



Gleason & Associates
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Examination of the City of Pittsburgh's Comprehensive Municipal Pension Trust Fund

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August 7, 2012





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Nature of Engagement

- Engaged by ICA in May 2012
- Assignment included conducting analysis of:
 - The current financial condition and funding level of the CMPTF
 - The current costs of administering the pensions
 - The future funding obligations for the pensions
 - OPEB liabilities and funding level





Information Used

- Publicly Available Information:
 - CAFR's
 - 2009 Actuarial Valuations
 - CMPTF website
 - Valuation of Pension Asset Created by Parking Revenues
- Additional Information Requested from CMPTF and City:
 - 2011 Actuarial Valuations
 - Investment Performance Reports
 - Pension Audit Reports
 - Pension Management Letters
 - Projections of Future Benefit Payments (Actuary)
 - Projections of Future Required Payments





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Progress of Information Requests

- May 18, 2012 – First request for information (via telephone)
- May 30, 2012 – First formal written request
- June 5, 2012 – First acknowledgement of request
- May 30, 2012 – June 21, 2012 – Various attempts at follow up by phone and email
- June 22, 2012 – First documents received (incomplete production)
- June 26 – July 31, 2012 – Various attempts at follow up by phone, email and in person
- July 31, 2012 – Meeting with Representatives of City, CMPTF and Actuary
- August 1, 2012 – Actuary Completes Analysis
- August 3, 2012 – City Provides Actuarial Analysis to ICA





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Historical Analysis of Pension and OPEB Financial Condition

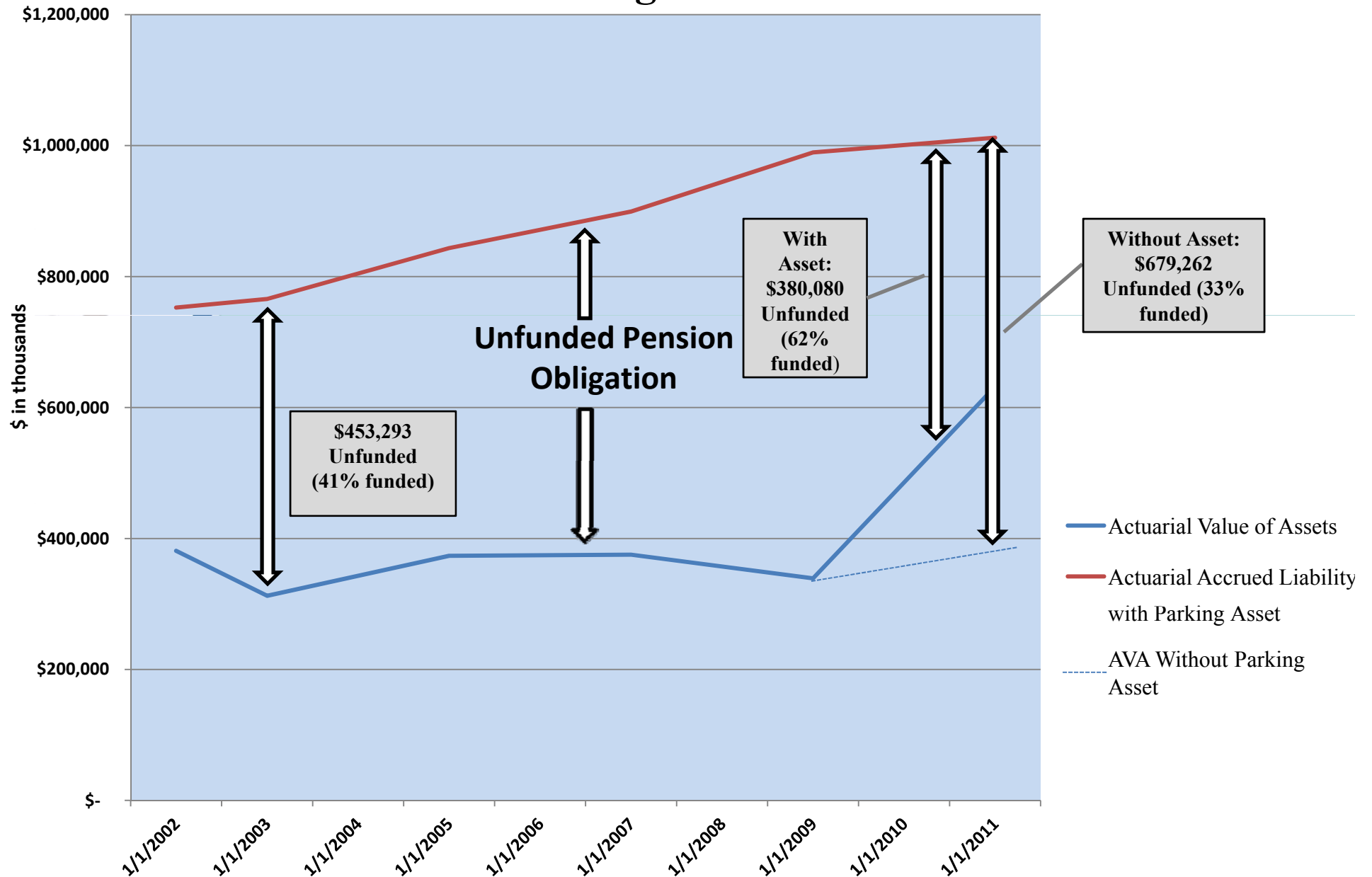




Pension / OPEB Historical Analysis

- Funding Status as of December 31, 2011:
 - The City's combined *unfunded* pension and OPEB liabilities are \$869 million
 - Pension \$380 million unfunded liability (56.5% funded)
 - OPEB \$489 million unfunded liability (0.0% funded)
- Pension unfunded liability considers a \$246 million non-cash asset for the present value of future parking revenues
- If this asset is not considered, the unfunded liability increases to more than \$1.1 billion
 - Pension - \$626 million unfunded liability / 38% funded
 - OPEB - \$489 million unfunded liability / 0% funded

