



THE SEGAL COMPANY  
100 Montgomery Street, Suite 500 San Francisco, CA 94104-4308  
T 415.263.8200 F 415.263.8290 www.segalco.com

July 24, 2009

Mr. Russell Crosby  
Director  
City of San Jose Police and Fire Department Retirement Plan  
1737 North First Street, Suite 580  
San Jose, CA 95112-4505

**Re: Projection of Contribution Rates Under Different Scenarios  
(Retirement Plan Only) – Reflects Preliminary Return for Plan Year 08/09**

Dear Russell:

As requested by your office, we have projected the employer and the employee's contribution rates under different future market rates of return as well as different investment return assumptions for the Retirement Plan. Note that this letter provides updated results to our March 25, 2009 letter, reflecting the preliminary market rate of return for plan year 2008/09 and showing the effect of the market value corridor under the current investment return assumption.

### **Description of the Scenarios Studied**

In order to have level and predictable plan costs from one year to the next, the Board of Retirement has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, any market value returns that are either below or above the assumed rate of investment return (currently 8% per year) are recognized over five years and as a result, the asset value and the resulting contribution rates are more stable. In addition, to avoid the smoothed Actuarial Value of Assets (AVA) from getting too far away from the Market Value of Assets (MVA), there is a market value corridor that limits the AVA to be no greater than 120% and no less than 80% of the MVA.

In this report, we have analyzed the impact of: (1) increasing contribution rate requirements brought about by unfavorable past and hypothetical future market rates of return since the last valuation date as of June 30, 2007; (2) increasing contribution rate requirements that would result if the current 8% assumed rate of investment return assumption used in the June 30, 2007 valuation were to be changed to 7.5% starting with the June 30, 2009 valuation; and (3) eliminating the 80% to 120% market value corridor starting with the June 30, 2009 valuation.



A description of the scenarios studied is summarized in the chart below.

	Rate of Investment Return Assumed in Valuation	Net Rate of Return (Plan Year)				MVA Corridor Applied
		07/08	08/09	09/10	10/11 and thereafter	
Baseline	8.00%	-5.89% <sup>(1)</sup>	-19.50% <sup>(2)</sup>	8.00% <sup>(3)</sup>	8.00%	Yes
Scenario 1	7.50%	-5.89%	-19.50%	7.50%	7.50%	Yes
Scenario 2	8.00%	-5.89%	-19.50%	8.00%	8.00%	No

- (1) This was the net rate of return for plan year 07/08 as provided by the Retirement Department and used by Segal without review. According to the Retirement Department, it was calculated by taking the -5.10% gross rate of return, reduced by 0.55% in administrative and investment expenses and by 0.24% in benefit related payments from the Supplemental Retiree Benefit Reserve (SRBR).
- (2) This was the preliminary net rate of return for plan year 08/09 as provided by the Retirement Department and used by Segal without review. According to the Retirement Department, it was calculated by taking the -18.81% gross rate of return, reduced by 0.55% in administrative and investment expenses and by 0.14% in benefit related payments from the SRBR.
- (3) According to the Retirement Department, the Plan has to earn an 8.90% gross rate of return in order to yield an 8.00% net rate of return because the 8.90% gross return has to be reduced by 0.60% in administrative and investment expenses and by 0.30% in benefit related payments from the SRBR.

### Actuarial Assumptions Used in the Projection

Other than the investment return assumptions described above, it is assumed that all future actuarial experience would match the assumptions adopted by the Board of Retirement for the June 30, 2007 retirement plan valuations. For the purpose of the projection, we have also made a simplifying assumption that an annual (rather than the current biennial) actuarial valuation would be performed effective with the June 30, 2009 valuation and that the valuation would establish the contribution rate requirements for the plan year that begins 12 months following the date of the valuation.

## Results

For the Baseline and each of the two scenarios, we have provided the following results for the Retirement Plan:

- Exhibit 2 shows a projection of the employer rates from the June 30, 2007 to the June 30, 2027 actuarial valuations.
- Exhibit 3 shows a projection of the Valuation Value of Assets (VVA, which excludes the SRBR) from the June 30, 2007 to the June 30, 2027 actuarial valuations.
- Exhibit 4 shows a projection of the Actuarial Accrued Liability (AAL) from the June 30, 2007 to the June 30, 2027 actuarial valuations.
- Exhibit 5 shows a projection of the Unfunded Actuarial Accrued Liability (UAAL) from the June 30, 2007 to the June 30, 2027 actuarial valuations. In each year, any additional UAAL as a result of the unfavorable investment return experience has been amortized over the Board of Retirement's current policy of 16 years.
- Exhibit 6 shows a projection of the funded percentage from the June 30, 2007 to the June 30, 2027 actuarial valuations.

