

El Paso Fireman and Policemen's Pension Fund

History

- The El Paso Firemen & Policemen's Pension Fund was created in May, 1920.
 - It is established and maintained pursuant to Article 6243(b), Vernon's Annotated Texas Statute.
 - It is divided into two divisions, a Policemen's Fund and a Firemen's Fund,
 - Both are managed by a common Board of Trustees and administrative staff.
 - The current statute charges the Board of Trustees with the Plan's administration, and is comprised of eleven (11) members. Per statute:
 - Three will be firefighters (elected by fire membership),
 - Three police officers (elected by police membership),
 - Three appointed by the Mayor of El Paso, and
 - Two appointed by the City Manager of El Paso.
 - These are volunteer positions and board members not compensated for their time.
 - The Fund is a single employer defined benefit plan under Section 401(a) of the Internal Revenue Code ("Code") of the United States.
 - It provides retirement, survivor, and disability benefits to the uniformed public safety employees of the City of El Paso.
 - Benefits are determined based on a member's years of covered service, average salary, and a multiplier percentage.
- In 2007, HB 3355 passed and codified in statute an agreement between the Fund and the City that required concessions and ongoing commitment by both parties.
 - The Fund now has a two-tiered benefit structure.
 - The City put a cash infusion into the Fund totaling \$210 million.
 - 2007 - \$100 Million
 - 2009 - \$110 Million
 - In 2007, Police membership also increased contributions.
 - Fire membership had previously made an increase.

What do SB 1133 (Rodriguez) and HB 2136 (Pickett) do?

- Clarify the use of public funds
 - Add the words "Except as provided for Section 14A of this act, no"...
 - Section 14A discusses the contribution increases or decreases as edited in the rest of the bill.
- Change the time period on contribution rates being insufficient to amortize the unfunded actuarial accrued liability from "not to exceed 40 years" to "**over a 40 year period**"
 - It maintains that this determination of insufficient rates must be made by a qualified actuary
- Add a section titled Contribution Decreases (almost identical to the increase section already in statute)
 - If at any time a qualified actuary determines that the total contribution rate is sufficient to amortize the unfunded actuarial accrued liability, **over a 25-year period**:
 - The city's or town's governing body may decrease the city or town contribution rate; and
 - To the extent that the city or town contribution rate decreases, the member contribution rate must decrease by an amount using a formula (in the bill)
 - The sum of the city or town contribution rate and the member contribution rate after a decrease **may not be less** than the total contribution rate determined by the qualified actuary to be necessary to amortize the unfunded actuarial accrued liability over a 25-year period.

By: Rodriguez

S.B. No. 1133

A BILL TO BE ENTITLED

1

AN ACT

2 relating to contributions to certain fire and police pension funds.

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

4 SECTION 1. Section 14, Chapter 101, Acts of the 43rd
5 Legislature, 1st Called Session, 1933 (Article 6243b, Vernon's
6 Texas Civil Statutes), is amended to read as follows:

7 Sec. 14. USE OF PUBLIC FUNDS. Except as provided by Section
8 14A of this Act, no ~~[No]~~ funds shall be paid out of the public
9 treasury of any such incorporated city or town, in carrying out any
10 of the provisions of this law, except on a majority vote of the
11 voters of such city or town, and where such funds have been voted on
12 as provided by law, said city or town shall contribute such amount.

13 SECTION 2. Section 14A(a), Chapter 101, Acts of the 43rd
14 Legislature, 1st Called Session, 1933 (Article 6243b, Vernon's
15 Texas Civil Statutes), is amended to read as follows:

16 (a) If at any time a qualified actuary that meets the
17 requirements of Subdivision (1), Subsection (b), Section 10A of
18 this Act, determines that the total contribution rate, expressed as
19 a percentage of wages, is insufficient to amortize the unfunded
20 actuarial accrued liability, as defined under the Governmental
21 Accounting Standards Board Statement No. 25, over a 40-year period
22 ~~[not to exceed forty (40) years]~~:

23 (1) the city's or town's governing body may increase
24 the city or town contribution rate; and

1 (2) to the extent that the city or town contribution
2 rate increases under Subdivision (1) of this subsection, the member
3 contribution rate must increase by an amount equal to the member
4 contribution rate before the increase multiplied by a fraction:

5 (A) the numerator of which is the increase in the
6 amount of the city or town contribution rate; and

7 (B) the denominator of which is the amount of the
8 city or town contribution rate before the increase.

9 SECTION 3. Chapter 101, Acts of the 43rd Legislature, 1st
10 Called Session, 1933 (Article 6243b, Vernon's Texas Civil
11 Statutes), is amended by adding Section 14B to read as follows:

12 Sec. 14B. CONTRIBUTION DECREASES. (a) If at any time a
13 qualified actuary that meets the requirements of Section 10A(b)(1)
14 of this Act determines that the total contribution rate, expressed
15 as a percentage of wages, is sufficient to amortize the unfunded
16 actuarial accrued liability, as defined under the Governmental
17 Accounting Standards Board Statement No. 25, over a 25-year period:

18 (1) the city's or town's governing body may decrease
19 the city or town contribution rate; and

20 (2) to the extent that the city or town contribution
21 rate decreases under Subdivision (1) of this subsection, the member
22 contribution rate must decrease by an amount equal to the member
23 contribution rate before the decrease multiplied by a fraction:

24 (A) the numerator of which is the decrease in the
25 amount of the city or town contribution rate; and

26 (B) the denominator of which is the amount of the
27 city or town contribution rate before the decrease.

1 (b) The sum of the city or town contribution rate and the
2 member contribution rate after a decrease under this section may
3 not be less than the total contribution rate determined by the
4 qualified actuary to be necessary to amortize the unfunded
5 actuarial accrued liability over a 25-year period.

6 SECTION 4. This Act takes effect immediately if it receives
7 a vote of two-thirds of all the members elected to each house, as
8 provided by Section 39, Article III, Texas Constitution. If this
9 Act does not receive the vote necessary for immediate effect, this
10 Act takes effect September 1, 2013.

By: Pickett

H.B. No. 2136

A BILL TO BE ENTITLED

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AN ACT

2 relating to contributions to certain fire and police pension funds.

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

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9 treasury of any such incorporated city or town, in carrying out any
10 of the provisions of this law, except on a majority vote of the
11 voters of such city or town, and where such funds have been voted on
12 as provided by law, said city or town shall contribute such amount.

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17 requirements of Subdivision (1), Subsection (b), Section 10A of
18 this Act, determines that the total contribution rate, expressed as
19 a percentage of wages, is insufficient to amortize the unfunded
20 actuarial accrued liability, as defined under the Governmental
21 Accounting Standards Board Statement No. 25, over a 40-year period
22 ~~[not to exceed forty (40) years]~~:

23 (1) the city's or town's governing body may increase
24 the city or town contribution rate; and

1 (2) to the extent that the city or town contribution
2 rate increases under Subdivision (1) of this subsection, the member
3 contribution rate must increase by an amount equal to the member
4 contribution rate before the increase multiplied by a fraction:

5 (A) the numerator of which is the increase in the
6 amount of the city or town contribution rate; and

7 (B) the denominator of which is the amount of the
8 city or town contribution rate before the increase.

9 SECTION 3. Chapter 101, Acts of the 43rd Legislature, 1st
10 Called Session, 1933 (Article 6243b, Vernon's Texas Civil
11 Statutes), is amended by adding Section 14B to read as follows:

12 Sec. 14B. CONTRIBUTION DECREASES. (a) If at any time a
13 qualified actuary that meets the requirements of Section 10A(b)(1)
14 of this Act determines that the total contribution rate, expressed
15 as a percentage of wages, is sufficient to amortize the unfunded
16 actuarial accrued liability, as defined under the Governmental
17 Accounting Standards Board Statement No. 25, over a 25-year period:

18 (1) the city's or town's governing body may decrease
19 the city or town contribution rate; and

20 (2) to the extent that the city or town contribution
21 rate decreases under Subdivision (1) of this subsection, the member
22 contribution rate must decrease by an amount equal to the member
23 contribution rate before the decrease multiplied by a fraction:

24 (A) the numerator of which is the decrease in the
25 amount of the city or town contribution rate; and

26 (B) the denominator of which is the amount of the
27 city or town contribution rate before the decrease.

1 (b) The sum of the city or town contribution rate and the
2 member contribution rate after a decrease under this section may
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Gallagher Benefit Services, Inc.
t h i n k i n g a h e a d

Analysis of the Funded Status of the
City of El Paso Policemen's and Firemen's Pension Funds

April 3, 2013



Gallagher Benefit Services, Inc.

Purpose and Report Contents

From 2008 to 2012, the funded status of the City of El Paso Policemen’s and Firemen’s Pension Funds have not improved according to expectations. According to the Fund’s actuary, the projected period to fully fund the Firemen’s Pension Fund is 76 years and the Policemen’s Pension Fund will never be fully funded. This report intends to explain how the Unfunded Actuarial Accrued Liability (UAAL) has changed since 2008, how those changes have impacted the expected funding amortization period, how sensitive the amortization results are to various assumption changes, how the UAAL and each Fund’s funding ratio is expected to change over time, and finally, alternative solutions to address the causes of the worsened underfunding.

Pages 3-13	Four Year Analysis of UAAL Increases
Pages 14-22	Contribution Margins
Pages 23-28	Sensitivity Analysis
Pages 29-33	Funding Status Forecasts
Pages 34-44	Potential Action Steps

This report is prepared by Gallagher Benefit Services, Inc. for the City of El Paso for use as a guide to understand the current funded status of the Fund and future funding status expectations. It includes a combination of results obtained from information provided in the Fund’s Biennial actuarial valuation reports prepared by Buck Consultants, the Fund’s actuary, as well as amounts deduced and projected by Gallagher Benefit Services, Inc.

Section 1 - Four Year Analysis of UAAL Increases

This section will provide an analysis of the sources of increases and decreases to the Unfunded Actuarial Accrued Liability (UAAL) that have occurred since benefit changes were enacted effective July 1, 2007 for new employees. This includes a reconciliation of asset and liability changes from the January 1, 2008 actuarial valuation through the January 1, 2012 actuarial valuation.

During the four year period, the Unfunded Actuarial Accrued Liability (UAAL) for the Policemen's Fund increased from \$99M to \$175M. The UAAL for the Firemen's Fund decreased from \$114M to \$109M. These measurements were based on an Actuarial Value of Asset (AVA) method for each Fund. The AVA method does not reflect all of the market value of asset losses that occurred during the four year period.

When the UAAL is instead measured using the actual Market Value of Assets (MVA), it increases from \$64M to \$219M, a \$155M increase for the Policemen's Fund and from \$95M to \$138M, a \$43M increase for the Firemen's Fund.

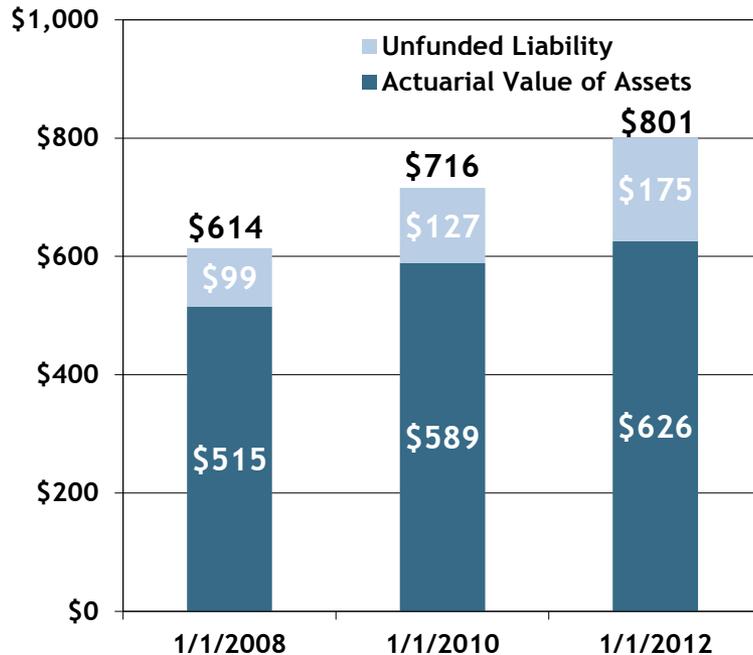
This section will explain the respective \$155M and \$43M increases that occurred from January 1, 2008 to January 1, 2012.