Historical Analysis of Pension Funding 2002 - 2011

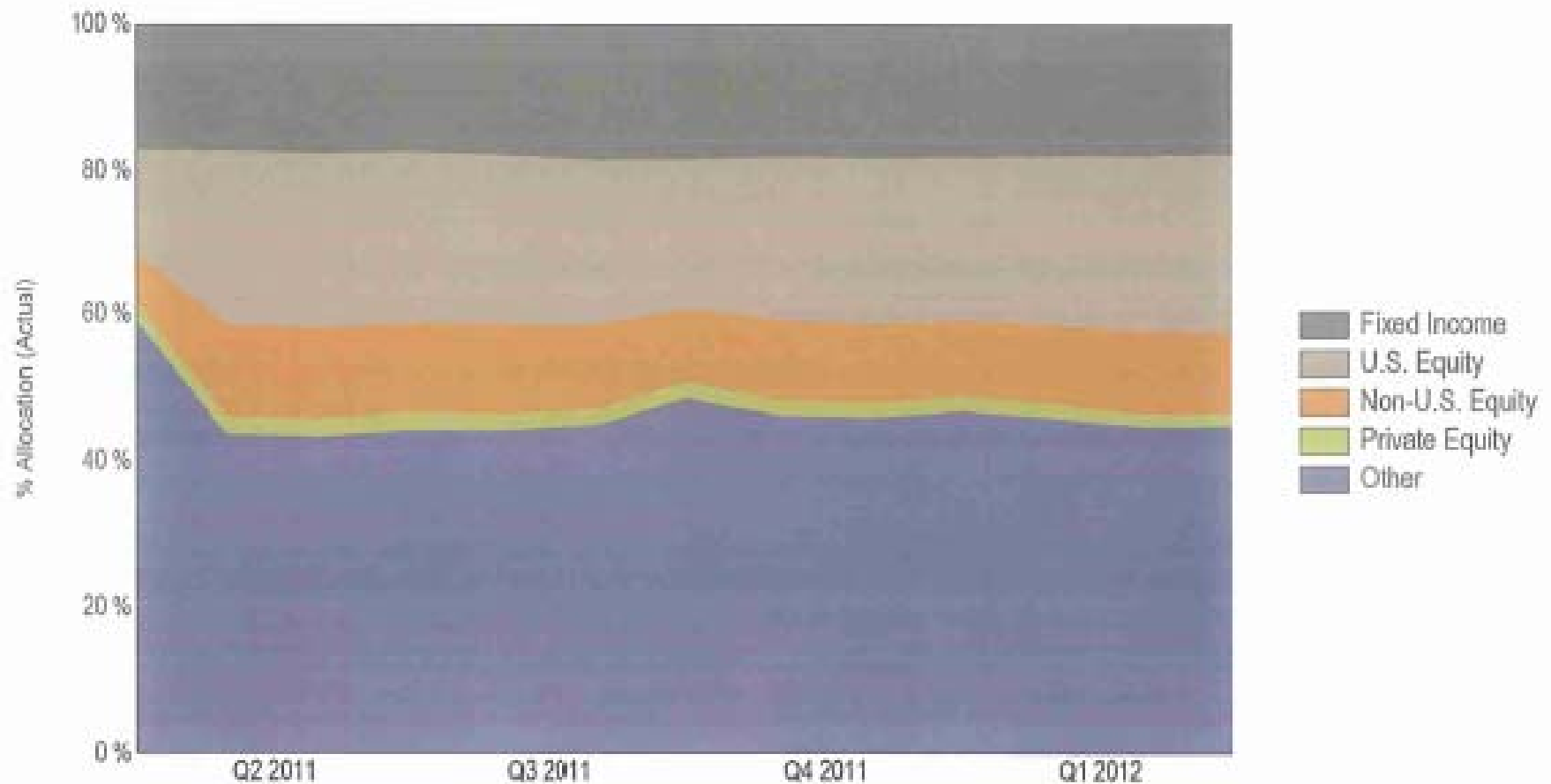


Total Fund Composite

Asset Allocation

Market Value: \$592.7 Million and 100.0% of Fund

Historic Asset Allocation



Source: Marquette Associates, Inc. March 31, 2012 CMPTF report, pg. 4



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Parking Receipts Pension Asset

- Funded by “irrevocably dedicated” receipts of revenue to be derived from parking taxes
- Future anticipated payments:
 - 2011 through 2017 - \$13,376,000 per year
 - 2018 through 2041 - \$26,752,000 per year
- Asset represents the present value of these future receipts
- According to CMPTF Solicitor – funding payments are to be made quarterly by the City (at the end of each quarter)
- Independently valued by Gleason & Associates





Key Funding Assumption – Parking Receipts Pension Asset

- The Gleason valuation report includes “Assumptions and Limiting Conditions.”
- Key assumption: “We have assumed that the City passed Ordinance 42/44...to allow specific funding to be dedicated to the [CMPTF], is *legally binding and irrevocable*. ”
- If this funding stream is revoked, changed, or delayed the valuation is no longer valid. Recent issues:
 - Payments to be made on March 31, 2012 and June 30, 2012 were actually made on June 27, 2012 and July 10, 2012, respectively.
 - July 31, 2012 – Mayor Ravenstahl “puts on hold” plans to add 338 meters in the Strip District.





