
2004	71,121,154	5.40%	132,269,237	10.61%
2005	79,765,485	6.02%	155,416,276	11.82%
2006	113,850,560	8.51%	104,567,156	7.45%
2007	162,081,911	11.71%	203,822,428	14.15%
2008	95,522,330	6.48%	-160,719,061	-10.23%
2009	75,674,851	5.06%	38,166,899	2.85%
2010	62,251,642	4.18%	104,159,043	8.05%
2011	40,829,900	2.80%	19,891,578	1.53%
2012	23,046,297	1.67%	174,056,576	14.48%
2013	72,583,326	5.83%	111,523,919	9.12%
2014	77,187,305	6.67%	61,475,800	5.24%
Total	$986,660,082		$1,114,955,557	
	Most recent five-year average return:	4.10%		7.61%
	Thirteen-year average return:	5.58%		6.63%

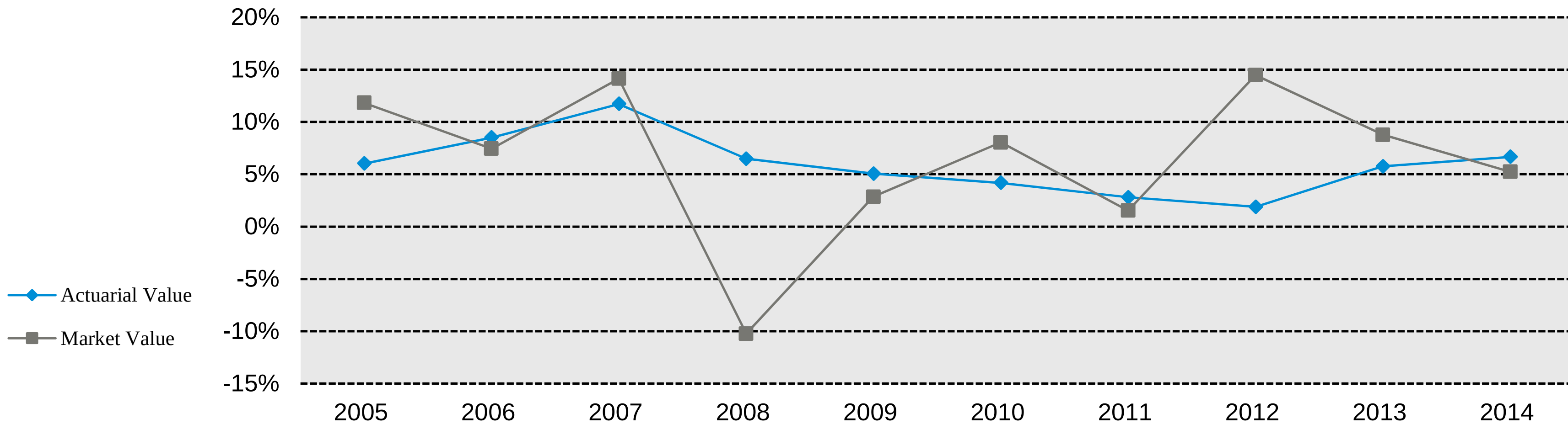
Note: Each year's yield is weighted by the average asset value in that year.

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

The chart illustrates how this leveling effect has actually worked over the past ten years.

CHART 12

Market and Actuarial Rates of Return for Years Ended September 30, 2005 - 2014



Administrative Expenses
Administrative expenses for the year ended September 30, 2014 totaled $18,494,773 compared to the assumption of $16,000,000. This resulted in a loss of $1,922,230 for the year. For this valuation, we have maintained the assumption of $16,000,000 but will monitor and evaluate in future years.

Other Experience
There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- the number of disability retirements, and
- salary increases different than assumed.

Another difference may be a significant change in the participant data or changes resulting from estimating the potential liability for current inactive vested members that might be eligible for future benefits.

The net loss from this other experience for the year ended September 30, 2014 amounted to $39,519,778, which is approximately 1.3% of the expected actuarial accrued liability. This loss was primarily due to new pensioners who were previously unreported in the data. We are continuously monitoring the plan's experience and may revise actuarial assumptions in the future, if warranted.

D. ACTUARIALLY DETERMINED CONTRIBUTION

The actuarially determined contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability. This total amount is then divided by the projected payroll for active members to determine the funding rate of 65.44% of payroll for the year beginning October 1, 2014 as compared to 59.68% of payroll as of October 1, 2013.

The actuarially determined contribution is based on a fixed 20-year amortization of the unfunded actuarial accrued liability as previously adopted by the Board.