Exhibit 1 provides a consolidated summary of the projected results for the current and the next five years. This summary shows the employer rate, the VVA, the AAL, the UAAL and the funded percentage listed above for the Baseline and the two scenarios. We have also included the employee's contribution rates for the next five years, as well as the ratio of AVA to MVA. This last ratio is used to show the effect of the market value corridor.

Below is a summary of the key results from the projections:

1. Under the Baseline scenario, it is anticipated that the AVA would be limited by the 120% of market value corridor in the June 30, 2009 valuation. This means that any market losses after the AVA exceeds 120% of the MVA would have to be fully recognized in developing the employer's contribution rate as of the June 30, 2009 valuation.

2. Under the Baseline scenario, the employer contribution rate for the Retirement Plan is expected to more than double from 22.5% of payroll developed in the June 30, 2007 valuation to 46.0% developed in the June 30, 2012 valuation for an increase of 23.5% of payroll.

Please note that in projecting the contribution rates for the employer, we have not taken into account a provision in the Municipal Code that would allow the transfers of up to 5% of the accrued principal balance of the SRBR to buydown one-tenth of the increase in the City's contribution rate caused by poor market/investment return of the Fund. Those transfers would have a negligible impact on the results of this study.

3. Under Scenario 1, if the Board of Retirement were to decrease the 8.0% assumed rate of investment return assumption used in the June 30, 2007 valuation to 7.5% effective with the June 30, 2009 valuation, there would be an immediate increase in the employer and the employee contribution rates of 8.5% and 1.1% of payroll, respectively.

The Scenario 1 contribution rates remain higher when compared to the Baseline until the end of the projection period. This is in part due to the assumption that, under Scenario 1, the Plan would actually earn an annual market return of 7.5% starting in 09/10, which is 0.5% less than that assumed under the Baseline scenario.

4. Under Scenario 2, we have removed the 80-120% market value corridor that was applied in determining the maximum amount that the AVA is allowed to deviate from the MVA in the Baseline scenario. Note that, relative to the Baseline scenario, the June 30, 2009 contribution rate is smaller by 8.9% of payroll. However, in the long term, the contribution rates under Scenario 2 will end up slightly higher than the rates under the Baseline scenario, due to the lower contributions in the early years.

Note that we include results under Scenario 2 with no MVA corridor to illustrate the impact of the MVA corridor, and not because removing the MVA corridor is necessarily a viable policy option.

## **Market Value Corridor and the Actuarial Standard of Practice**

In 2007, the Actuarial Standards Board adopted Actuarial Standard of Practice (ASOP) No. 44. That standard requires that the “actuary should select an asset valuation method that is designed to produce actuarial values of assets that bear a reasonable relationship to the corresponding market values.”

In particular, the ASOP goes on to say that the qualities of an asset valuation method should include the following:

“3.3(b) The asset valuation method is likely to produce actuarial values of assets that, in the actuary’s professional judgment, satisfy both of the following:

1. The asset values fall within a reasonable range around the corresponding market values. For example, there might be a corridor centered at market value, outside of which the actuarial value of assets may not fall, in order to assure that the difference from market value is not greater than the actuary deems reasonable.
2. Any differences between the actuarial value of assets and the market value are recognized within a reasonable period of time. For example, the actuary might use a method where the actuarial value of assets converges toward market value at a pace that the actuary deems reasonable, if the investment return assumption is realized in future periods.

In lieu of satisfying both (1) and (2) above, an asset valuation method could satisfy section 3.3(b) if, in the actuary’s professional judgment, the asset valuation method either (i) produces values within a sufficiently narrow range around market value or (ii) recognizes differences from market value in a sufficiently short period.”

The application of this standard in relation to recent market events is still under review and discussion.

## **Other Considerations**

As the Retirement Department is aware, even though removing the Market Value Corridor would reduce contribution rate volatility for the next couple of the plan years, a change in the asset smoothing method (or any other funding methodology change) will not have a long-term impact on Plan costs (except for the time value of money effect of different contributions in the early years). The Plan’s ultimate costs are determined by the benefits and expenses paid less actual investment income. Since an asset smoothing method affects neither benefits nor expenses, it will not reduce the Plan’s true costs. The table of projected contribution rates shows that any short term current contribution savings will have to be made up in the future, plus interest.

Finally, we emphasize that projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

Except as noted, all the calculations are based on the June 30, 2007 actuarial valuation results including the participant data and actuarial assumptions on which that valuation was based. These projections were completed under the supervision of Eva Yum, FSA, EA.