Key Funding Assumption - Anticipated Return on Invested Plan Assets

- Currently assumed at an 8.0% annual return
- Assumed return is significantly higher than actual returns over the last 5 or 10 years
- Annualized performance (net of fees) of invested portfolio (as of March 31, 2012):
 - Last 5 years – 1.9%
 - Last 7 years – 4.6%
 - Last 10 years – 5.2%
- Funding levels are extremely sensitive to changes in the return on plan assets assumption





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Analysis of Projected Future Financial Condition of Pension Funds





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Gleason Analysis of Future Pension Funding and Cash Flows

- Based upon Mockenhaupt's analysis prepared on August 1, 2012
- Scope was limited due to actuaries' analysis lacking calculations, descriptions or key assumptions used to derive conclusions
- "Reverse engineered" analysis to better understand Mockenhaupt's assumption and analysis
- Status of Gleason & Associates analysis - "Limited"



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BENEFITS GROUP

**City of Pittsburgh - Projected Funding Status
Combined Pension Funds**

1/1 Year	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	AVA Funding Ratio	Unfunded Actuarial Accrued Liability	Market Value of Assets (MVA)	MVA Funding Ratio
2011	1,012,072,000	631,992,000	62.4%	380,080,000	571,383,000	56.5%
2012	1,028,498,000	649,636,000	63.2%	378,861,000	590,375,000	57.4%
2013	1,046,047,000	651,738,000	62.3%	394,310,000	594,029,000	56.8%
2014	1,064,313,000	653,516,000	61.4%	410,798,000	597,503,000	56.1%
2015	1,082,870,000	655,146,000	60.5%	427,723,000	600,983,000	55.5%
2016	1,101,336,000	658,291,000	59.8%	443,045,000	606,147,000	55.0%
2017	1,119,713,000	656,296,000	58.6%	463,417,000	606,339,000	54.2%
2018	1,137,456,000	651,474,000	57.3%	485,982,000	603,847,000	53.1%
2019	1,154,524,000	646,757,000	56.0%	507,767,000	601,598,000	52.1%
2020	1,170,618,000	639,470,000	54.6%	531,147,000	596,923,000	51.0%
2021	1,185,819,000	633,159,000	53.4%	552,660,000	593,364,000	50.0%
2022	1,199,395,000	623,749,000	52.0%	575,645,000	586,850,000	48.9%
2023	1,211,862,000	608,377,000	50.2%	603,485,000	574,489,000	47.4%
2024	1,223,605,000	592,204,000	48.4%	631,401,000	561,415,000	45.9%
2025	1,234,818,000	578,085,000	46.8%	656,734,000	550,496,000	44.6%
2026	1,245,533,000	560,911,000	45.0%	684,620,000	536,629,000	43.1%
2027	1,255,868,000	547,175,000	43.6%	708,692,000	526,312,000	41.9%
2028	1,265,569,000	531,575,000	42.0%	733,994,000	513,848,000	40.6%
2029	1,275,045,000	521,008,000	40.9%	754,037,000	505,758,000	39.7%
2030	1,284,470,000	497,137,000	38.7%	787,333,000	484,506,000	37.7%
2031	1,294,184,000	478,668,000	37.0%	815,515,000	468,784,000	36.2%
2032	1,304,708,000	434,918,000	37.2%	819,790,000	477,853,000	36.6%
2033	1,315,714,000	502,667,000	38.2%	813,045,000	496,643,000	37.7%
2034	1,327,613,000	510,780,000	38.5%	816,833,000	505,899,000	38.1%
2035	1,340,448,000	530,772,000	39.6%	809,677,000	527,145,000	39.3%
2036	1,354,365,000	550,194,000	40.6%	804,170,000	547,959,000	40.5%
2037	1,369,672,000	534,920,000	42.7%	784,752,000	584,243,000	42.7%
2038	1,386,748,000	621,139,000	44.8%	765,608,000	621,139,000	44.8%
2039	1,405,755,000	652,533,000	47.1%	743,221,000	662,533,000	47.1%

All values as of January 1 of each year

For illustrative purposes only



08/01/2012

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**City of Pittsburgh Cash Flow Projection
Combined Pension Funds**

Year	BOY Market Value of Assets	Minimum Municipal Obligation	Employee Contribs	Investment Return	Benefit Payments	Expenses	EOY Market Value of Assets
2011	571,383,000	46,496,000	10,459,000	44,702,000	(80,447,000)	(2,218,000)	590,375,000
2012	590,375,000	30,821,000	10,768,000	45,585,000	(81,237,000)	(2,283,000)	594,029,000
2013	594,029,000	31,258,000	11,092,000	45,860,000	(82,383,000)	(2,352,000)	597,503,000
2014	597,503,000	32,348,000	11,394,000	46,127,000	(83,971,000)	(2,416,000)	600,983,000
2015	600,983,000	35,420,000	11,680,000	46,459,000	(85,915,000)	(2,479,000)	606,147,000
2016	606,147,000	31,963,000	11,954,000	46,669,000	(87,857,000)	(2,538,000)	606,339,000
2017	606,339,000	31,564,000	12,241,000	46,582,000	(90,279,000)	(2,600,000)	603,847,000
2018	603,847,000	34,201,000	12,501,000	46,400,000	(92,694,000)	(2,656,000)	601,598,000
2019	601,598,000	34,450,000	12,773,000	46,134,000	(95,319,000)	(2,715,000)	596,923,000
2020	596,923,000	38,169,000	13,040,000	45,816,000	(97,812,000)	(2,772,000)	593,364,000
2021	593,364,000	38,402,000	13,301,000	45,431,000	(100,819,000)	(2,828,000)	586,850,000
2022	586,850,000	35,575,000	13,531,000	44,709,000	(103,298,000)	(2,879,000)	574,489,000
2023	574,489,000	37,719,000	13,793,000	43,730,000	(105,381,000)	(2,935,000)	561,415,000
2024	561,415,000	42,431,000	14,092,000	42,805,000	(107,245,000)	(3,001,000)	550,496,000
2025	550,496,000	41,980,000	14,407,000	41,855,000	(109,040,000)	(3,069,000)	536,629,000
2026	536,629,000	47,823,000	14,724,000	40,920,000	(110,645,000)	(3,137,000)	526,312,000
2027	526,312,000	48,117,000	15,054,000	40,044,000	(112,473,000)	(3,208,000)	513,848,000
2028	513,848,000	54,484,000	15,370,000	39,251,000	(113,916,000)	(3,276,000)	505,758,000
2029	505,758,000	43,447,000	15,731,000	38,131,000	(115,207,000)	(3,355,000)	484,506,000
2030	484,506,000	51,109,000	16,098,000	36,704,000	(116,199,000)	(3,435,000)	468,784,000
2031	468,784,000	76,506,000	16,495,000	36,429,000	(116,841,000)	(3,520,000)	477,853,000
2032	477,853,000	85,759,000	16,931,000	37,494,000	(117,781,000)	(3,614,000)	496,643,000
2033	496,643,000	75,506,000	17,355,000	38,580,000	(118,481,000)	(3,705,000)	505,899,000
2034	505,899,000	86,693,000	17,819,000	39,747,000	(119,206,000)	(3,805,000)	527,145,000
2035	527,145,000	84,954,000	18,290,000	41,365,000	(119,890,000)	(3,906,000)	547,959,000
2036	547,959,000	98,389,000	18,785,000	43,552,000	(120,429,000)	(4,012,000)	584,243,000
2037	584,243,000	96,133,000	19,313,000	46,368,000	(120,791,000)	(4,125,000)	621,139,000
2038	621,139,000	97,563,000	19,886,000	49,378,000	(121,185,000)	(4,248,000)	662,533,000
2039	662,533,000	94,918,000	20,495,000	52,583,000	(121,726,000)	(4,379,000)	704,425,000