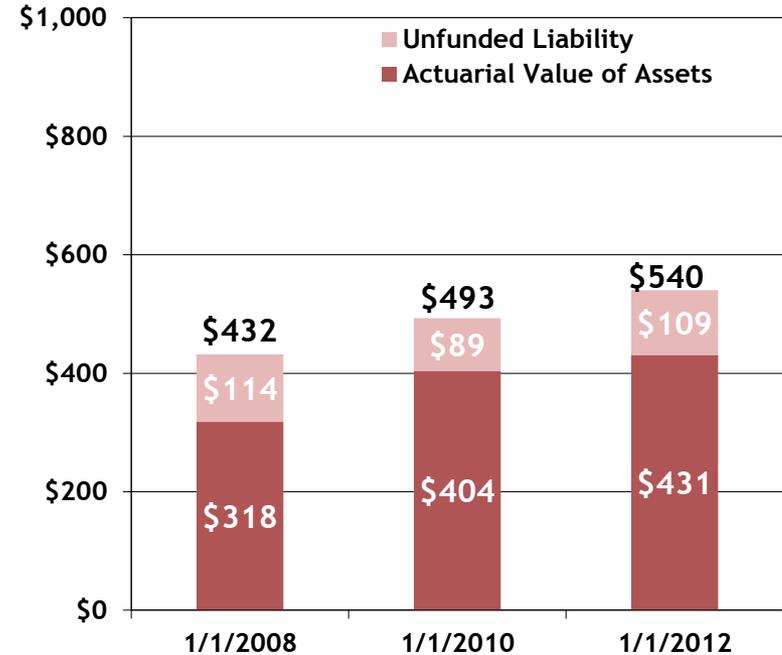
Funded Status Since 1/1/2008 (Actuarial Value of Assets)

The Unfunded Actuarial Accrued Liability (UAAL) of the Plan is measured by comparing the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). The difference is the UAAL. The UAAL on this basis increased from \$99M to \$175M in the Policemen's Fund. The UAAL on this basis actually decreased from \$114M to \$109M in the Firemen's Fund. The following pages will explain why the two Funds results are so different.

Policemen's Fund

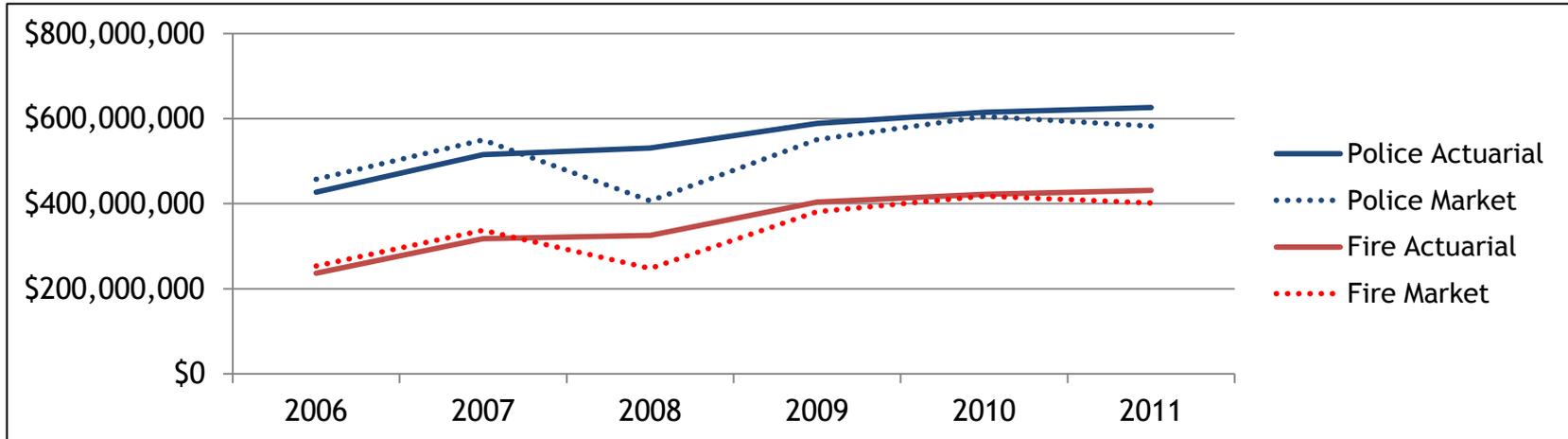


Firemen's Fund



Market Value vs. Actuarial Value

The use of Actuarial Value of Assets (AVA) differs from Market Value of Assets (MVA) by spreading gains and losses over a 5-year period. Use of AVA instead of MVA is helpful to smooth out biennial fluctuations in the Annual Required Contribution (ARC) and the funded status. However, at any point in time it overstates or understates the true asset value. When evaluating the true funded status and expected amortization period of the Fund, MVA may be a more appropriate measurement. The remainder of this study discusses the Fund status primarily in terms of MVA.

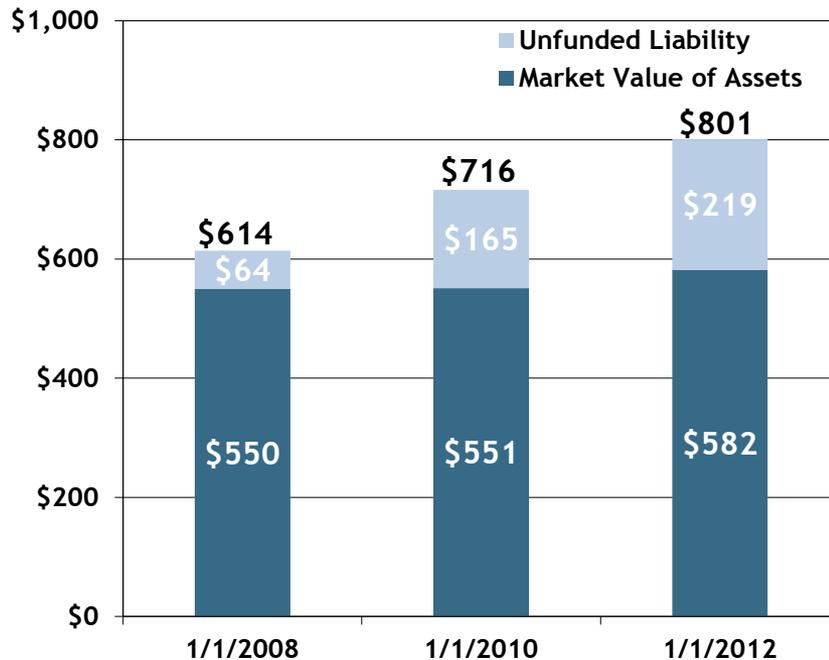


	Market Value at 1/1/2012	Actuarial Value at 1/1/2012	Amount of 1/1/2012 Overstatement
Policemen's Fund	\$582M	\$626M	\$44M
Firemen's Fund	\$402M	\$431M	\$29M

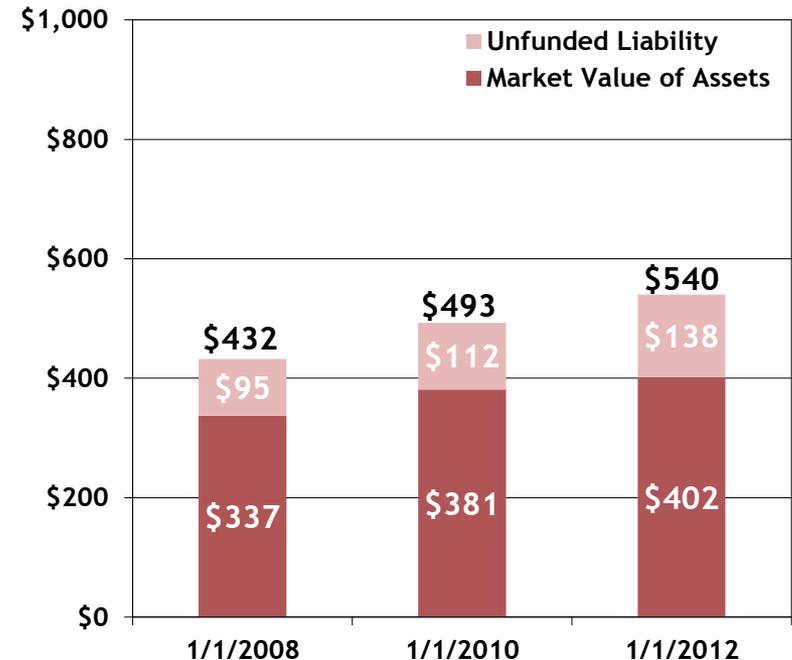
Funded Status Since 1/1/2008 (Market Value of Assets)

The UAAL since 2008, when measured using MVA, has increased by \$155M in the Policemen's Fund and by \$43M in the Firemen's Fund. The Actuarial Accrued Liability has increased at a rate close to the expected investment return. The Market Value of Assets has not increased as expected based on the assumptions set in 2008 and 2010. The following four slides compare the expected and actual growth of both components for each Fund.