The actuarially determined contribution as of October 1, 2014 is based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, actuarial gains and losses and changes in the actuarial assumptions. This includes the 3% increase in the employer contribution rate from 17.5% to 20.5% and the 1% increase in the employee contribution rates both effective January 1, 2015.

The chart compares this valuation's actuarially determined contribution with the prior valuation.

CHART 13

Actuarially Determined Contribution

	Year Beginning October 1			
	2014		2013	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	$36,619,530	10.30%	$36,684,229	9.91%
2. Administrative expenses	16,000,000	4.50%	16,000,000	4.32%
3. Employer normal cost: (1) + (2)	52,619,530	14.80%	$52,684,229	14.23%
4. Actuarial accrued liability	3,128,348,875		3,080,464,945	
5. Actuarial value of assets	1,154,728,837		1,237,213,473	
6. Unfunded actuarial accrued liability: (4) – (5)	1,973,620,038		$1,843,251,472	
7. Payment on unfunded actuarial accrued liability	180,089,967	50.64%	168,194,025	45.44%
8. Actuarially determined contribution*: (3) + (7)	$232,709,497	65.44%	$220,878,254	59.68%
9. Projected employer contributions	70,231,718	19.75%	$64,773,076	17.50%
10. Projected members contributions	32,619,706	9.17%	31,163,003	8.42%
11. Total expected contributions (9) + (10)	$102,851,424	28.92%	$95,936,079	25.92%
12. Shortfall (8) – (11)	$129,858,073	36.52%	$124,942,175	33.76%
13. Projected payroll	$355,603,633		$370,131,865	

**The actuarially determined contributions are based on payment at the beginning of the year.*

Reconciliation of the Actuarially Determined Contribution

The chart below details the changes in the actuarially determined contribution from the prior valuation to the current year's valuation.

The chart reconciles the actuarially determined contribution from the prior valuation to the amount determined in this valuation.

CHART 14

Reconciliation of Actuarially Determined Contribution from October 1, 2013 to October 1, 2014

Actuarially Determined Contribution as of October 1, 2013	$220,878,254
Effect of increase in contribution rates	$973,266
Effect of open amortization period	-4,278,067
Effect of contributions less than actuarially determined contribution	12,663,912
Effect of investment loss	898,188
Effect of other gains and losses	1,573,944
Total change	$11,831,243
Actuarially Determined Contribution as of October 1, 2014	$232,709,497

EXHIBIT A
Table of Plan Coverage

Category	Year Ended September 30 2014	Year Ended September 30 2013	Change From Prior Year
Active members in valuation:			
Number	9,227	9,393	-1.8%
Average age	46.2	46.3	N/A
Average years of credited service	14.4	14.6	N/A
Projected covered payroll	$355,603,633	$370,131,865	-3.9%
Projected average payroll	$38,539	$39,405	-2.2%
Total active vested members	5,514	5,706	-3.4%
Retired members:			
Number in pay status	8,293	7,845	5.7%
Average age	69.6	69.4	N/A
Average semi-monthly benefit	$1,183	$1,174	0.8%
Beneficiaries in pay status:			
Number in pay status	172	179	-3.9%
Average age	77.5	77.4	N/A
Average semi-monthly benefit	$426	$412	3.4%

EXHIBIT B

Members in Active Service as of September 30, 2014
By Age, Years of Service, and Average Payroll