For illustrative purposes only



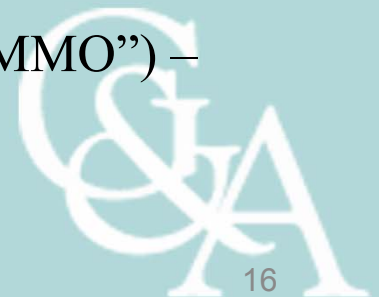
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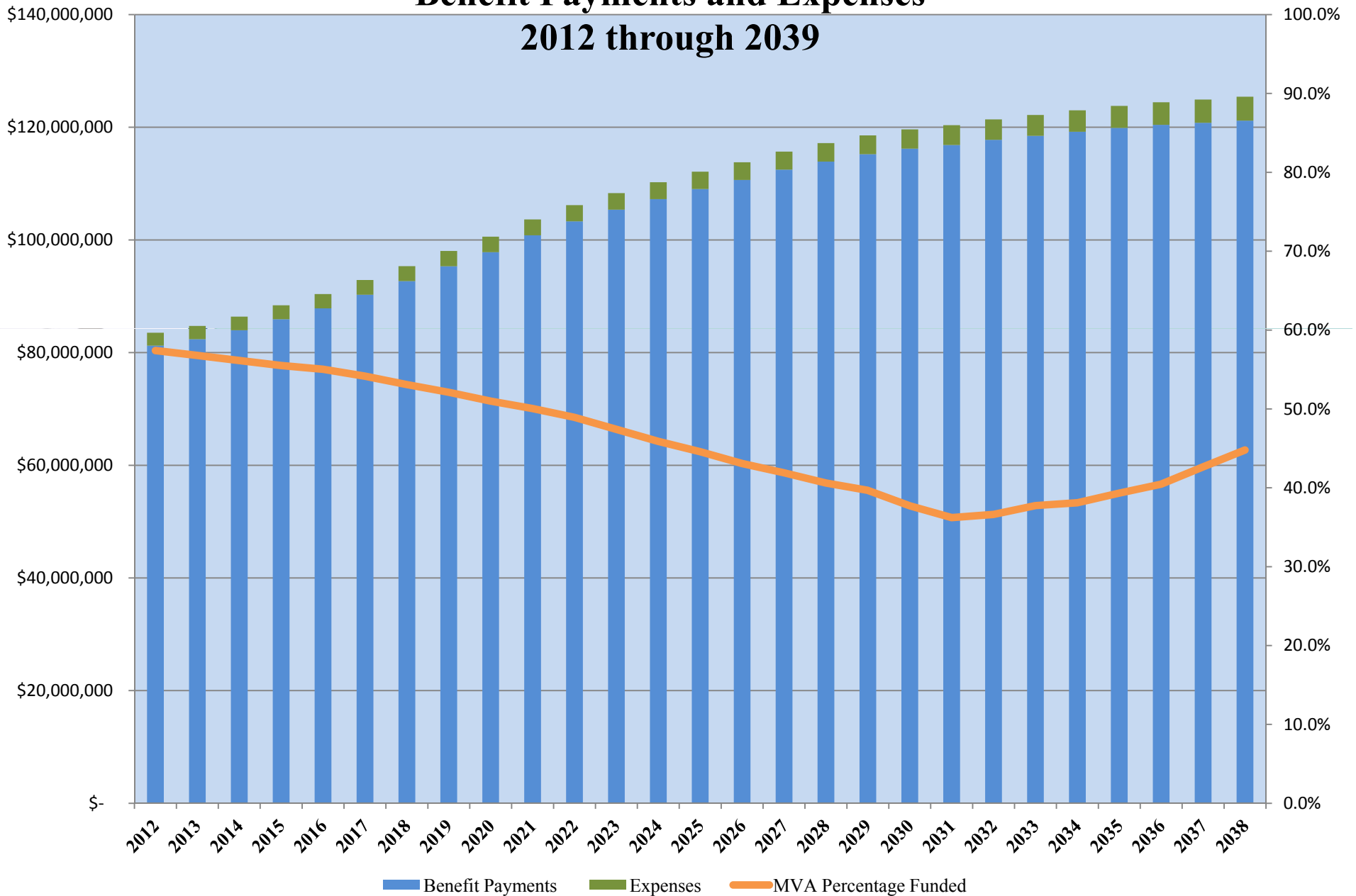
Summary of Actuaries' Future Cash Flow Projections