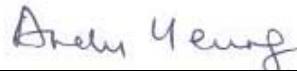
Please let us know if you have any question regarding this letter and/or the enclosures.

Sincerely,



---

Paul Angelo, FSA, MAAA, FCA  
Senior Vice President & Actuary



---

Andy Yeung, ASA, MAAA  
Vice President & Associate Actuary

DNA/bqb  
Enclosures

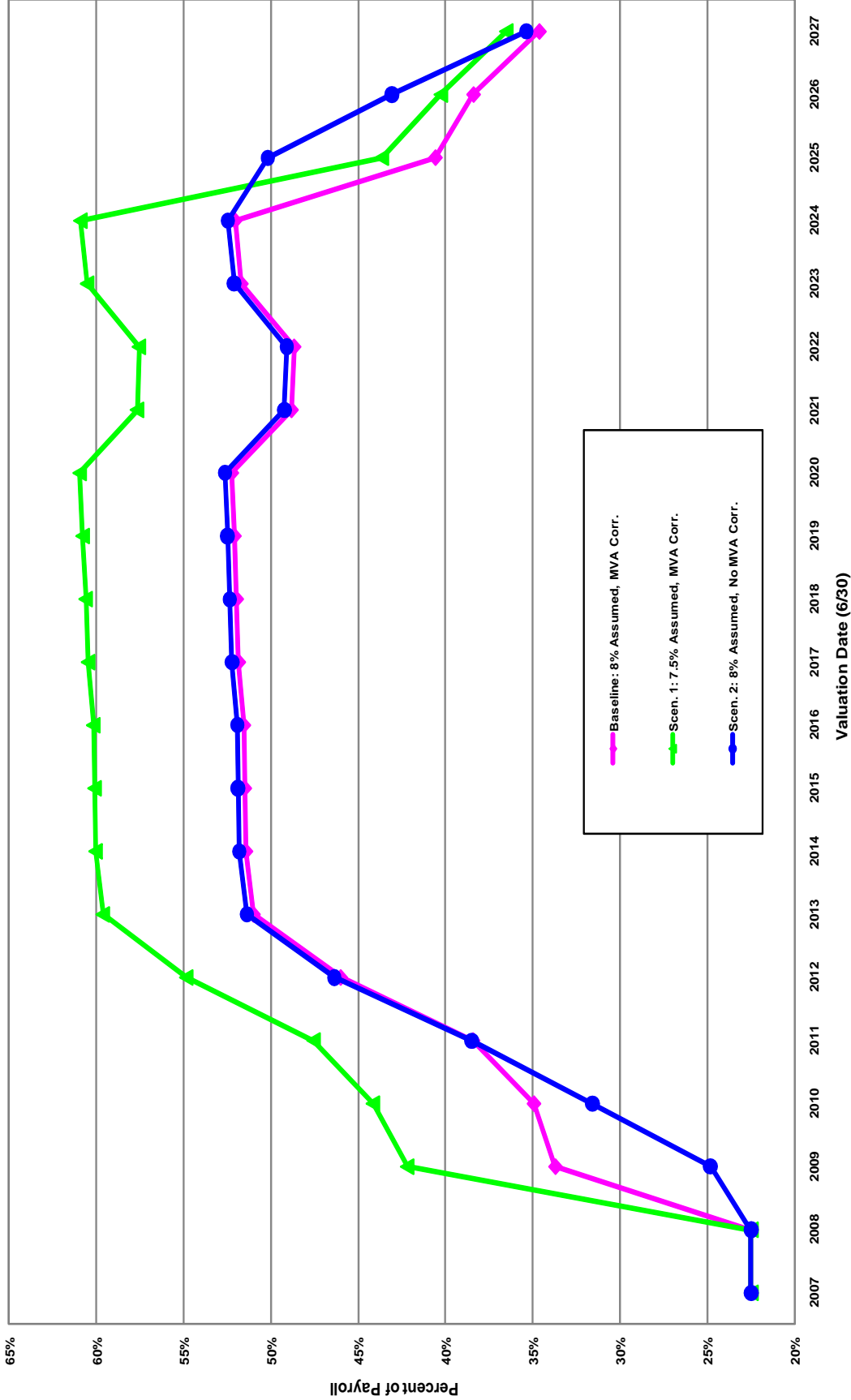
**Exhibit 1: Summary of Projected Results for Next 5 Years**  
(\$ in millions)