		Years of Service								
Age	**Total**	**0-4**	**5-9**	**10-14**	**15 - 19**	**20 - 24**	**25 - 29**	**30 - 34**	**35 - 39**	**40 & over**
Under 25	170	159	11	- -	- -	- -	- -	- -	- -	- -
	$28,635	$28,349	$32,769	- -	- -	- -	- -	- -	- -	- -
25 - 29	568	329	235	4	- -	- -	- -	- -	- -	- -
	30,926	30,943	30,944	28,415	- -	- -	- -	- -	- -	- -
30 - 34	879	257	460	152	10	- -	- -	- -	- -	- -
	33,407	33,997	33,000	33,496	35,614	- -	- -	- -	- -	- -
35 - 39	1,061	166	377	336	170	12	- -	- -	- -	- -
	36,258	34,241	34,852	37,004	39,225	45,438	- -	- -	- -	- -
40 - 44	1,429	156	357	299	431	172	14	- -	- -	- -
	38,146	35,600	34,665	36,661	41,085	42,197	46,791	- -	- -	- -
45 - 49	1,581	118	269	253	378	367	181	15	- -	- -
	40,142	35,609	34,436	37,115	40,106	45,733	43,895	48,040	- -	- -
50 - 54	1,500	89	240	192	229	280	273	179	18	- -
	41,121	37,561	34,248	36,579	39,102	43,815	47,359	44,877	50,608	- -
55 - 59	1,122	89	179	120	179	181	171	137	61	5
	40,753	36,697	35,274	35,110	38,607	40,894	45,537	49,444	46,830	40,332
60 - 64	581	35	115	70	90	64	80	61	43	23
	43,828	40,931	35,932	37,396	42,809	43,626	47,536	52,512	55,720	53,668
65 - 69	263	10	50	45	53	28	19	20	20	18
	42,773	43,914	32,555	37,822	37,240	43,468	52,191	53,266	61,200	56,037
70 & over	73	1	15	8	18	12	8	2	2	7
	44,384	--	37,345	36,939	39,671	55,470	46,226	30,194	54,865	61,927
Total	9,227	1,409	2,308	1,479	1,558	1,116	746	414	144	53
	$38,539	$33,624	$33,988	$36,404	$39,985	$43,846	$46,220	$47,962	$52,065	$54,306

EXHIBIT C

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended September 30, 2014		Year Ended September 30, 2013	
Net assets at actuarial value at the beginning of the year		$1,237,213,473		$1,327,038,907
Contribution income:				
Employer contributions	$68,298,617		$64,431,322	
Employee contributions	34,020,107		34,090,376	
Less administrative expenses	-18,494,773		-19,581,770	
Net contribution income		83,823,951		78,939,928
Other income*		3,573,611		-783,854
Investment income:				
Interest, dividends and other income	$30,213,073		$34,610,880	
Adjustment towards market value	49,932,954		42,623,235	
Less investment fees	-2,958,722		-4,650,789	
Net investment income		77,187,305		72,583,326
Total income available for benefits		$164,584,867		$150,739,400
Less benefit payments:				
Benefits paid to members	-$239,713,063		-$234,361,509	
Refunds of member contributions	-7,356,440		-6,203,325	
Net benefit payments		-$247,069,503		-$240,564,834
Change in reserve for future benefits		-$82,484,636		-$89,825,434
Net assets at actuarial value at the end of the year		$1,154,728,837		$1,237,213,473

* Includes adjustments due to restatement from draft financial statement.

EXHIBIT D

Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended September 30, 2014		Year Ended September 30, 2013	
Net assets at market value at the beginning of the year		$1,252,509,113		$1,303,393,954
Contribution income:				
Employer contributions	$68,298,617		$64,431,322	
Employee contributions	34,020,107		34,090,376	
Less administrative expenses	-18,867,491		-19,581,770	
Net contribution income		83,451,233		78,939,928
Other income*		3,573,611		-783,854
Investment income:				
Interest, dividends and other income	$37,045,846		$34,610,880	
Net asset appreciation	26,239,797		81,563,828	
Less investment and administrative fees	-2,958,722		-4,650,789	
Net investment income		60,326,921		111,523,919
Total income available for benefits		$147,351,765		$189,679,993
Less benefit payments:				
Benefits paid to members	-$239,713,063		-$234,361,509	
Refunds of member contributions	-7,356,440		-6,203,325	
Net benefit payments		-$247,069,503		-$240,564,834
Change in reserve for future benefits		-$99,717,738		-$50,884,841
Net assets at market value at the end of the year		$1,152,791,375		$1,252,509,113

* Includes adjustments due to restatement from draft financial statement.

EXHIBIT E

Summary Statement of Plan Assets

	Year Ended September 30, 2014		Year Ended September 30, 2013	
Cash and cash equivalents		$51,438,732		$63,394,844
Accounts receivable:				
Due from department of finance and other agencies	$10,618,291		$7,842,309	
Accrued interest receiveable	2,421,783		5,405,371	
Other assets	3,046,751		4,655,116	
Foreign currency contracts	239,214		0	
Total accounts receivable		16,326,039		17,902,796
Investments:				
Mutual funds	$487,821,519		$525,599,647	
Member loans	157,111,977		148,069,305	
U.S. equities	151,663,524		154,875,735	
Debt securities	112,123,228		119,374,073	
Real estate	81,118,790		106,740,444	
Limited partnerships	53,907,600		57,693,182	
Asset backed securities	30,970,242		41,622,704	
Other investments	29,205,764		30,874,093	
Total investments at market value		1,103,922,644		1,184,849,183
Total assets		$1,171,687,415		$1,266,146,823
Less accounts payable:				
Retirement benefits in process of payment	-$4,021,823		-$4,501,849	
Securities purchased	-3,996,207		-566,263	
Foreign currency contracts	0		-294,996	
Other liabilities	-10,878,010		-8,274,602	
Total accounts payable		-$18,896,040		-$13,637,710
Net assets at market value		$1,152,791,375		$1,252,509,113
Net assets at actuarial value		$1,154,728,837		$1,237,213,473