Key Assumptions:

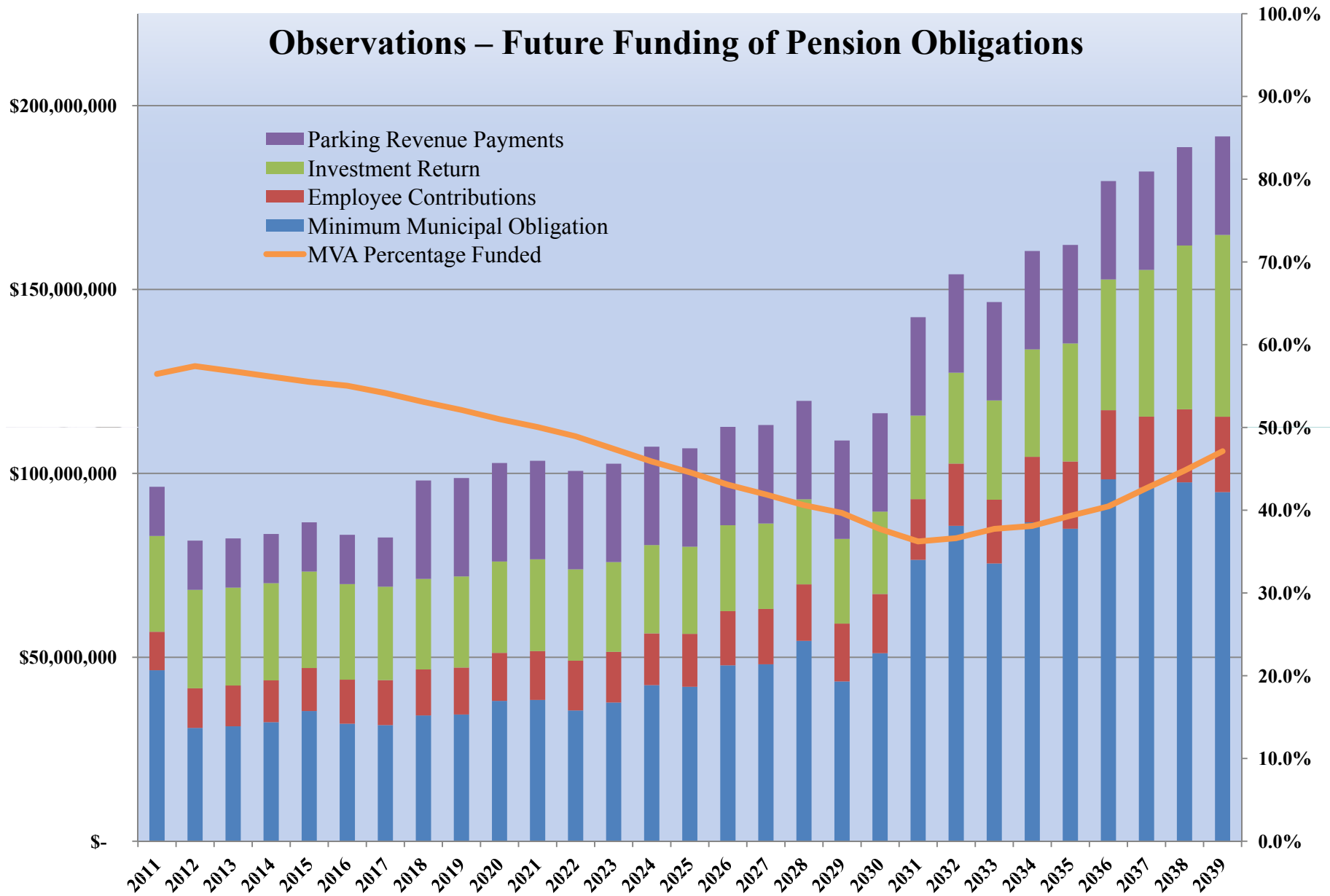
- Return on Plan Assets - 8%
- Actuarial Accrued Liability -
 - Annual growth ranges from .07% to 1.7%
 - Compounded Annual Growth Rate - 1.18%
- Benefit Payments -
 - Annual growth ranges from 0% - 3%
 - Compounded Annual Growth Rate - 1.5%
- Administrative Expenses - 3% annual increase
- Municipal Minimum (Funding) Obligation (“MMO”) –
Calculated by Actuary



Observations - Projection of Required Benefit Payments and Expenses 2012 through 2039