Valuation Date (6/30) Plan Year	2007 08/09	2008 09/10	2009 10/11	2010 11/12	2011 12/13	2012 13/14
<b>Baseline: Assumed Rate of Investment Return at 8% per year, 120% MVA Corridor Applied</b>						
<b>Net Rate of Return at -5.89% for Plan Year 2007/2008, -19.5% for 2008/2009, and 8% per year thereafter</b>						
Employer Rate	22.5%	22.5%*	33.7%	34.9%	38.4%	46.0%
Employee Rate	8.3%	8.3%*	8.3%	8.3%	8.3%	8.3%
Valuation Value of Assets	\$ 2,366	\$ 2,579	\$ 2,352	\$ 2,490	\$ 2,564	\$ 2,511
Actuarial Accrued Liability	\$ 2,372	\$ 2,515	\$ 2,680	\$ 2,850	\$ 3,027	\$ 3,211
UAAL	\$ 7	\$ (64)	\$ 328	\$ 360	\$ 463	\$ 700
Funded Percentage	100%	103%	88%	87%	85%	78%
Ratio of AVA to MVA (before corridor)	89%	104%	133%	124%	115%	106%
<b>Scenario 1: Assumed Rate of Investment Return at 7.5% per year, 120% MVA Corridor Applied</b>						
<b>Net Rate of Return at -5.89% for Plan Year 2007/2008, -19.5% for 2008/2009, and 7.50% per year thereafter</b>						
Employer Rate	22.5%	22.5%*	42.2%	44.2%	47.6%	54.9%
Employee Rate	8.3%	8.3%*	9.4%	9.4%	9.4%	9.4%
Valuation Value of Assets	\$ 2,366	\$ 2,579	\$ 2,352	\$ 2,478	\$ 2,565	\$ 2,529
Actuarial Accrued Liability	\$ 2,372	\$ 2,515	\$ 2,858	\$ 3,038	\$ 3,225	\$ 3,420
UAAL	\$ 7	\$ (64)	\$ 506	\$ 560	\$ 660	\$ 891
Funded Percentage	100%	103%	82%	82%	80%	74%
Ratio of AVA to MVA (before corridor)	89%	104%	133%	124%	115%	106%
<b>Scenario 2: Assumed Rate of Investment Return at 8% per year, No MVA Corridor</b>						
<b>Net Rate of Return at -5.89% for Plan Year 2007/2008, -19.5% for 2008/2009, and 8% per year thereafter</b>						
Employer Rate	22.5%	22.5%*	24.8%	31.6%	38.5%	46.4%
Employee Rate	8.3%	8.3%*	8.3%	8.3%	8.3%	8.3%
Valuation Value of Assets	\$ 2,366	\$ 2,579	\$ 2,608	\$ 2,578	\$ 2,544	\$ 2,480
Actuarial Accrued Liability	\$ 2,372	\$ 2,515	\$ 2,680	\$ 2,850	\$ 3,027	\$ 3,211
UAAL	\$ 7	\$ (64)	\$ 72	\$ 272	\$ 483	\$ 731
Funded Percentage	100%	103%	97%	90%	84%	77%
Ratio of AVA to MVA	89%	104%	133%	124%	116%	106%

\*Contribution rate calculated in the June 30, 2007 valuation.

Note: Results shown above may not add exactly due to rounding.