Policemen's Fund

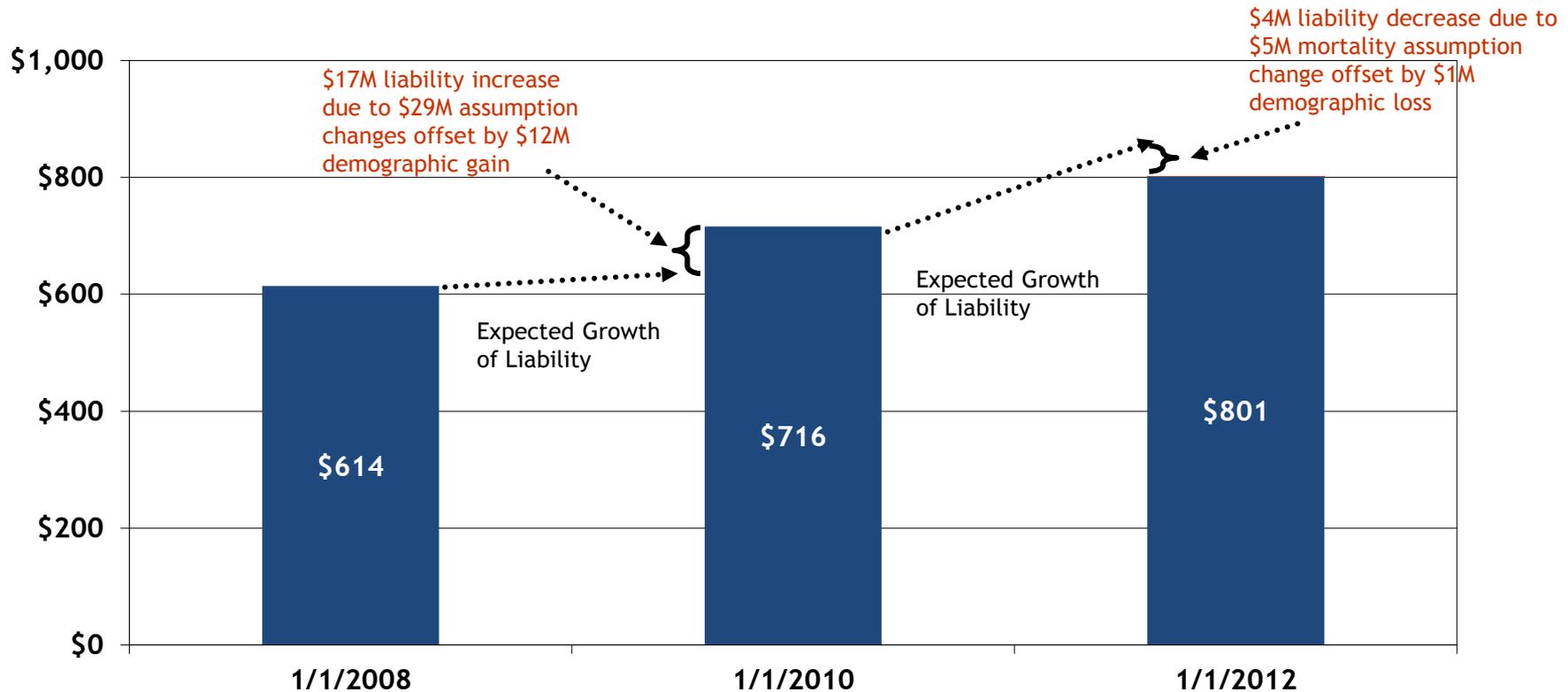


Firemen's Fund



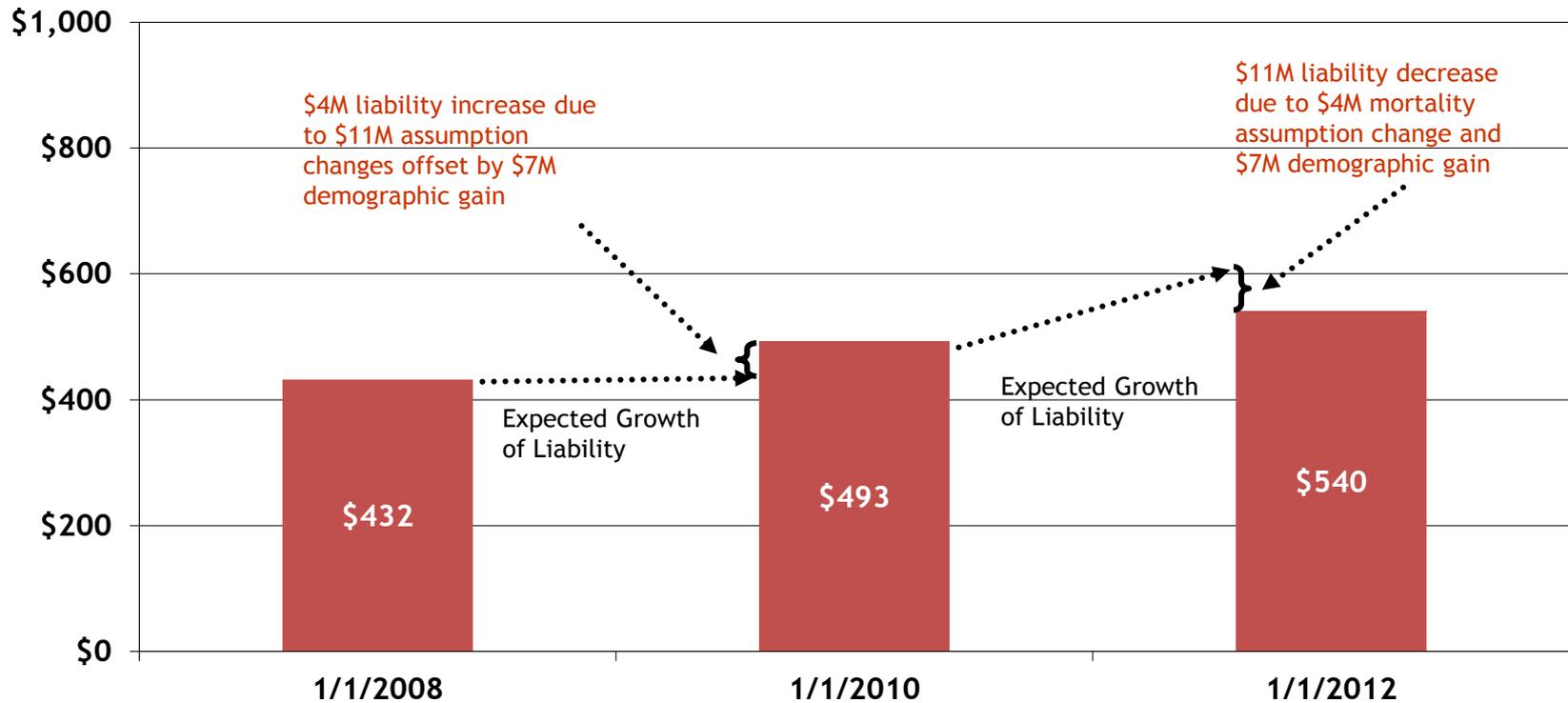
Policemen's Fund Liability Changes Since 2008

The Liability is expected to increase each year due to interest (one year less of discounting) at the assumed rate of return plus the cost of benefit accruals for active employees and decrease by actual benefit payments. Additional adjustments called gains or losses occur when demographic experience is different than expected. The liability estimate also changes when different sets of assumptions are used.



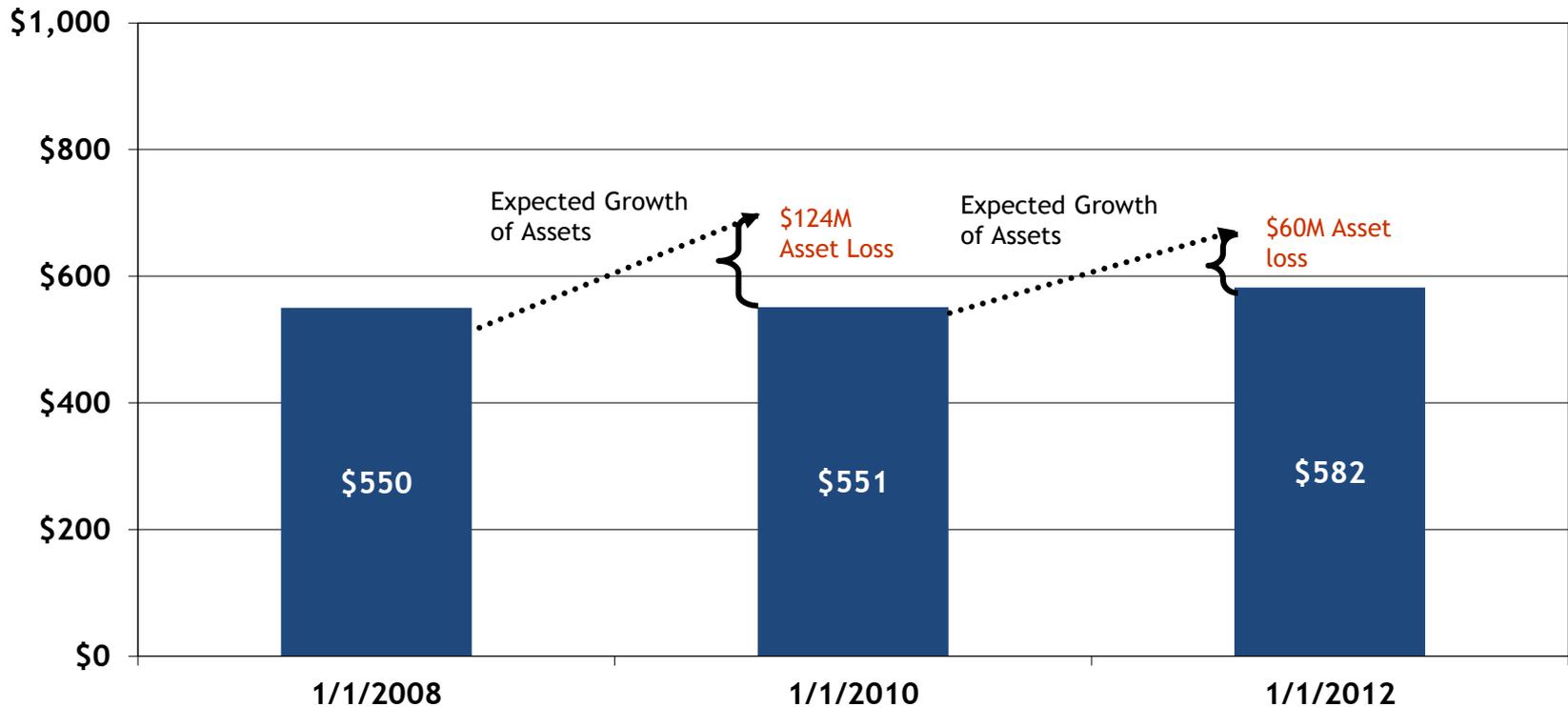
Firemen's Fund Liability Changes Since 2008

The Liability is expected to increase each year due to interest (one year less of discounting) at the assumed rate of return plus the cost of benefit accruals for active employees and decrease by actual benefit payments. Additional adjustments called gains or losses occur when demographic experience is different than expected. The liability estimate also changes when different sets of assumptions are used.



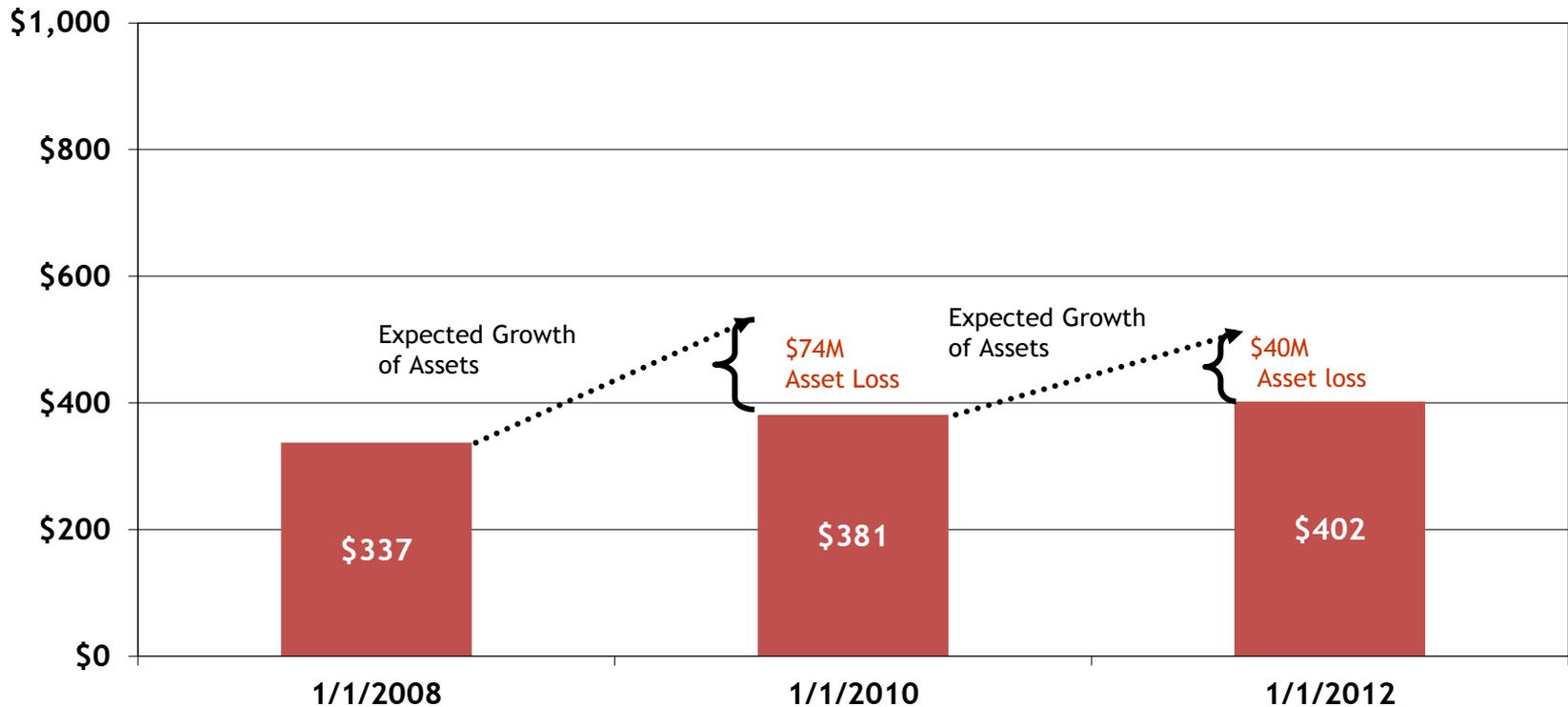
Policemen's Fund Market Value of Asset Changes

The Market Value of Assets is expected to increase at the assumed rate of return (8.0% before 2010, 7.75% after 2009, after consideration of all plan expenses) plus contributions minus benefit payments. The following compares the expected growth in assets against the actual growth and identifies the amount of asset losses in the past four years.