EXHIBIT F

Development of the Fund Through September 30, 2014

Year Ended September 30	Employer Contributions	Employee Contributions	Other Income	Net Actuarial Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2005	$51,542,030	$30,415,687	$0	$79,765,485	$9,287,655	$143,758,685	$1,368,965,198
2006	65,061,430	34,209,871	0	113,850,560	10,257,747	150,736,277	1,421,093,035
2007	60,778,382	35,769,001	0	162,081,911	9,838,704	160,639,245	1,509,244,380
2008	75,871,146	36,957,585	0	95,522,330	11,927,702	172,785,884	1,532,881,855
2009	80,177,004	40,099,762	0	75,674,851	13,364,747	180,533,545	1,534,935,280
2010	77,004,630	40,107,669	0	62,251,642	13,609,415	194,685,196	1,506,004,610
2011	80,849,762	42,997,146	0	40,829,900	14,440,676	207,314,151	1,448,926,591
2012	66,677,155	37,727,063	2,239,690**	23,046,297	18,481,417	233,096,472	1,327,038,907
2013	64,431,322	34,090,376	-783,854**	72,583,326	19,581,770	240,564,834	1,237,213,473
2014	68,298,617	34,020,107	3,573,611	77,187,305	18,494,773	247,069,503	1,154,728,837

* Net of investment fees

** Includes adjustment due to restatement from draft financial statements

EXHIBIT G

Section 415 Limitations

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of $160,000 indexed for inflation. That limit is $210,000 for 2014 and 2015. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

EXHIBIT H

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions: The estimates on which the cost of the Plan is calculated including:

(a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;

(b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;

(c) Retirement rates — the rate or probability of retirement at a given age;

(d) Withdrawal rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal Cost: The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial Accrued Liability For Actives: The value of all projected benefit payments for current members less the portion that will be paid by future normal costs.

Actuarial Accrued Liability For Pensioners: The single-sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded Actuarial Accrued Liability: The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded Actuarial Accrued Liability: Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.

Investment Return: The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

EXHIBIT I

Summary of Actuarial Valuation Results as of October 1, 2014

The valuation was made with respect to the following data supplied to us:			
1.	Retired members as of the valuation date (including 172 beneficiaries in pay status)		8,465
2.	Members active during the year ended September 30, 2014		9,227
	Fully vested	5,514	
	Not vested	3,713	
The actuarial factors as of the valuation date are as follows:			
1.	Normal cost, including administrative expenses		$52,619,530
2.	Present value of future benefits		3,378,351,239
3.	Present value of future normal costs		250,002,364
4.	Actuarial accrued liability		3,128,348,875
	Retired members and beneficiaries	$1,989,284,884	
	Inactive members with vested rights	147,599,150	
	Active members	991,464,841	
5.	Actuarial value of assets ($1,152,791,375* at market value as reported by Bert Smith & Co., CPAs)		1,154,728,837
6.	Unfunded actuarial accrued liability		$1,973,620,038

** Based on a draft financial statement.*

EXHIBIT I (continued)

Summary of Actuarial Valuation Results as of October 1, 2014

The determination of the actuarially determined contribution is as follows:

1.	Total normal cost		$36,619,530
2.	Administrative expenses		16,000,000
3.	Total normal cost: (1) + (2)		$52,619,530
4.	20-year amortization of the unfunded actuarial accrued liability		180,089,967
5.	Total actuarially determined contribution: (3) + (4), payable at beginning of the year		$232,709,497
6.	Total expected contributions		$102,851,424
	Employer	$70,231,718	
	Members	32,619,706	
7.	Shortfall (5) – (6)		$129,858,073
8.	Projected covered payroll		$355,603,633
9.	Total actuarially determined contribution as a percentage of projected payroll: (5) ÷ (8)		65.44%