Observations – Future Funding of Pension Obligations

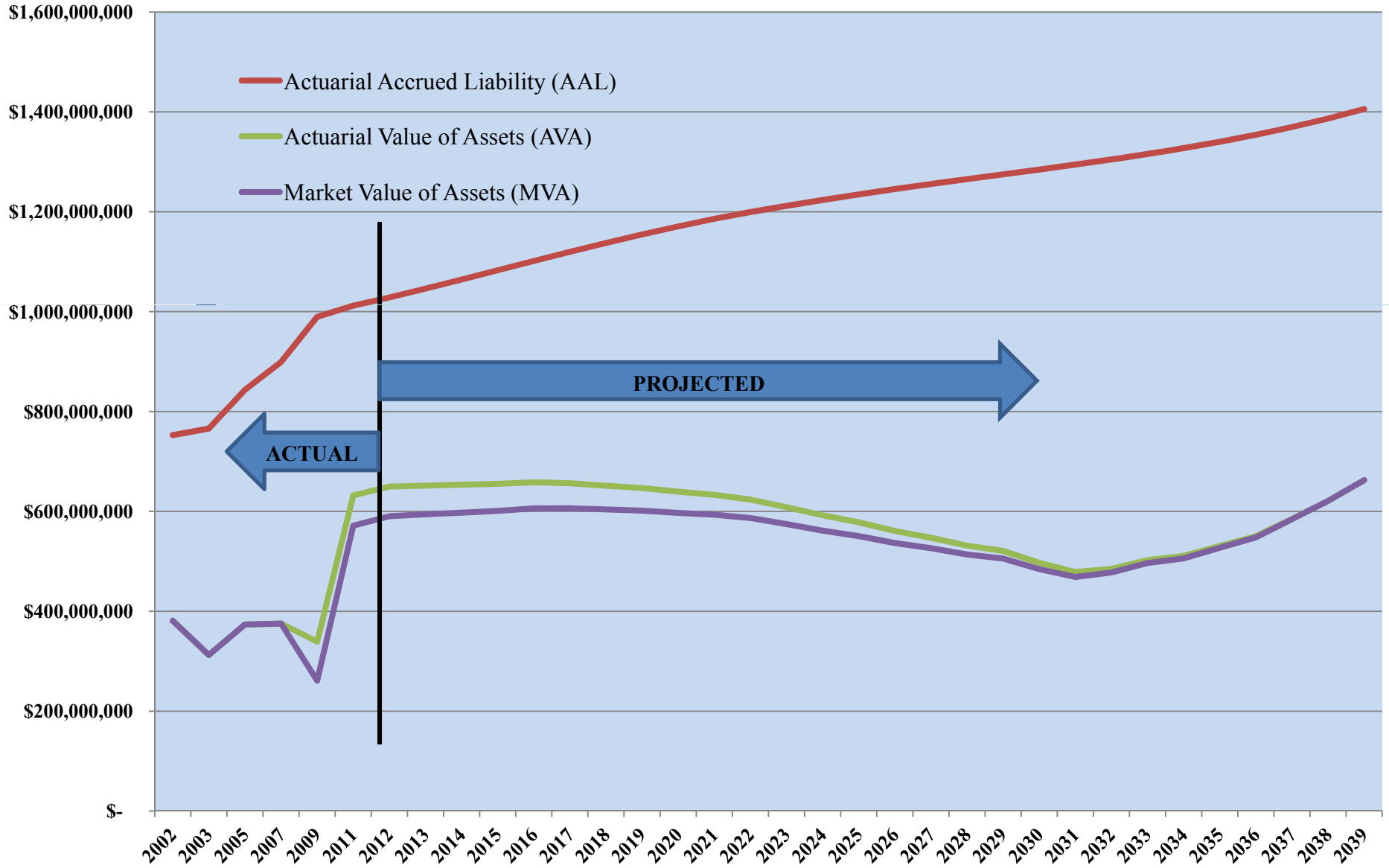




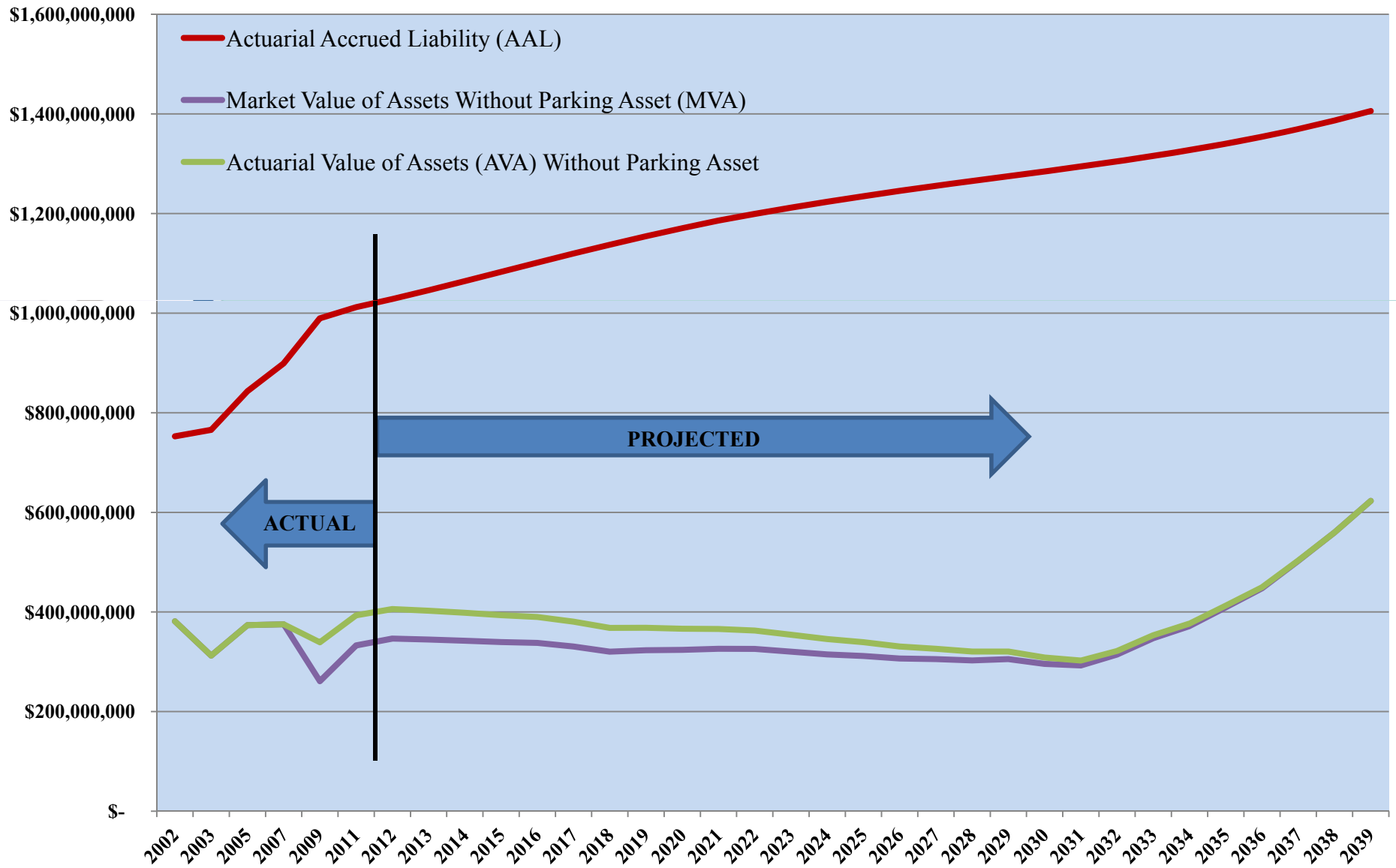
Observations - Future Funded Status

- Actual MVA Funded Status - Decrease from 56.5% (current) to its lowest level at 36.2% (in 2031)
- From 2031 to 2039 - funding level rebounds from 36.2% to 47.1%
- Reason - higher MMO contributions:
 - 2030 to 2031 – MMO increases by 50% or approximately \$25.4 million
 - 2031 to 2039 – MMO increases from \$76.5 million to \$94.8 million

Actuarial Accrued Liability vs. Actuarial Value of Assets with the Parking Receipts Asset



Actuarial Accrued Liability vs. Actuarial Value of Assets (without the Parking Receipts Asset)