Firemen's Fund Market Value of Asset Changes

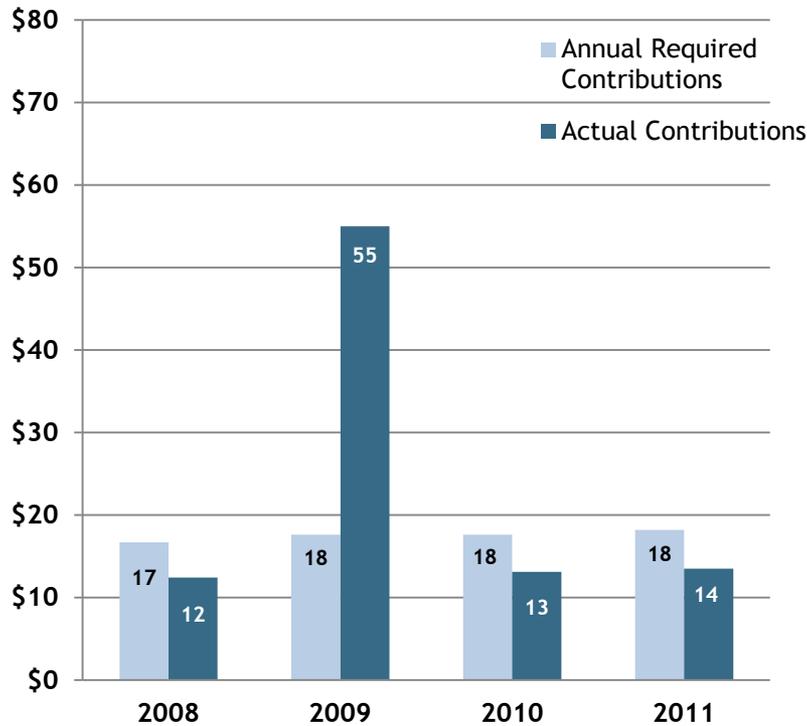
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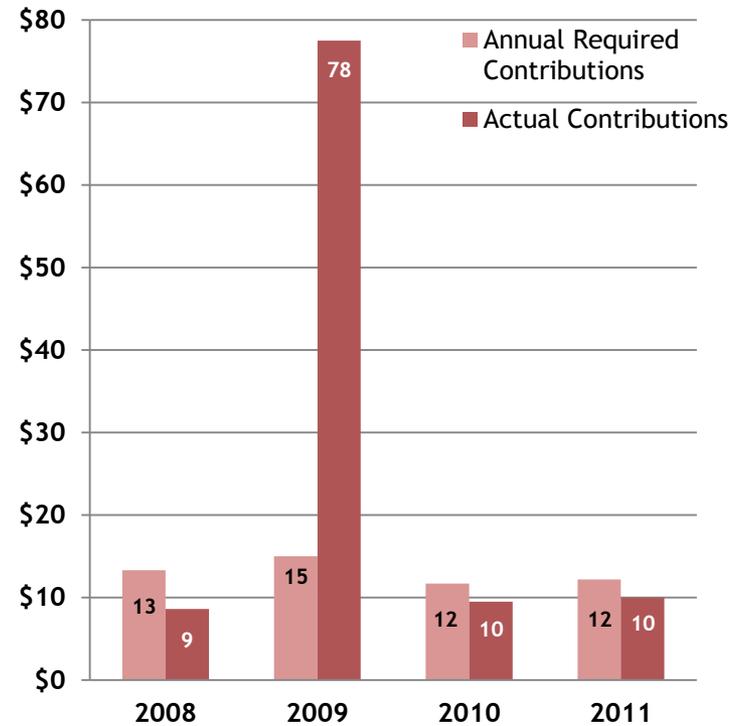
Actual vs. Required Contributions

The Unfunded Actuarial Accrued Liability will also change as a result of actual contributions. The following compares actual City contributions compared to the City Annual Required Contribution (ARC). Since 2008, the City contributions have exceeded the ARC by \$24M in the Policemen's Fund and by \$53M in Firemen's Fund.

Policemen's Fund

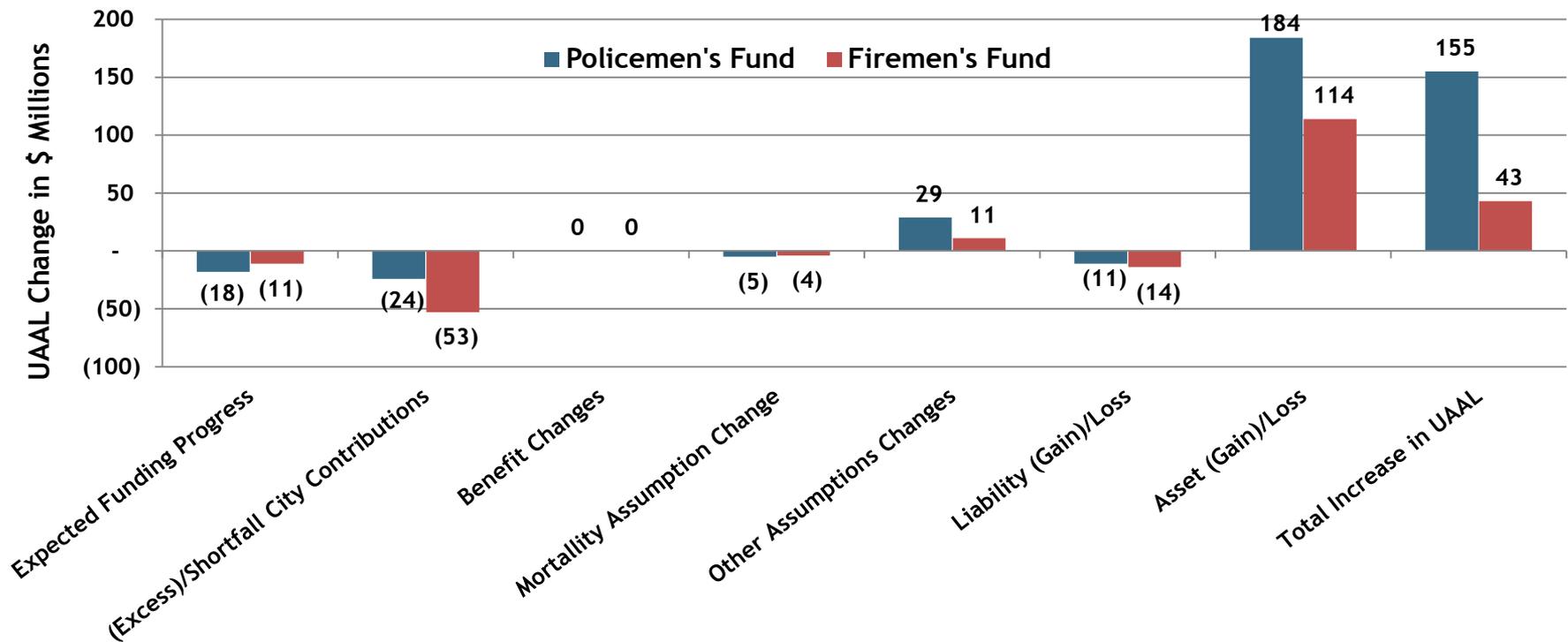


Firemen's Fund



Sources of Unfunded Liability Increase Since 2008

Since 2008 the UAAL (based on Market Value) has increased by \$155M in the Policemen's Fund and \$43M in the Firemen's Fund. If all assumptions had been met, and the City contributed the ARC, the UL would have decreased by \$18M in the Policemen's Fund and \$11M in the Firemen's Fund (expected funding progress). After considering the City's excess contributions, the expected decrease in UAAL would have been \$42M and \$64M respectively. The large asset loss in each Fund explains most of the difference between the expected \$42M and \$64M expected decreases and the actual \$155M and \$43M increases.



Section 1 Conclusions

The following conclusions can be drawn from Section 1:

1. The extensive asset losses experienced by both Funds over the past four years are the only significant cause of the worsening of the funded status. If the asset returns had met the assumption, the funded status of each Fund would have improved at a rate better than expected.
2. The investment losses for the Funds were consistent with overall poor performance in the capital markets during this period of time. We did directly compare the Fund's losses to those of other Funds. The results observed appear to be consistent with investment losses experienced by many pension funds during this time.
3. The Fund has an investment allocation of 65% equities, 30% fixed income, and 5% real estate. This allocation may result in fairly large asset gains or losses from year to year. Just as large losses occurred from 2008 to 2012, it is possible for some significant gains in the future.
4. Had all assumptions been met, and the City only funded the 30-year Annual Required Contribution, the Unfunded Actuarial Accrued Liability would have been reduced over the four year period ending 1/1/12.
5. The City's contribution significantly exceeded the 30-year Annual Required Contribution.
6. The Fund changed some assumptions that in the aggregate slightly increased each Fund's liability estimates. The most significant assumption change is the reduction in the investment rate of return from 8.0% to 7.75%. These assumption changes together reflect a slightly more conservative set of assumptions and should result in a reduced likelihood of future annual experience losses.
7. Liability gains occurred during the four year period for both Funds. This may indicate that the demographic assumptions (mortality rates, retirement rates, withdrawal rates, etc.) are slightly conservative. While this is a relatively short period to evaluate demographic gains and losses, it is an encouraging pattern from the perspective of the funding status of the Funds.



Section 2 - Contribution Margins

Section 1 demonstrated the sources of liability and asset changes from 2008 to 2012 according to information determined by the Fund's actuary. This section will discuss how the changes in liabilities and assets affect the Annual Required Contribution and the amortization period. The process to convert asset and liability measurements into an Annual Recommended Contribution (ARC) will be demonstrated. The actual scheduled contributions based on established City and Member contribution rates and expected payroll will then be compared to the ARC. This difference is called the Contribution Margin.

If the actual contribution is larger than the 30-year ARC (i.e. if the Contribution Margin is positive), the UAAL will be paid off faster than 30 years. If the actual contribution is not sufficient to at least make the interest payment on the UAAL, the amortization period may be infinite (i.e. the UAAL will never be paid off). If the actual contribution is somewhere between these two points, the amortization period will be a finite amount greater than 30 years.

Because the comparison of actual contributions to the amounts needed to ultimately fund the UAAL change over time, we will demonstrate the expected future pattern of those differences.

Finally, in this section, as it is clear that asset losses have been the primary source of the UAAL increase since 1/1/2008, we will look at the impact of actual 2012 investment returns to determine what the Fund must earn in 2013 to achieve a lower (or finite) amortization period measurement as of the January 1, 2014 actuarial valuation date.



Policemen's Fund - Development of the 2012 30-Year ARC

Present Value of Future Benefits (PVFB)

The total liability is allocated between past service liabilities and future service liabilities.

Actuarial Accrued Liability (AAL) = **\$801M**

PV of Future Normal Costs (PVFNC)

The assets in the plan are allocated first to cover the past service liability (the AAL). To the extent that assets do not cover the AAL, there will be an UAAL. This UAAL is then amortized over 30 years.