EXHIBIT II

History of Employer Contributions

Plan Year Ended September 30	Actuarially Determined Employer Contributions*	Actual Contributions	Percentage Contributed
2005**	$120,184,848	$51,542,030	42.89%
2006**	131,059,471	65,061,430	49.64%
2007	137,797,268	60,778,382	44.11%
2008**	138,488,871	75,871,146	54.79%
2009**	147,490,851	80,177,004	54.36%
2010**	157,817,709	77,004,630	48.79%
2011**	162,841,336	80,849,762	49.65%
2012	178,644,349	66,677,155	37.32%
2013**	172,439,842	64,431,322	37.36%
2014	189,715,251	68,298,617	36.00%
2015	200,089,791	Not yet available	Not yet available

** Prior to 2014, this amount was the Annual Required Contribution (ARC) and based on GASB statement No. 25*

*** Estimated based on prior year's actuarial valuation*

EXHIBIT III

Schedule of Funding Progress

Actuarial Valuation Date October 1,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
2005*	$1,366,982,183	$2,455,556,736	$1,088,574,553	55.67%	$355,462,276	306.24%
2006	1,421,093,035	2,657,664,564	1,236,571,529	53.47%	394,595,844	313.38%
2007*	1,509,244,380	2,750,383,258	1,241,138,878	54.87%	419,161,255	296.10%
2008*	1,530,604,789	2,840,823,515	1,310,218,726	53.88%	433,549,406	302.21%
2009*	1,534,899,736	2,932,161,397	1,397,261,661	52.35%	458,154,309	304.98%
2010*	1,505,970,212	3,019,029,885	1,513,059,673	49.88%	440,026,457	343.86%
2011	1,448,926,591	3,168,037,497	1,719,110,906	45.74%	403,473,988	426.08%
2012*	1,327,038,907	2,930,797,361	1,603,758,454	45.28%	381,012,309	420.92%
2013	1,237,213,473	3,080,464,945	1,843,251,472	40.16%	370,131,865	498.00%
2014	1,154,728,837	3,128,348,875	1,973,620,038	36.91%	355,603,633	555.01%

** For these years, the AAL was estimated based on projecting the AAL from the last completed actuarial valuation.*

EXHIBIT IV

Funded Ratio

A critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the Plan as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

The chart below depicts a history of the funded ratios for this plan.

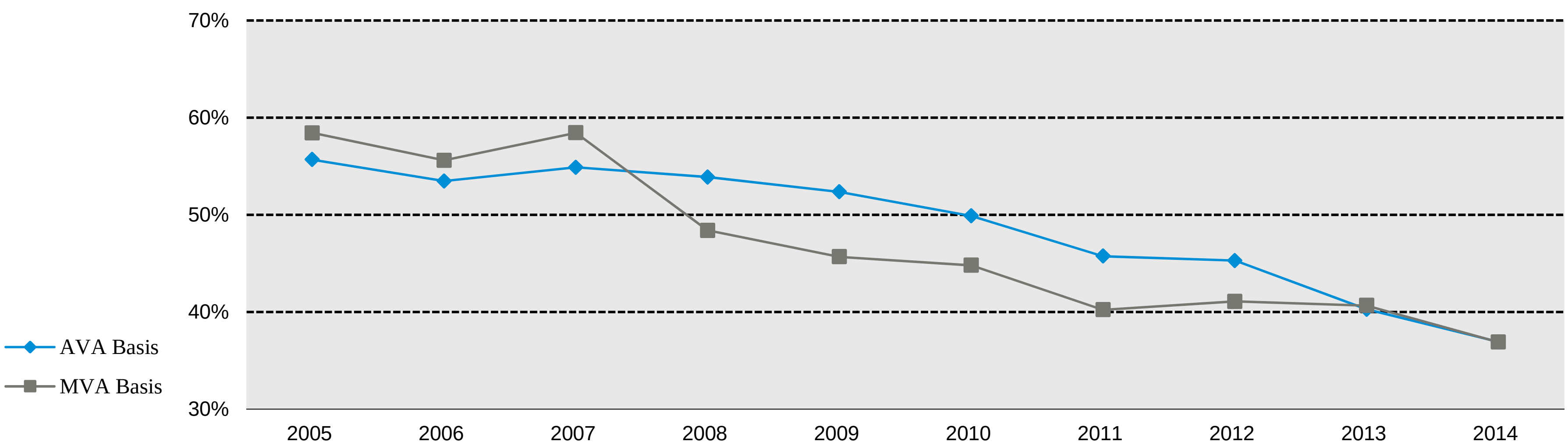


EXHIBIT V
Actuarial Assumptions and Actuarial Cost Method

Rationale for Assumptions: Current data is reviewed in conjunction with each valuation. Based on professional judgment, no assumption changes are warranted at this time.