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Sensitivity Analyses of Projected Future Financial Condition of Pension Funds

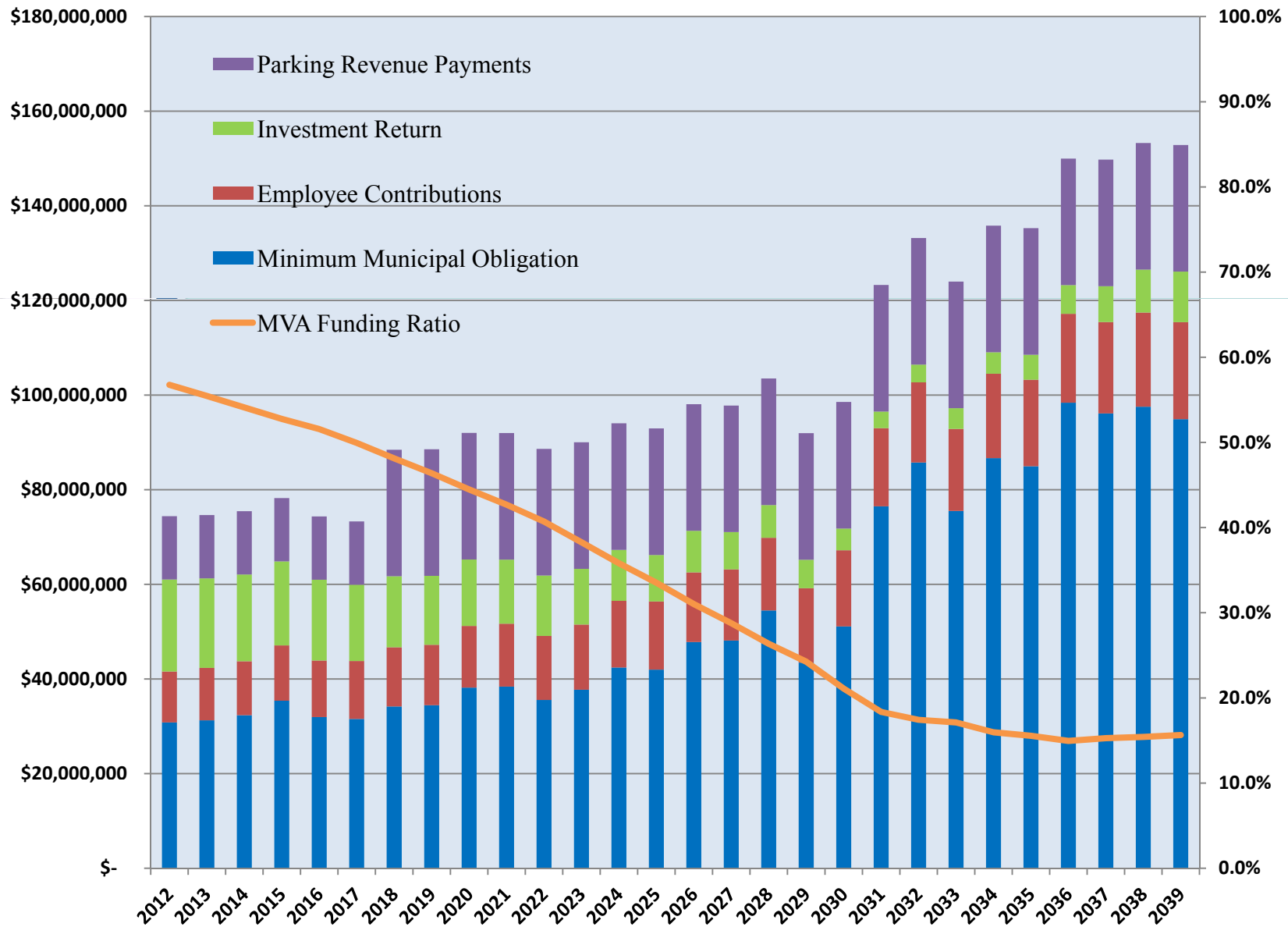




Sensitivity Analysis - Annual Investment Return

- Decreasing annual investment return significantly affects assets and the funding level.
- For example - by decreasing assumed return on investments by 2% (200 basis points):
 - Funding percentage steadily decreases from 56.5% in 2011 to the lowest level of 14.9% in 2036
 - Funding level rebounds to 15.6% by 2039 (due to higher MMO)
- Unfunded liability:
 - \$380,080 in 2011
 - \$819,790 in 2032
 - \$743,221 in 2039
- This assumed return is higher than the actual return over the last 10 years