Actuarial Value of Assets (AVA)
\$626M

Unfunded AAL
\$175M

PV of City NC

PV of EE Cont

Total 30-year ARC
=\$29.8M
=41.27% of payroll

=

\$10.2M
14.10%

+

\$19.6M
27.17%

30 Year
Amortization
of the UAAL.

Amortized over
future working
lifetime of remaining
active employees

The Total Annual Required Contribution of 41.27% is the rate needed to fully fund the Unfunded Liability over a 30-year period. The Current total contribution rate (City and Members) of 32.39% is 8.88% less than the total 30-year ARC



Firemen's Fund - Development of the 2012 30-Year ARC

Present Value of Future Benefits (PVFB)

The total liability is allocated between past service liabilities and future service liabilities.

Actuarial Accrued Liability (AAL) = **\$540M**

PV of Future Normal Costs (PVFNC)

The assets in the plan are allocated first to cover the past service liability (the AAL). To the extent that assets do not cover the AAL, there will be an UAAL. This UAAL is then amortized over 30 years.

Actuarial Value of Assets (AVA)
\$431M

Unfunded AAL
\$109M

PV of City NC

PV of EE Cont

**Total 30-year ARC
=\$20.3M
=39.10% of payroll**

=

**\$6.3M
12.21%**

+

**\$14.0M
26.89%**

30 Year
Amortization
of the UAAL.

Amortized over
future working
lifetime of remaining
active employees

The Total Annual Required Contribution of 40.10% is the rate needed to fully fund the Unfunded Liability over a 30-year period. The Current total contribution rate (City and Members) of 33.78% is 5.32% less than the 30-year ARC



Amortization Period Sensitivity

Amortization periods are highly sensitive to changes in the Unfunded Actuarial Accrued Liability and to the Contribution Margin. As of January 1, 2012, the Policemen's Fund amortization period is infinite and the Firemen's Fund amortization period is 76 years. The Fund experienced asset returns in 2012 greater than the 7.75% assumption. Based on actual market value of assets as of December 31, 2012, and under the assumption that all other economic and demographic assumptions are met, we can forecast the expected January 1, 2014 amortization periods.

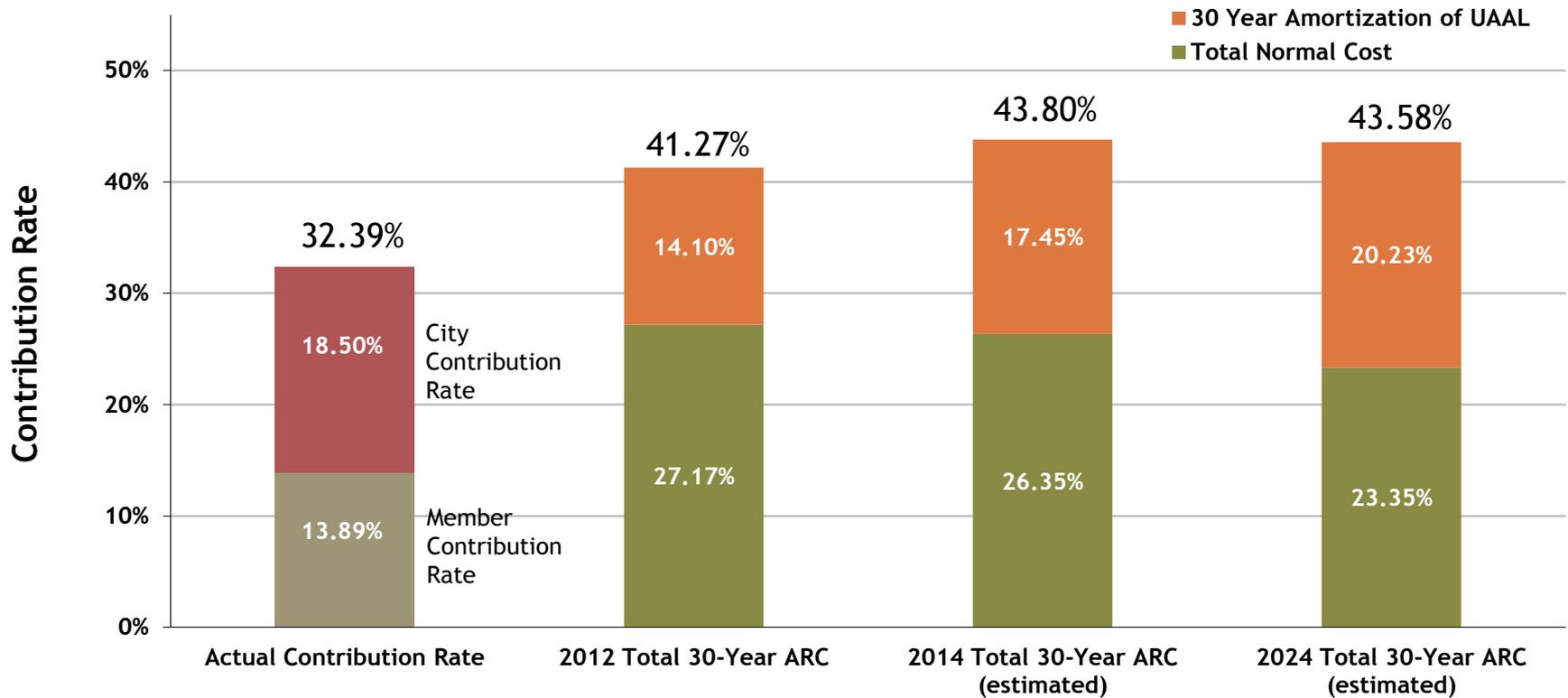
The following shows the expected amortization period as of January 1, 2014 under various assumed rates of return in 2013. All other assumptions are assumed to be exactly met. These are estimated amortization periods that reflect the long-term reductions in benefits under the Second Tier.

Policemen's Fund Expected 2014 Valuation Results			Firemen's Fund Expected 2014 Valuation Results		
If the 2013 Rate of Return is:	The 2014 UAAL will Equal:	The Amortization Period will be:	If the 2013 Rate of Return is:	The 2014 UAAL will Equal:	The Amortization Period will be:
7.75%	\$230,000,000	Infinite	7.75%	\$135,000,000	<60 Years
20%	\$154,000,000	<50 Years	12%	\$117,000,000	<50 Years
22%	\$141,000,000	<40 Years	14%	\$108,000,000	<40 Years
24%	\$129,000,000	<35 Years	16%	\$99,000,000	<35 Years
26%	\$116,000,000	<30 Years	18%	\$90,000,000	<30 Years

Given the Fund's 65% equity allocation and the strong market results in the first quarter of 2013. The possibility of a return greater than 7.75% is realistic.

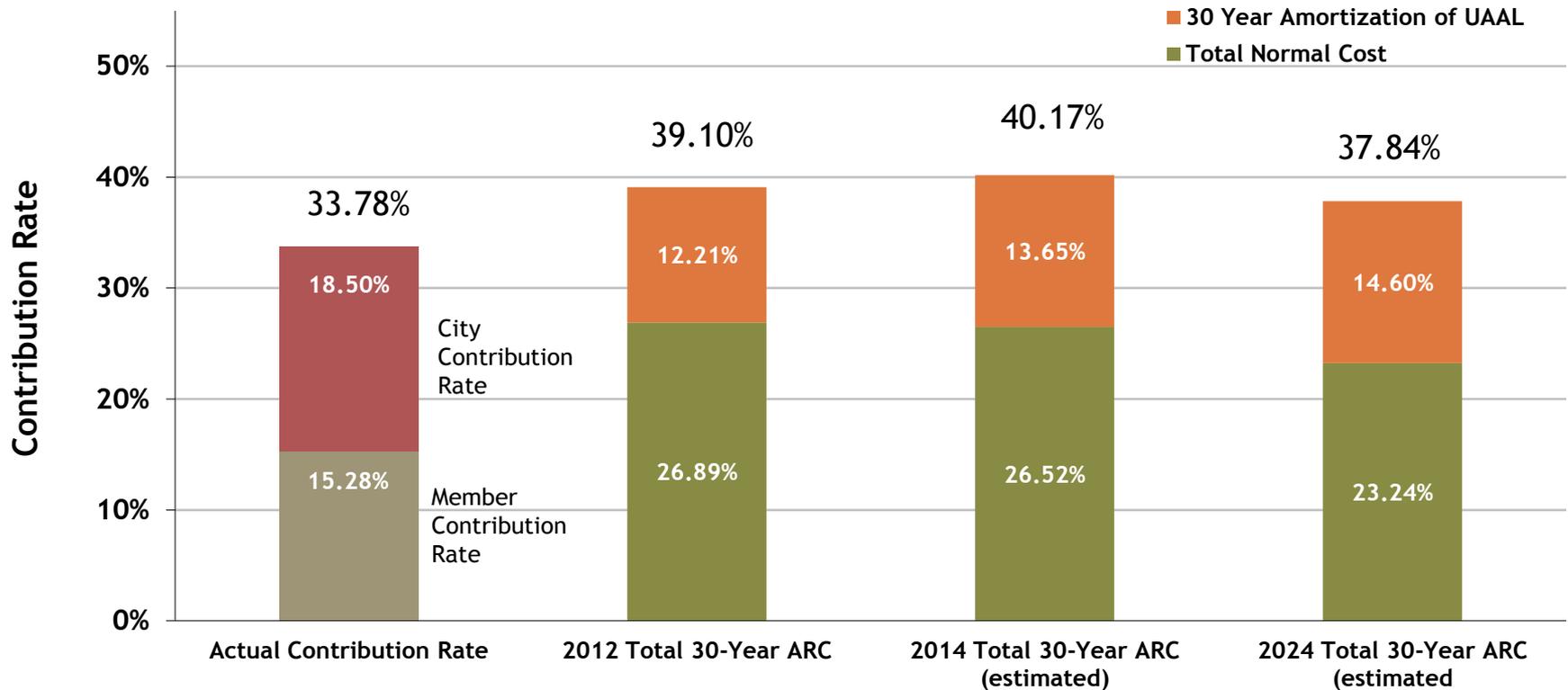
Policemen's Fund Contribution Margin

The actual total contribution (32.39%) is not enough to meet the 2012 30-year total ARC (41.27%). It is also less than the expected 2014 30-Year ARC and looking forward, the expected 2024 30-Year ARC. The expected 30-year ARC is changing as the normal cost decreases as 2nd Tier benefits are phased in over time. However, the increasing UAAL will cause the ARC to increase in the long run. This is consistent with the expectation that the UAAL will never fully be paid.



Firemen's Fund Contribution Margin

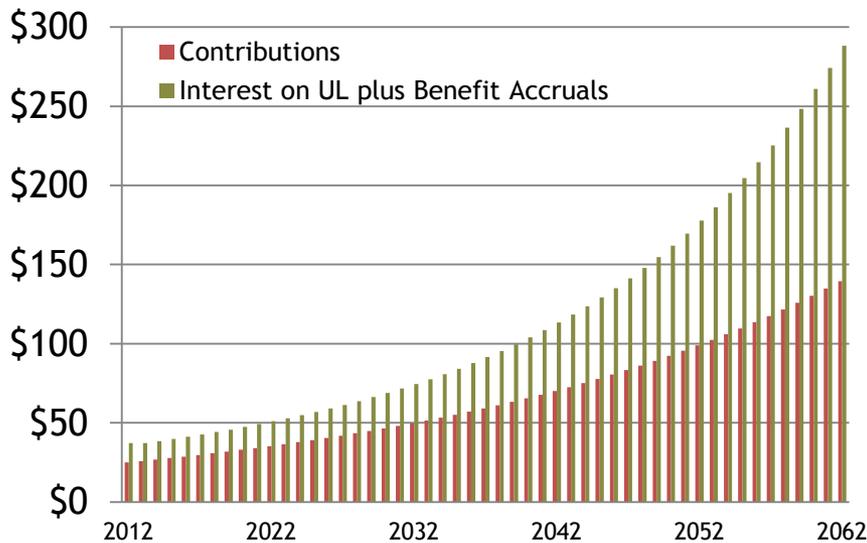
The actual total contribution (33.78%) is not enough to meet the 2012 30-year total ARC (39.10%). It is also less than the expected 2014 30-Year ARC and looking forward, the expected 2024 30-Year ARC. However, the expected 30-year ARC is expected to decrease over time as the normal cost decreases as 2nd Tier benefits are phased. While the UAAL will grow in the short term, the contribution rate is eventually expected to be larger than the 30-year ARC.