Mortality Rates: RP-2000 Combined Healthy Mortality Table set forward 2 years

This mortality table reasonably reflects the mortality experience of the Plan as of the measurement date and was determined to contain provision appropriate to reasonably reflect future mortality improvement.

Termination Rates before Retirement:

Rate (%)

Age	Mortality		Disability		Withdrawal	
	Male	Female	Non-Public Safety	Public Safety	Regular	Non-Regular
20	0.04	0.02	0.03	0.05	7.94	5.44
25	0.04	0.02	0.03	0.05	7.72	4.89
30	0.06	0.04	0.03	0.05	7.22	3.70
35	0.09	0.06	0.03	0.06	6.28	2.35
40	0.12	0.09	0.05	0.09	5.15	1.13
45	0.17	0.13	0.09	0.18	3.98	0.27
50	0.27	0.20	0.20	0.40	2.56	0.00
55	0.47	0.35	0.43	0.85	0.94	0.00
60	0.88	0.67	0.87	1.74	0.09	0.00

Retirement Rates:

Retirement Rates for Regular Members

Age/Service	Males	Females
54 and 30 years of service	20%	0%
57 and 30 years of service	30%	25%
60 and 30 years of service	30%	50%
63 and 10 years of service	100%	100%

Retirement Rates (continued):		
	Public Safety:	100% at the earlier of 25 years of service or 55 with 10 years of service.
	Judges:	100% at 50 with 20 years of service.
	Legislature:	100% at 53 with 6 years of service.
Retirement Age for Inactive Vested Participants:	65	

Unknown Data for Participants: Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.

Adjustment for Incomplete Data: Due to inconsistent or incomplete data as of September 30, 2014, the following assumptions were made:

- Participants with missing salary information were assumed to have the same salary as reported in the 2013 active data. If salary information was still unknown, participants were excluded from the valuation.
- Service information for inactive vested participants was determined based on date of hire and termination, if available. If not available, inactive vested participants were assumed to have ten years of service as of the valuation date. Vested benefit amounts were estimated based on participant's salary and assumed service.
- For retirees where no employee contribution was provided, we assumed that the contributions would guarantee benefits for 4 years.

Percent Married: 80%

Age of Spouse: Females 3 years younger than males.

Net Investment Return: 7.5% - The net investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classees as well as the Plan's target asset allocation.

Salary Increases:	4.0%
Annual Administrative Expenses:	$16,000,000, payable at the beginning of the year for the year beginning October 1, 2014.
Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the actuarial value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated as a level percent of salary.
Change in Assumptions:	There have been no changes in actuarial assumptions since the last valuation.

EXHIBIT VI
Summary of Plan Provisions

This exhibit summarizes the major provisions of the Retirement System included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	October 1 through September 30
Plan Status:	Ongoing plan

Service Pension:

Regular Employees	
Eligibility	Age 60 with 10 years of service or any age with 30 years of service
Amount	Tier 1: 2.5% of Final Average Salary* per year of service up to 100%
	Tier 2: 1.75% of Final Average Salary* per year of service up to 100%
Public Safety Employees	
Eligibility	Age 55 with 10 years of service or any age with 20 years of service
Amount	Tier 1: 3.0% of Final Average Salary* per year of service up to 90%
	Tier 2: 2.1% of Final Average Salary* per year of service up to 90%

* *Final Average Salary for Regular and Public Safety Employees is based on the average of the highest annual salary up to a maximum of $65,000 for any five years in the last 10 years.*

Legislature	
Eligibility	Age 50 with 6 years of service or any age with 20 years of service
Amount	Tier 1: 2.5% of highest compensation for years 1-6
	3% of highest compensation for years 7-12
	4% of highest compensation for years above 12, up to a maximum of 75%
	Tier 2: 3.5% of highest compensation for years 1-6
	4% of highest compensation for years 7-12
	4.5% of highest compensation for years 13-20
	5% of highest compensation for years above 20, up to a maximum of 100%
Judges	
Eligibility	Age 50 with 6 years of service
Amount	Tier 1: 5% of highest compensation per year of service up to 100%
	Tier 2: 5% of highest compensation per year of service up to 100%

Early Retirement:

Regular Employees	
Eligibility	Age 50 with 10 years of service
Amount	Service Pension reduced 3.9% per year less than age 60
Public Safety Employees	
Eligibility	Age 50 with 10 years of service
Amount	Service Pension reduced 3.9% per year less than age 55