## Exhibit 2: Projected Employer Rates

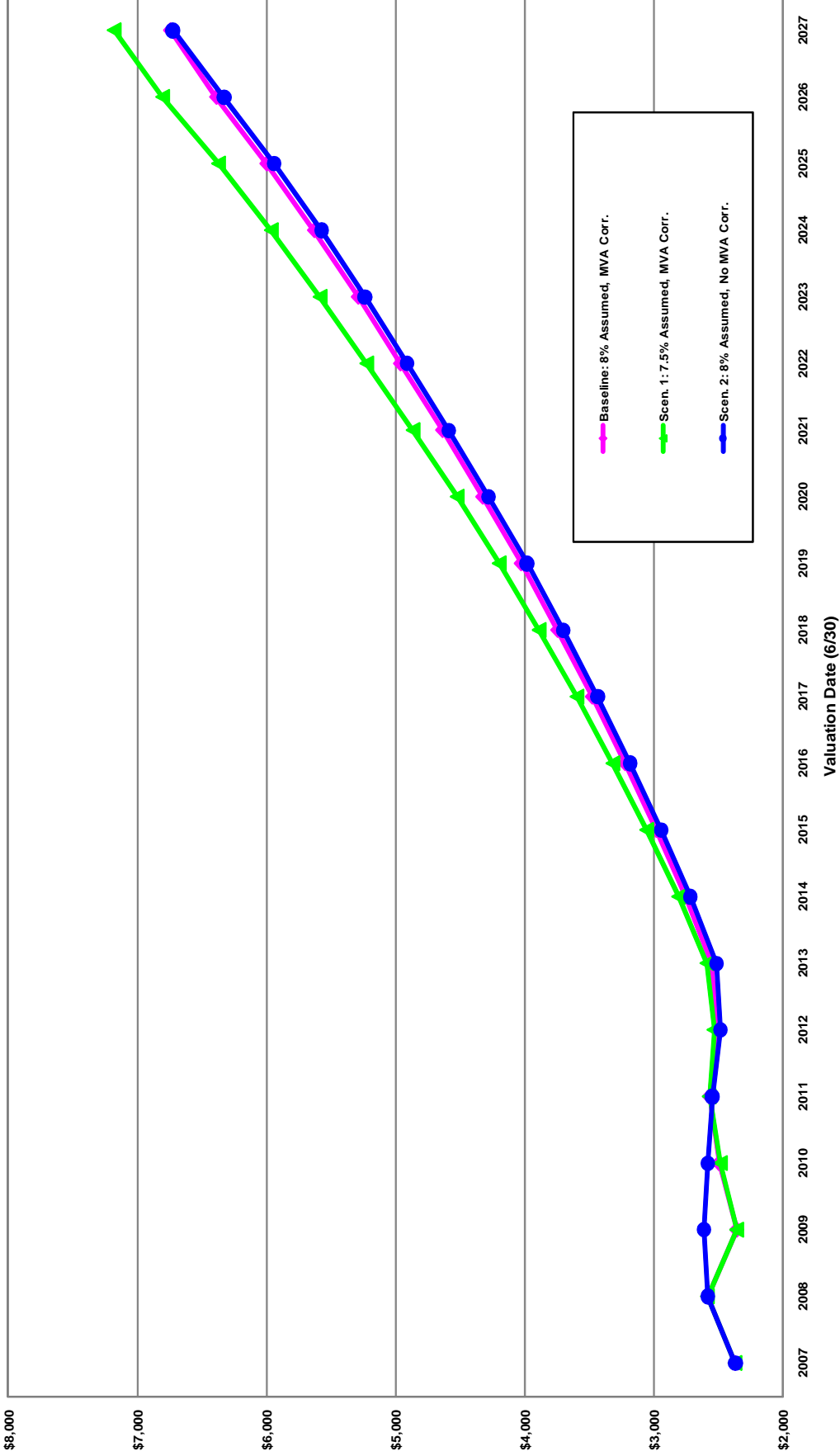


Valuation Date (6/30)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Baseline: 8% Assumed, MVA Corr.	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
Scen. 1: 7.5% Assumed, MVA Corr.	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
Scen. 2: 8% Assumed, No MVA Corr.	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%

Baselines: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.  
 Scenario 1: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 7.50% per year thereafter.  
 Scenario 2: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.