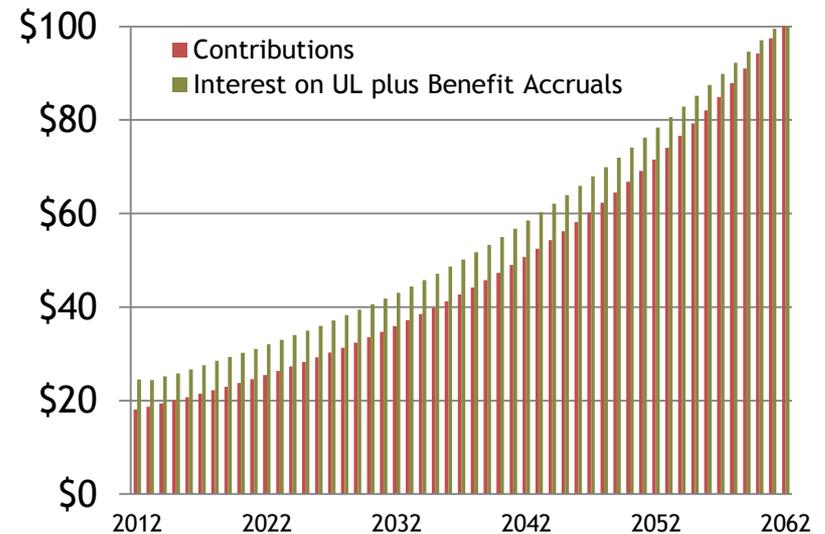
Contribution Margins Over Time

The UAAL will be reduced if the actual annual contributions to the Fund are higher than the combination of interest on the UAAL plus the cost of annual benefit accruals (the normal cost). This margin changes over time. Contributions will grow as total payroll grows (currently assumed to be 3.5%), interest on the UAAL will increase/(decrease) as the UAAL increases/(decreases), and the cost of annual benefit accruals will decrease as more members receive the lower 2nd Tier benefits. If the gap widens, as is the case expected in the Policemen's Fund, the UAAL will never decrease. If the gap closes, and ultimately reverses, as is expected in the Firemen's Fund, the UAAL will ultimately be reduced to zero. Please note the differences in the scale of the charts.

Policemen's Fund



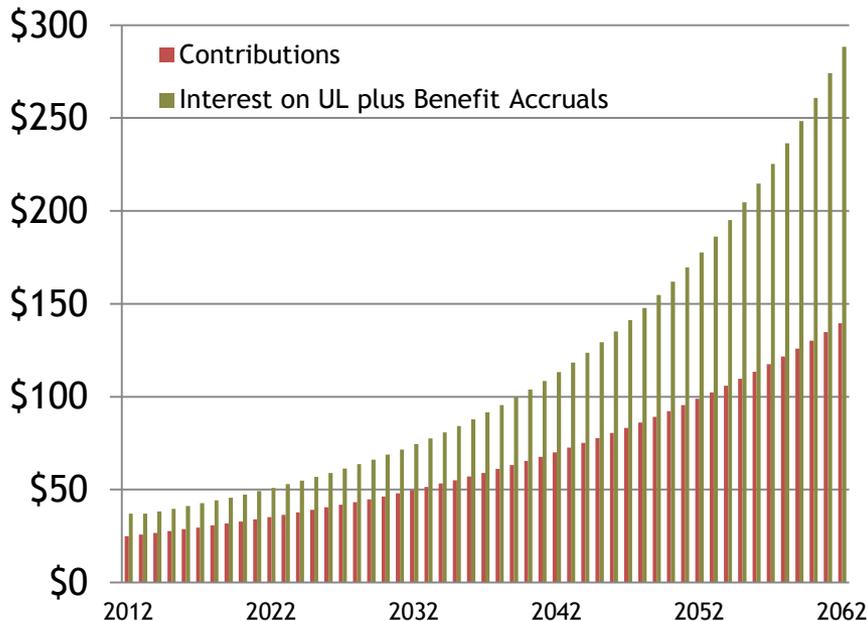
Firemen's Fund



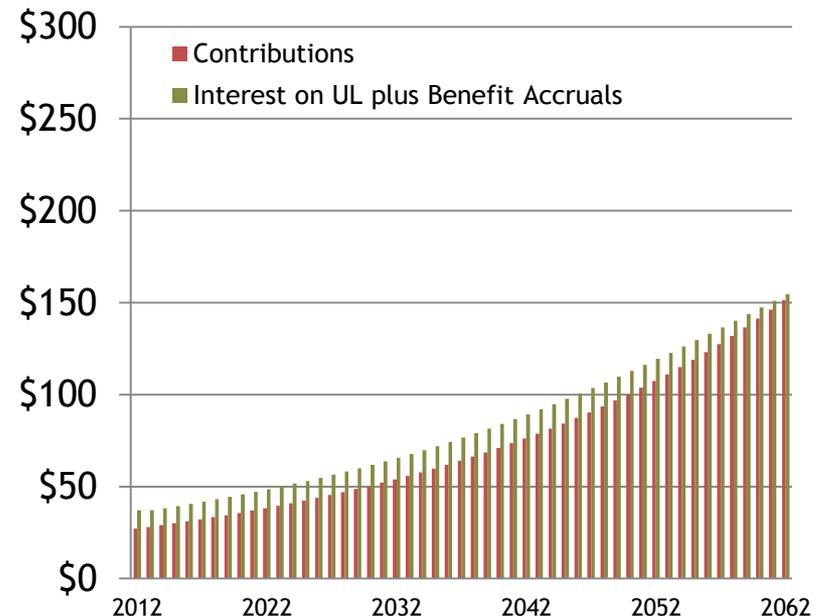
Policemen Fund - Effect of Contribution Change

If the contribution rate to a Fund is changed, it changes both the contributions into the Fund and the interest on the UAAL due to the subsequent reduction in the UAAL. The graph to the right below shows the impact of an additional 2.5% contribution to the Policemen's Fund. The resulting pattern shows that the contributions are only slightly higher, but they have a large impact on reducing the UAAL and the resulting annual interest on the UAAL. This is a pattern similar to the Firemen's Fund. Briefly stated, if the contribution rate for the Policemen's Fund was 2.5% higher, the funding status and resulting amortization period would resemble that of the Firemen's Fund.

Policemen's Fund



Policemen's Fund with Extra 2.5% Contribution



Section 2 Conclusions

The following conclusions can be drawn from Section 2:

1. The current combined rate of City and Member contributions is not sufficient to cover the cost of annual Member benefit accruals (the total normal cost) plus the interest on the Unfunded Actuarial Accrued Liability for either Fund.
2. The gap between actual contributions and those needed to reduce the UAAL is expected to increase for the Policemen's Fund.
3. The gap between actual contributions and those needed to reduce the UAAL is expected to decrease for the Firemen's Fund.
4. Positive investment returns in 2012 and to date in 2013 will very likely reduce the Firemen's January 1, 2014 amortization period below the January 1, 2012 76 year measurement.
5. The positive investment returns in 2012 and to date in 2013 will not likely be sufficient to result in a finite Policemen Fund amortization period in the January 1, 2014 valuation. An investment return in excess of about 18% in 2013 would be needed to result in a finite Policemen's Fund amortization period.
6. The long term outlook, if all assumptions are met, appear favorable for the Firemen's Fund and unfavorable for the Policemen's Fund. The two Funds currently are on separate and distinct paths.
7. An additional 2.5% contribution to the Policemen's Fund would result in a funding status and amortization period similar to the Firemen's Fund.



Section 3 - Sensitivity Analysis

The previous sections of this report reviewed how past results differed from past assumptions and looked at future expectations under only one set of assumptions (with the exception of looking at the impact of various 2013 investment returns impact on the 2014 amortization period). The assumptions that were used were those developed from experience studies performed by the Fund's actuary.

Assumptions should be reviewed and changed from time to time. It is 100% certain that not all assumptions will be met prospectively. As a result, it is appropriate to look at valuation results under some alternative sets of assumptions.

We have identified four economic and four demographic assumptions that are worth evaluating to study the impact on expected results if the assumptions are changed. We first look at isolating and changing a single assumption. We then look at what results may be expected if combinations of assumptions are changed. The combination of assumption changes may be more realistic since some assumptions move closely together. For example, if long term investment rates of return are 1% higher than the current assumption for an extended period, it may follow that salary increases may also be about 1% higher than the assumed rates.

The effect of the various assumption changes are measured by showing the impact on each Fund's funded status (Market Value of Assets / Actuarial Accrued Liability), the Contribution Margin (current contribution rate less the 30-year ARC), and the amortization period.

When the Contribution Margin is positive, the Amortization Period will be less than 30 years. If the Contribution Margin is negative, the Amortization Period will be over 30 years and possibly infinite.



Assumptions Analyzed

The following assumptions were used in the January 1, 2012 actuarial valuation report and are used as the baseline for this section's sensitivity analysis. We have reviewed the experience study that was used to generate these assumptions and believe the basis for developing these assumptions was reasonable.

Economic Assumptions	Demographic Assumptions
Investment Return of 7.75% per annum, compounded annually, net all expenses including administrative expenses	Mortality - RP-2000 (projected)
Salary increases of 10.75% in 1 st Year of Service decreasing to 4.50%/year after 20 years of Service	Retirement rates commence at age 42 for the Base Plan and 50 for the 2 nd Tier Plan and continue to age 60
Overtime is assumed to be a flat percentage of base, incentive, and longevity pay. An 8.00% load is applied for police, and a 4.00% load for fire.	Withdrawal rates start at age 20 and decline to 0% at age 50
Total payroll is assumed to grow 3.50%/year. New hires are assumed to replace terminations	100% of active members are assumed to be married

Economic Assumptions

The following shows expected results if a single isolated economic assumption is changed, and all other assumptions are precisely met in subsequent years. For example, if the Fund assumed, and achieved, an 8.75% investment return, without any other changes, the Policemen's Fund UAAL would be amortized in 24 years and the Firemen's Fund UAAL would be fully amortized in 16 years.

		Assumptions Reflecting Better Economic Expectations				Baseline Assumptions and Results	Assumptions Reflecting Worse Economic Expectations			
		Investment Return	Salary Scale	Total Payroll Growth	Overtime		Investment Return	Salary Scale	Total Payroll Growth	Overtime
New Assumption		8.75%	+1.00% (all rates)	4.50%	+1.00%			6.75%	-1.00% (all rates)	2.50%
P o l i c e	2012 Funding Ratio	81%	71%	72%	72%	72%	63%	73%	72%	72%
	Contribution Margin (Actual - ARC)	2.49%	(12.76%)	(7.92%)	(8.88%)	(8.88%)	(23.17%)	(6.45%)	(11.21%)	(8.88%)
	Amortization Period	24 Years	Infinite	118 Years	Infinite	Infinite	Infinite	Infinite	Infinite	Infinite
F i r e	2012 Funding Ratio	84%	74%	75%	75%	74%	66%	76%	75%	75%
	Contribution Margin (Actual - ARC)	6.58%	(8.61%)	(3.78%)	(5.32%)	(5.32%)	(18.41%)	(1.75%)	(6.45%)	(5.32%)
	Amortization Period	16 Years	Infinite	52 Years	70 Years	76 Years	Infinite	46 Years	Infinite	Infinite

Demographic Assumptions

The following shows expected results if a single isolated demographic assumption is changed, and all assumptions are precisely met in subsequent years. For example, if the Fund assumed, and experienced higher mortality rates, and all other assumptions were perfectly met, the Firemen's UAAL would be fully amortized in 69 years.