Disability:

Duty Connected Disability	
Eligibility	Total and permanent disability as a result of performance of duty
Amount	Tier 1: 75% salary less workers compensation
	Tier 2: 52.5% salary less workers compensation

Non-Duty Connected Disability	
Eligibility	9 years of service and total and permanent disability
Amount	Tier 1: 2.0% of Final Average Salary* per year of service up to 60%, 20% minimum Tier 2: 1.4% of Final Average Salary* per year of service up to 42%, 14% minimum * *Final Average Salary for Regular and Public Safety Employees is based on the average of the highest annual salary up to a maximum of $65,000 for any five years in the last 10 years.*
Vesting:	
Eligibility	10 years of service and leave contributions in System
Amount	Service pension accrued at termination
Severance Benefit:	
Amount	Refund of contributions with 4% annual interest, if no other benefits payable
Post-Retirement COLAs:	
Disabled Pensioners	1% of the original retirement benefit each year up to age 60
Pensioners and Survivor annuitants	None
Pre-Retirement Death Benefit:	
Duty Connected Death	
Eligibility	Death in service as a result of performance of duty
Amount	Tier 1: Annuity of 40% of salary in effect on date of death to widow plus 10% of salary for each child up to age 18 to a maximum family benefit of 60% of salary. If no widow, 10% of salary is payable on behalf of each child under age 18 to a maximum family benefit of 50%. If no widow or children, each dependent parent is entitled to 25% of salary. Tier 2: Annuity of 28% of salary in effect on date of death to widow plus 7% of salary for each child up to age 18 to a maximum family benefit of 42% of salary. If no widow, 7% of salary is payable on behalf of each child under age 18 to a maximum family benefit of 35%. If no widow or children, each dependent parent is entitled to 17.5% of salary.

Non-Duty Connected Death	
Eligibility	Death in service
Amount	Accumulated contributions of deceased member to designated beneficiary. Tier 1: If, at the time of death, the member was eligible for a service or early retirement annuity, the surviving spouse, if any, can elect a 100% survivor annuity based on the benefit which would have been payable to the member had he/she retired the date before he/she died
Post-Retirement Death Benefits:	
Lump - sum Benefit	Lump sum payment equal to the excess of the sum of contributions plus annual salary at retirement (maximum $10,000) over the total of benefits paid.
Husband and Wife	If married, pension benefits are paid in the form of a joint and survivor annuity unless this form is rejected by the participant and spouse. If not rejected, the benefit amount otherwise payable is reduced to reflect the joint and survivor coverage. If rejected, or if not married, benefits are payable for the life of the employee, or in any other available optional form elected by the employee in an actuarially equivalent amount.
Optional Forms of Payment:	50% joint-and-survivor annuity 100% joint-and-survivor annuity

Contribution Rates Effective January 1, 2015:

Employee Contribution Rates (% of Payroll)	**Tier 1**	**Tier 2**
Regular Employees	9%	9.5%
Public Safety Employees	11%	11.625%
Legislature	10%	12%
Judges	11%	14%

Employer Contribution Rate: 20.5% of payroll

Changes in Plan Provisions and Contribution Rates:

There have been no benefit changes since September 30, 2013. However, effective January 1, 2015, the employer contribution rate increased from 17.5% to 20.5% of payroll. Starting January 1, 2015 the employee contribution rate for Tier 1, and Tier 2 employees will increase 1% per year for each of the next three years. In addition, the Board established Tier 2 for Judges on January 23, 2015.

EXHIBIT 1

Net Pension Liability

The components of the net pension liability as of September 30, 2014 were as follows:

Total pension liability	$4,228,909,387
Plan fiduciary net position	1,152,791,375*
Net pension liability	3,076,118,012
Plan fiduciary net position as a percentage of the total pension liability	27.26%

** Based on draft financial statements*

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of September 30, 2014, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.85%
Salary increases	4.00% including inflation
Investment rate of return	4.42%, net of pension plan investment expense, including inflation

Mortality rates were based on the RP-2000 Healthy Annuitant Mortality Table set forward 2 years.

The total pension liability was determined using the level percent of salary Entry Age Normal Cost funding method.

The actuarial assumptions are the same as the assumptions used in the October 1, 2014 funding actuarial valuation.