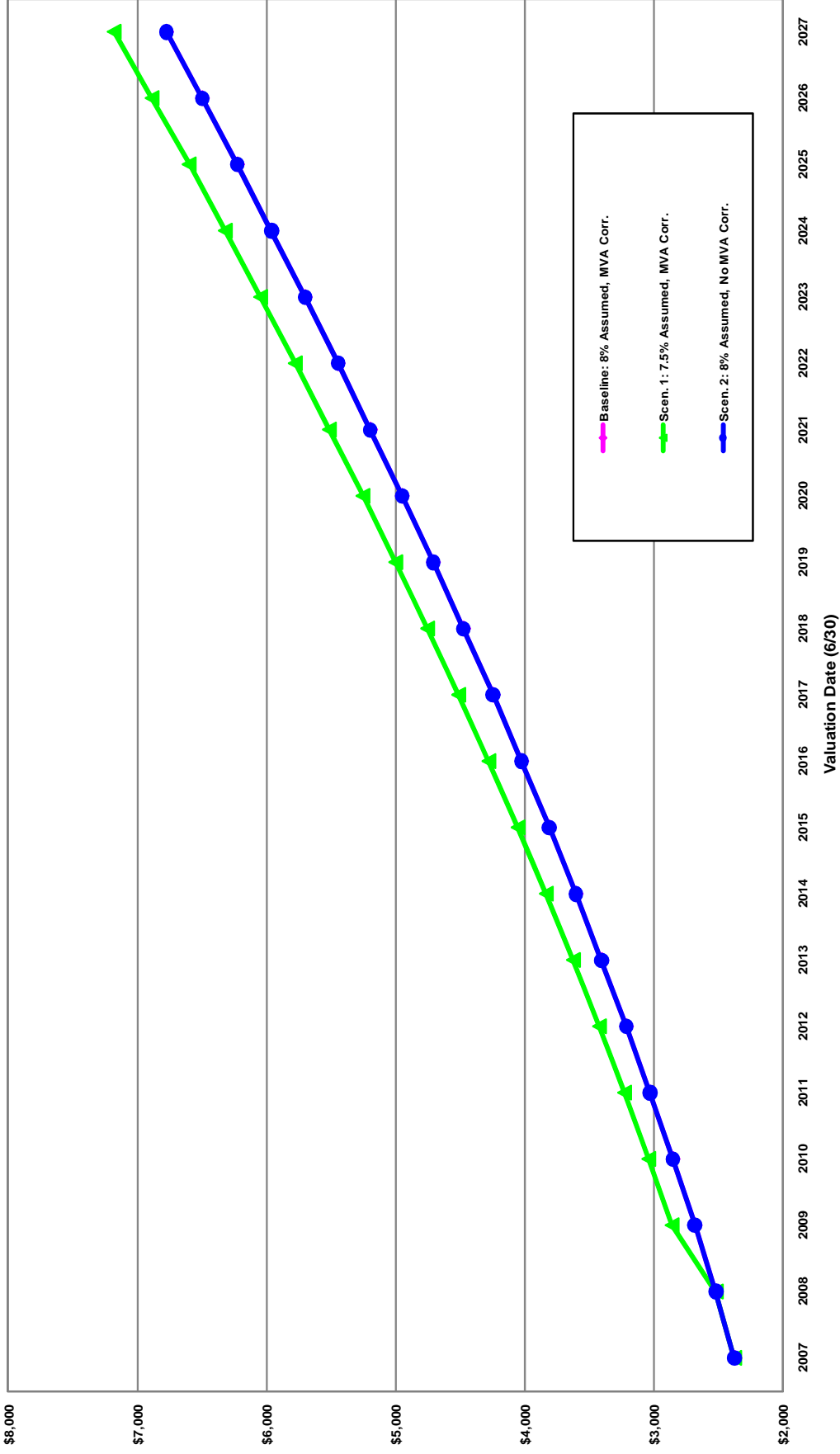
### Exhibit 3: Projected VVA (\$ in millions)



Valuation Date (06/30)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Baseline: 8% Assumed, MVA Corr.	2,366	2,579	2,352	2,490	2,564	2,511	2,547	2,748	2,976	3,217	3,473	3,742	4,025	4,323	4,635	4,962	5,289	5,629	5,999	6,389	6,746
Scen. 1: 7.5% Assumed, MVA Corr.	2,366	2,579	2,352	2,478	2,565	2,529	2,583	2,803	3,050	3,313	3,591	3,885	4,195	4,520	4,863	5,222	5,584	5,962	6,372	6,805	7,182
Scen. 2: 8% Assumed, No MVA Corr.	2,366	2,579	2,608	2,578	2,544	2,480	2,514	2,713	2,939	3,179	3,432	3,700	3,981	4,277	4,587	4,911	5,236	5,573	5,940	6,328	6,725

Baseline: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.  
Scenario 1: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 7.50% per year thereafter.  
Scenario 2: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.