		Assumptions Reflecting More Favorable Demographic Experience				Baseline Assumptions and Results	Assumptions Reflecting Less Favorable Demographic Experience			
		Higher Mortality Rates	Earlier Retirements	Fewer Terminations	Fewer Married Actives		Lower Mortality Rates	Later Retirements	More Terminations	Same Marriage Assumption
New Assumption		RP-2000	+5% (ages < 55)	Rates ÷ 2	90%		RP-2000 (Fully Generational)	-5% (ages < 55)	Rates x 2	100%
P o l i c e	2012 Funding Ratio	74%	72%	72%	72%	72%	71%	72%	72%	72%
	Contribution Margin (Actual - ARC)	(7.98%)	(10.14%)	(10.05%)	(8.99%)	(8.88%)	(10.83%)	(8.62%)	(8.36%)	(8.88%)
	Amortization Period	Infinite	Infinite	Infinite	Infinite	Infinite	Infinite	Infinite	Infinite	Infinite
F i r e	2012 Funding Ratio	76%	75%	75%	75%	74%	74%	74%	74%	74%
	Contribution Margin (Actual - ARC)	(3.50%)	(4.41%)	(5.24%)	(4.54%)	(5.32%)	(6.33%)	(5.12%)	(4.73%)	(5.32%)
	Amortization Period	69 Years	70 Years	73 Years	70 Years	76 Years	Infinite	Infinite	Infinite	76 Years

Effect of Combined Assumption Changes

	Good Economic & Good Demographic	Good Economic & Baseline Demographic	Baseline	Poor Economic & Baseline Demographic	Poor Economic & Bad Demographic	
Economic Assumptions:						
Investment Return	8.75%	8.75%	7.75%	6.75%	6.75%	
Salary Scale	+1% (all rates)	+1% (all rates)	4.5% (ultimate)	-1% (all rates)	-1% (all rates)	
Overtime	+1.00%	+1.00%	8.00%/4.00%	-1.00%	-1.00%	
Total Payroll Growth	4.50%	4.50%	3.50%	2.50%	2.50%	
Demographic Assumptions:						
Mortality	RP-2000	RP-2000 (Projected)	RP-2000 (Projected)	RP-2000 (Projected)	RP-2000 (Fully Generational)	
Retirement	+5% (ages<55)	Base Rate Table	Base Rate Table	Base Rate Table	-5% (ages<55)	
Withdrawal	Rates x 2	Base Rate Table	Base Rate Table	Base Rate Table	Rates ÷ 2	
Marriage Assumption	90%	100%	100%	100%	100%	
Results:						
P o l i c e	2012 Funding Ratio	82%	81%	72%	64%	63%
	Contribution Margin (Actual - ARC)	4.07%	0.66%	(8.88%)	(21.99%)	(25.10%)
	Amortization Period	19 Years	27 Years	Infinite	Infinite	Infinite
F i r e	2012 Funding Ratio	85%	83%	74%	66%	66%
	Contribution Margin (Actual - ARC)	6.28%	4.03%	(5.32%)	(16.83%)	(17.56%)
	Amortization Period	15 Years	21 Years	76 Years	Infinite	Infinite



Section 3 Conclusions

The following conclusions can be drawn from from Section 3:

1. If the investment return assumption was 1% higher at 8.75%, and this assumption was met, the amortization period for both Funds would be expected to be under 30 years.
2. If the investment return assumption was 1% lower at 6.75%, and this assumption was met, the amortization period for both plans would be infinite.
3. If the total payroll growth assumption was changed to 4.5%, but all other assumptions were met, the expected increase in contributions into the Fund would reduce the Firemen's amortization period and result in a finite (but still high) amortization period for the Policemen's Fund.
4. Demographic assumption changes have lesser impact. Experience over the past four years has indicated that demographic changes have been close to expectations.
5. When looking at combinations of assumptions, the importance becomes apparent. If the assumptions are aggressive (generally associated with a high investment return assumption), the amortization period can be quite low for both Funds. If the assumptions are conservative, both Funds would have an infinite amortization period.
6. Given the sensitivity of results to various assumptions. We recommend that consideration be given to adding a brief sensitivity analysis section to future biennial valuation reports. The sensitivity analysis need only demonstrate the impact of a change in the investment return assumption (i.e. 0.5% higher or lower) on the amortization period.



Section 4 - Funding Status Forecasts

Section 3 shows the effect of what would happen if an assumption was changed, and then that assumption is met each year thereafter. This is helpful in understanding the impact current assumptions have on results, but doesn't adequately demonstrate what happens if the current assumptions are not met.

In this section we look at forecasting the Unfunded Actuarial Accrued Liability and Funding Ratio (Market Value of Assets / Actuarial Accrued Liability) under different investment return assumptions. First this is done using a deterministic approach. A deterministic approach shows what happens if the exact same investment return result occurs each year. For example we demonstrate what happens to the UAAL and Funding Ratio over time if the investment return is 6.75%, 7.75%, and 8.75%.

The second approach we take is called a stochastic modeling approach. This is sometimes referred to as a Monte Carlo simulation. This approach runs 1,000 iterations of a model selecting a unique investment return assumption for each year. This approach is more helpful in gaining information about the possible range of results if the exact investment does not occur each year. This better reflects the impact of volatility of returns.

The importance of looking at the funding ratio in addition to the UAAL is to recognize that the existence of an UAAL is not necessarily a sign of a distressed Fund. Ideally the UAAL will decrease each year. However, if the UAAL can be stopped from growing while the Fund overall continues to grow, the funding ratio will improve and the size of the UAAL will seem less significant over time.

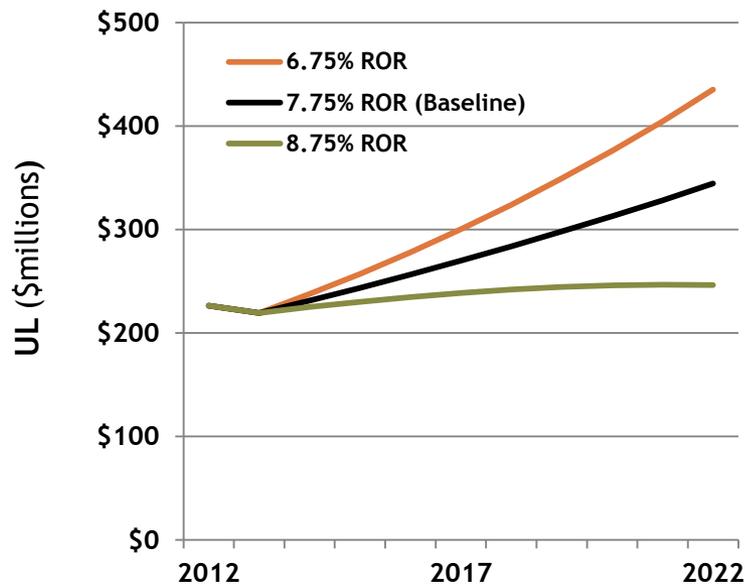
While the UAAL for each Fund appears relatively large, the funding ratio for each Fund is over 70% on a market value basis. Both Funds have sufficient assets to cover benefit payments for a very long period time. Although the benefit payments are significant, and exceed the contributions to the Fund, the large size of the assets is expected to generate significant investment returns in the future. All of the expected benefit payments, contributions, and investment returns are factored into our forecasts.



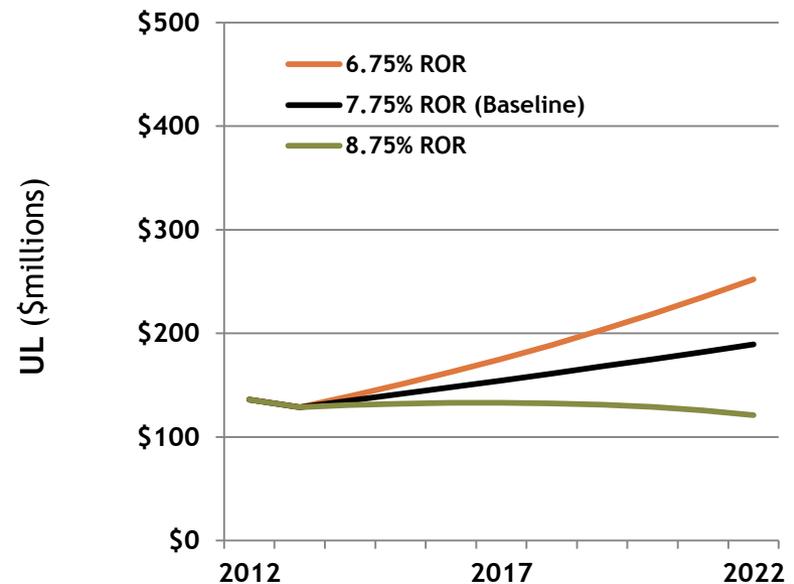
UAAL Forecast

Deterministic forecasting projects results without regard to future uncertainty. The following charts show expected UAAL results if all assumptions are precisely met with the exception that the respective Funds earn the shown market value of asset rates of return. In the case of the Policemen's Fund, the UAAL is expected to increase under any investment return under 8.75%. The Firemen's Fund will decrease if the Fund earns 8.75%, but increase gradually under a lower rate. Although the Firemen's Fund would be expected to have an increasing UAAL under the 7.75% assumption in the short term, the trend is expected to reverse as the 2nd Tier benefits are phased in and the UAAL would decrease to \$0 at the end of the 76 year amortization period.

Policemen's Fund



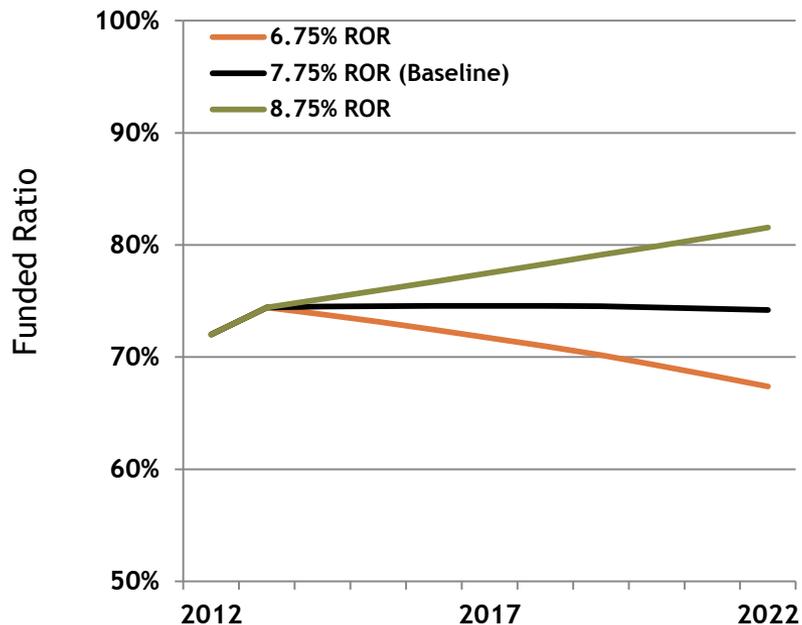
Firemen's Fund



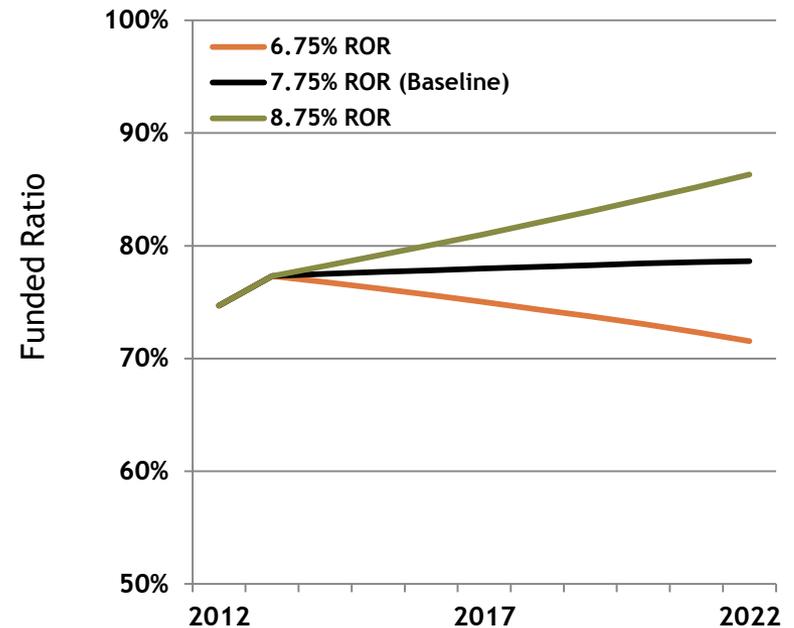
Funded Ratio Forecast

Up to this point, the study has been focused on the UAAL. While reducing the UAAL is desirable, it may also be considered reasonable to have an ongoing UAAL provided the plan is sufficiently solvent to make benefit payments for a lengthy period time. The funding ratios below for the Policemen's Fund demonstrate that under the 7.75% assumption, the UAAL dollar amount will increase. However, the rate of growth is consistent with the overall rate of growth of the Fund's assets and liabilities. As a result, the funding ratio does not significantly change over time. In theory, a Fund could have an infinite amortization period, but maintain a relatively stable funding ratio. The Policemen's Fund appears to be such an example if the 7.75% assumption is met.