The long-term expected rate of return of 7.5% on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of September 30, 2014 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	45%	6.99%
International equity	10%	7.49%
Fixed income	40%	2.59%
Alternatives	5%	4.29%
Total	100%	

Discount rate: The discount rate used to measure the total pension liability was 4.42% as of September 30, 2014 and 4.87% as of September 30, 2013. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate, including the increases in the employee contribution rates effective January 1, 2015, 2016 and 2017. Based on those assumptions, the pension plan's fiduciary net position was not projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments of 7.5% was applied to all periods of projected benefit payments that are covered by projected assets. For periods where projected future benefit payments are not covered by projected assets, the yield on a 20-year AA Municipal Bond Index was applied. As of September 30, 2014 that rate was 4.11%.

Note, the discount rate to measure the total pension liability as of September 30, 2013 was developed using the same method as described above but a 20-Year AA Municipal Bond Index of 4.53% as of September 30, 2013 was applied to those periods where projected benefit payments were not covered by projected assets.

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability calculated using the discount rate of 4.42%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (3.42%) or 1-percentage-point higher (5.42%) than the current rate:

	1% Decrease (3.42%)	Current Discount (4.42%)	1% Increase (5.42%)
Net pension liability	$3,573,307,103	$3,076,118,012	$2,655,737,611

EXHIBIT 2

Schedules of Changes in Net Pension Liability

September 30,	2014	2013	2012	2011	2010
Total pension liability					
Service cost	$65,274,936				
Interest	191,113,749				
Change in contribution rates	-40,421,809				
Differences between expected and actual experience	35,917,905				
Changes of assumptions	241,527,329				
Benefit payments, including refunds of employee contributions	-247,069,503				
Net change in total pension liability	$246,342,607				
Total pension liability – beginning	3,982,566,780				
Total pension liability – ending (a)	$4,228,909,387				
Plan fiduciary net position					
Contributions – employer	$68,298,617				
Contributions – employee	34,020,107	(Historical information prior to implementation of GASB 67/68 is not required)			
Net investment income	60,326,921				
Benefit payments, including refunds of employee contributions	-247,069,503				
Administrative expense	-18,867,491				
Other income	3,573,611				
Net change in plan fiduciary net position	-$99,717,738				
Plan fiduciary net position – beginning	1,252,509,113				
Plan fiduciary net position – ending (b)	$1,152,791,375				
Net pension liability – ending (a) – (b)	$3,076,118,012				
Plan fiduciary net position as a percentage of the total pension liability	27.26%				
Covered employee payroll	$355,603,633*				
Net pension liability as percentage of covered employee payroll	865.04%				

** Covered employee payroll as reported in the participant data as of September 30, 2014.*

Notes to Schedule:

Benefit changes: There have been no benefit changes since September 30, 2013. However, effective January 1, 2015, the contribution rate for Tier 1 and Tier 2 employees increased 1% per year for three years and the employer contribution rate increased to 20.5%. In addition, the Board established Tier 2 for Judges on January 23, 2015.

Change of Assumptions: The discount rate used to measure the total pension liability decreased from 4.87% as of September 30, 2013 to 4.42% as of September 30, 2014.

EXHIBIT 3

Schedule of Contribution – Last Ten Fiscal Years

Year Ended September 30	Actuarially Determined Employer Contributions	Contributions in Relation to the Actuarially Determined Employer Contributions	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
2005*	$120,184,848	$51,542,030	($68,642,818)	$372,996,234	13.82%
2006*	131,059,471	65,061,430	(65,998,041)	355,462,276	18.30%
2007	137,797,268	60,778,382	(77,018,886)	394,595,844	15.40%
2008*	138,488,871	75,871,146	(62,617,725)	419,161,255	18.10%
2009*	147,490,851	80,177,004	(67,313,847)	433,549,406	18.49%
2010*	157,817,709	77,004,630	(80,813,079)	458,154,309	16.81%
2011*	162,841,336	80,849,762	(81,991,574)	440,026,457	18.37%
2012	178,644,349	66,677,155	(111,967,194)	403,473,988	16.53%
2013*	172,439,842	64,431,322	(108,008,520)	381,012,309	16.91%
2014	189,715,251	68,298,617	(121,416,634)	370,131,865	18.45%

** Estimated based on prior year's actuarial valuation*

EXHIBIT 4

Notes to Required Supplementary Information

Valuation date	Actuarially determined contributions are calculated as of October 1
Methods and used assumptions to determine contribution rates:	
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level dollar, closed group
Amortization period	20 years open amortization
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the actuarial value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial assumptions:	The actuarial assumptions are the same as the assumptions used in the October 1, 2014 funding actuarial valuation.

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