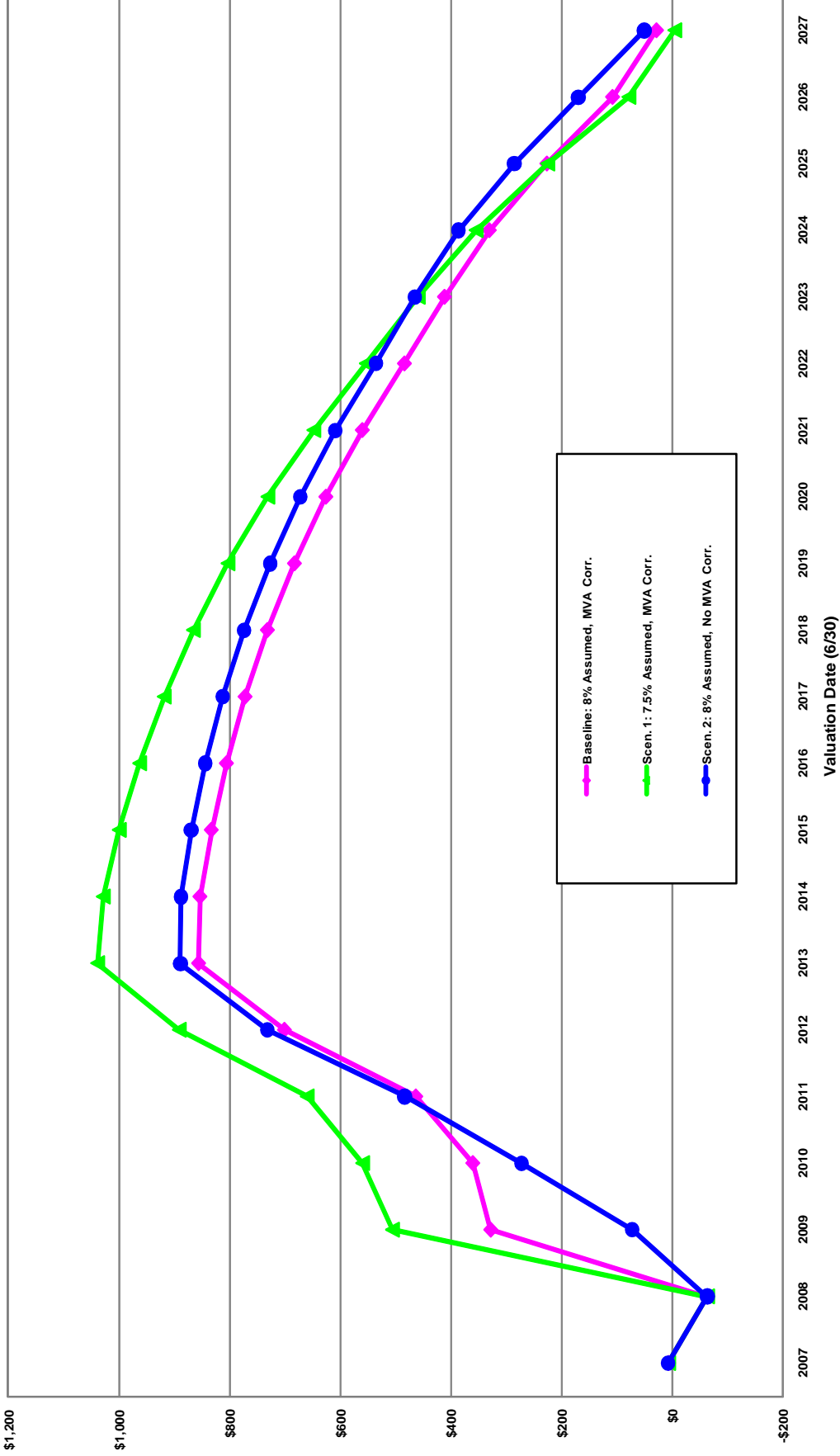
## Exhibit 4: Projected AAL (\$ in millions)



Valuation Date (6/30)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Baseline: 8% Assumed, MVA Corr.	2,372	2,515	2,680	2,850	3,027	3,211	3,402	3,601	3,808	4,023	4,244	4,473	4,708	4,948	5,195	5,446	5,700	5,960	6,225	6,497	6,775
Scen. 1: 7.5% Assumed, MVA Corr.	2,372	2,515	2,680	2,850	3,027	3,211	3,402	3,601	3,808	4,023	4,244	4,473	4,708	4,948	5,195	5,446	5,700	5,960	6,225	6,497	6,775
Scen. 2: 8% Assumed, No MVA Corr.	2,372	2,515	2,680	2,850	3,027	3,211	3,402	3,601	3,808	4,023	4,244	4,473	4,708	4,948	5,195	5,446	5,700	5,960	6,225	6,497	6,775

Baseline: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.  
 Scenario 1: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 7.50% per year thereafter.  
 Scenario 2: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.