Sensitivity Analysis – Future Funding of Pension Obligations





Sensitivity Analysis – Cash Infusion Required to Maintain Current Funding Levels

Assumptions:

- Used actuary's forecasted assumptions
- Solved for cash infusions required to maintain current 56.5% funding

Observations:

- Additional funding not required until 2014 (when funding drops to 56.1%)
- Between 2014 and 2026, additional funding required each year, totaling \$73.6 million over 13 years
- Over the forecast period, the \$73.6 million contributed will compound to \$265 million (based upon 8% assumed rate of return on plan assets)



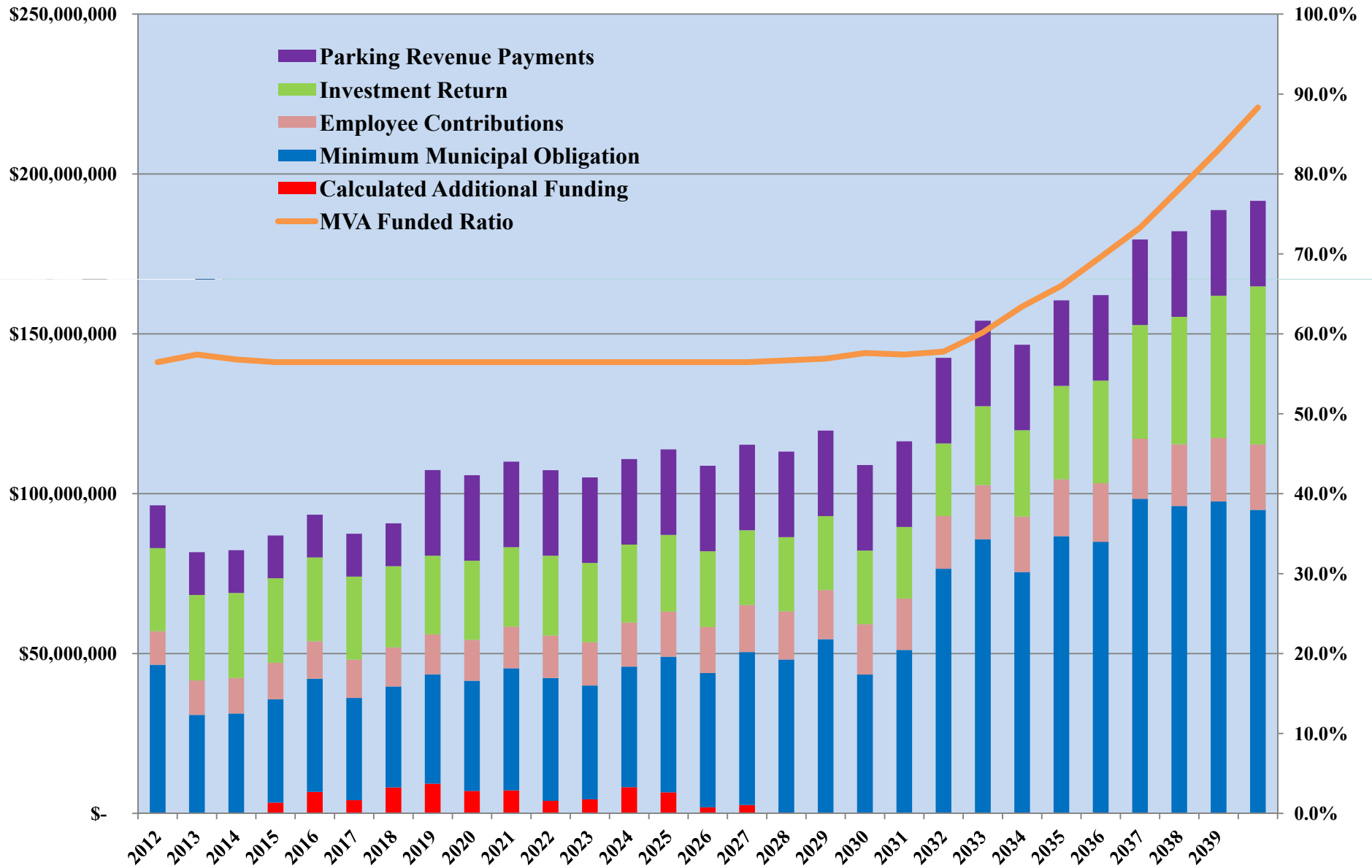


Sensitivity Analysis – Cash Infusion Required to Maintain Current Funding Levels

Observations (cont'd):

- Between 2026 and 2030, funding level will increase from 56.5% to 57.4%.
- After 2031, funding percentage increases dramatically due to substantial increase in MMO contributions.
- From 2030 to 2039, MMO increases from \$51 million to \$95 million and funding level increases from 57.4% to 88.3%.

Sensitivity Analysis – Funded Status





Conclusions / Considerations

Parking Asset

- Critical to maintaining current funding levels.
- City must ensure irrevocability of funding stream.

Assumed Investment Returns

- Significantly exceed actual returns.
- Lowering returns will increase need for additional funding.

Maintaining Current Funded Status

- Will require additional cash infusions to maintain funding levels - additional analysis required.

Other Additional Analysis

- Effects of potential benefit changes or plan conversions on funded status.
- Alternative funding scenarios – timing / amounts / methods





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QUESTIONS?

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