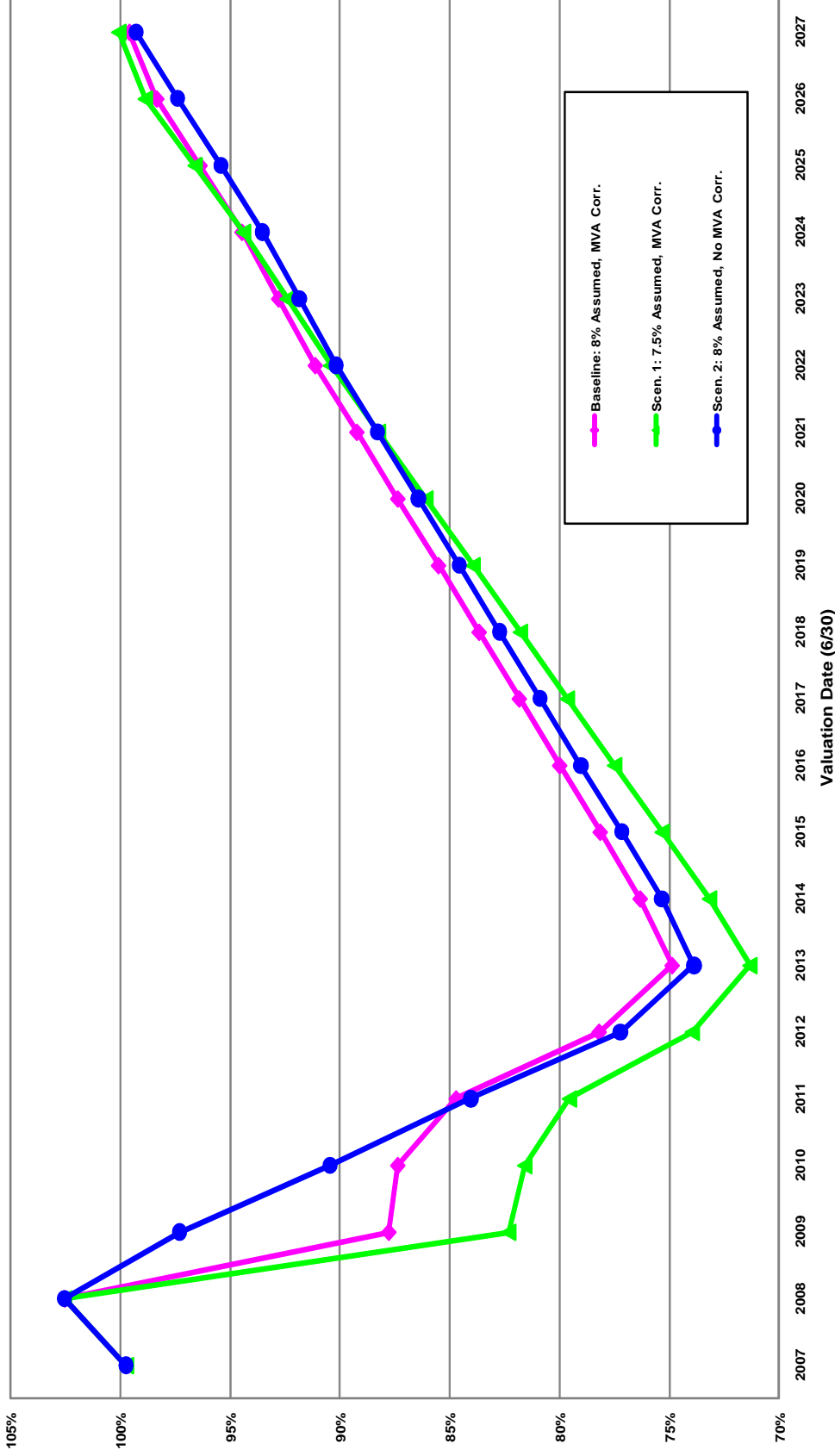
## Exhibit 5: Projected UAAL (\$ in millions)



Valuation Date (06/30)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Baseline: 8% Assumed, MVA Corr.	7	(64)	328	360	463	700	855	853	832	805	771	731	682	626	560	484	411	330	226	108	28
Scen. 1: 7.5% Assumed, MVA Corr.	7	(64)	506	560	660	891	1,039	1,028	999	963	918	866	803	731	648	553	459	355	225	78	(5)
Scen. 2: 8% Assumed, No MVA Corr.	7	(64)	72	272	483	731	889	888	869	844	812	773	726	672	608	535	465	386	285	169	50

Baseline: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.  
 Scenario 1: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 7.50% per year thereafter.  
 Scenario 2: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.

**Exhibit 6: Projected Funded Percentage**



Valuation Date (6/30)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027		
Baseline: 8% Assumed, MVA Corr.	100%	103%	88%	87%	85%	78%	75%	76%	78%	80%	82%	84%	86%	87%	89%	91%	93%	94%	96%	98%	98%	100%	100%
Scen. 1: 7.5% Assumed, MVA Corr.	100%	103%	82%	82%	80%	74%	71%	73%	75%	77%	80%	82%	84%	86%	88%	90%	92%	94%	97%	99%	99%	100%	100%
Scen. 2: 8% Assumed, No MVA Corr.	100%	103%	97%	90%	84%	80%	77%	74%	75%	77%	79%	81%	83%	85%	86%	88%	90%	92%	94%	95%	97%	97%	99%

Baseline: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.  
 Scenario 1: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 7.50% per year thereafter.  
 Scenario 2: Net market rate of return: -5.89% (07/08), -19.5% (08/09), and 8% per year thereafter.