Policemen's Fund



Firemen's Fund

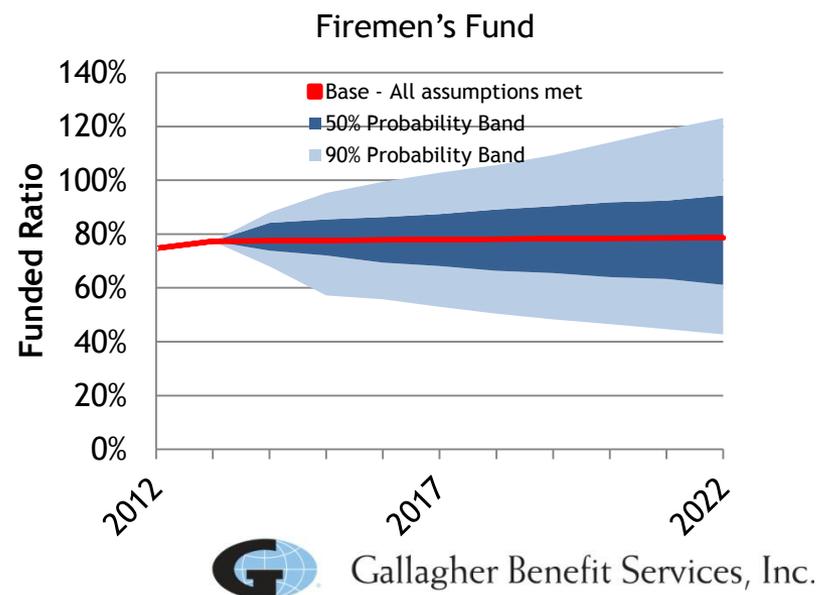
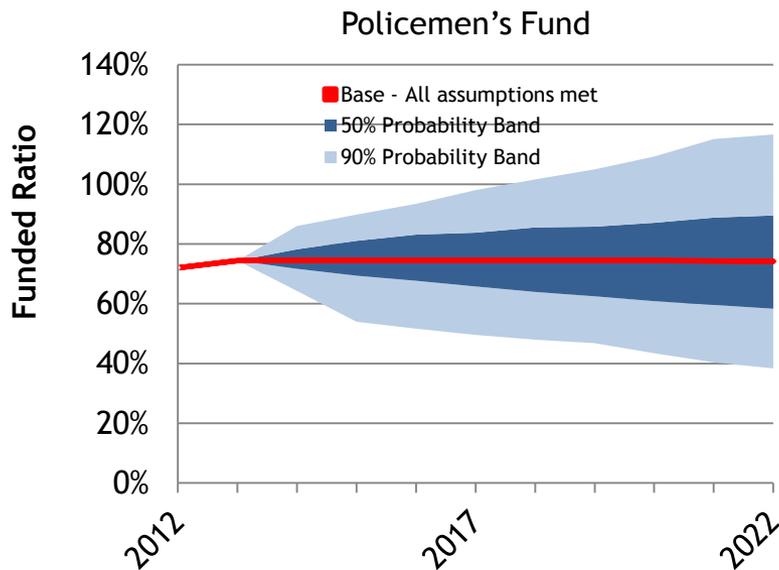


Stochastic Forecasting

While deterministic projections can serve as useful guidelines, actual investment returns are sure to differ from expected. To better show the impact of market volatility, we ran 1,000 simulations of each Fund's projected assets using historical rates of return. The actual rates of return over the past 35 years were used for this analysis. These interest rates were normalized such that the average rate matches the current 7.75% assumption. All other assumptions were assumed to remain the same.

A summary of the simulation results is below. The Base result (red line) reflects the median result. The 50% probability band indicates that using historical returns that average 7.75%, 50% of the time the 2022 funding ratio will range from about 60% to 90%. The 90% probability band indicates that 90% of the time, the results will range between 40% to 120%.

A significant note is that we only look at investment return volatility during this period. Real results would likely be muted. For example, if investment returns are consistently poor over 10 years, it is likely that salary increases would also be low. This would offset some of the poor investment experience.



Sections 4 Conclusions

The following conclusions can be drawn from Section 4:

1. If the expected investment rate of return of 7.75% is precisely met each year, the UAAL for both Funds will increase over the next ten years. It is only the Firemen's Fund that would be expected to later decrease.
2. The Policemen's Fund would need to consistently achieve a rate of return of about 8.75% to keep the UAAL from growing.
3. It is possible for the UAAL to grow while a Fund maintains a constant funding ratio. The Policemen's Fund is an example of this situation. Over the next ten years, if the 7.75% assumption is met, the UAAL would increase. However, the increase would be proportional to the total growth of the Fund and the funded ratio would not increase.
4. Elimination of the UAAL, or achievement of a 100% funding ratio, is desirable. However, if a Fund continues to exist for an indefinite period of time, as is expected for most public sector plans, it is not unreasonable to maintain an UAAL for a long period of time. It is possible for a Fund to meet all benefit obligations over a long period of time without being 100% funded.
5. Investment returns can be very volatile and scenarios of relatively extreme funding status improvement or decline can happen within a 10 year period. This is a strong argument in favor of achieving a 100% funding ratio. If the funding ratio is near 100%, economic downturns such as the one that occurred in the past four years can be weathered. If the Fund is less than 80% funded, it is very vulnerable to economic downturns.



Section 5 - Potential Action Steps

This section explores what actions may be needed to improve the prospects for long-term success. There are four variables to a defined benefit plan:

$$\text{Benefits} = \text{Contributions} + \text{Investment Earnings} - \text{Administrative Costs}$$

Whether the Fund's equation is in balance is a matter of opinion and depends on the desired funding level and period.

If the goal is to 100% fund the actuarial accrued liability over a 30 year period, the equation would not be in balance since the combined City and Member contributions do not meet the Annual Required Contribution for either Fund (i.e. the amortization period is greater than 30 years).

If the goal is to 100% fund the actuarial accrued liability over a longer, but finite period of time, the Firemen's Fund equation may be considered to be in balance. As of January 1, 2012, the expected amortization period is 76 years and it is expected that the investment gains in 2013 will reduce that amortization period by more than two years by January 1, 2014. However, the Policemen's Fund would not meet this goal.

If the goal is to be less concerned with fully funding over a specific or even a finite period, and instead be concerned with maintaining a minimum funding ratio and paying benefits as they are due, it still may be possible to consider a Fund in balance. This is the case with the Policemen's Fund.

To be clear, it is desirable, and encouraged by the Governmental Accounting Standards Board, Texas Pension Review Board, and most any other entity involved with public pensions to strive for 100% funding over a period not to exceed 30 years. Yet it is possible to have a perpetually underfunded plan that is still able to meet all current and future retiree obligations. As demonstrated in the previous section of this report, the Policemen's Fund is expected to have an increasing Unfunded Actuarial Accrued Liability while maintaining a fairly steady funding ratio.

Section 5 - Potential Action Steps (continued)

Ideally, both Funds would be in a better funded status and some consideration should be given whether adjustments to the Fund should occur. The range of possible changes or combination of changes is limitless and it would be premature to make specific recommendations until it is clear whether the City believes it is necessary to seek changes at this time.

The City did take action by making significant additional contributions within the past 6 years and Members hired since July 1, 2007 have had significant reductions in benefits. Although the Funds have had significant asset losses in the past few years, it is difficult to conclude that the Funds are in need of significant adjustments. Nevertheless, we do have some suggestions for potential action steps under two of the four above stated components of each Fund:

Benefits

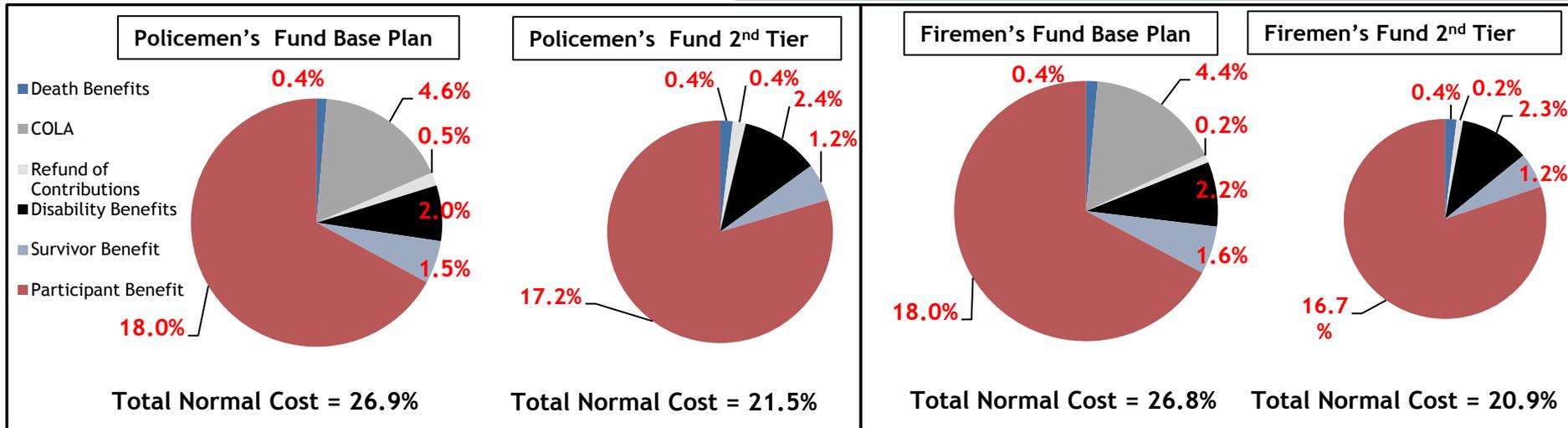
The Fund's current 3% COLA provision is unique because it is not directly tied to an inflation index and relatively high compared to most public sector plans. We provide analysis of both the impact on retirees benefits and the cost of providing this benefit in this section of the report.

Contributions

Both Funds would benefit by increased contributions. The Firemen's Fund currently has a rate of contributions that will fully fund the benefits in a finite period of time. The Policemen's Fund would require an additional 2.5% contribution in order to be in a similar situation as the Firemen's Fund. This section will include a discussion of rates suggested in the actuarial valuation report and thoughts regarding alternative contribution rates.



Active Member Benefit Analysis



The above charts show the normal cost for Policemen and Firemen Members under both the Base Plan and the 2nd Tier plan. The normal cost represents the cost of providing one year of benefit accrual. The results shown above are based on calculations performed by Gallagher given information in the actuarial valuation report. The total normal cost calculated by the Fund's actuary varies slightly. However, the proportion of the cost components of each normal cost likely would not be significantly different.

When considering potential benefit changes, this analysis can serve as a guide to what changes may be meaningful. Most notable already, is the significant difference in normal cost rates between the Base Plan and the 2nd Tier Plan. The three major plan changes in 2007 were (1) the reduction in the Participant's Benefit due to the multiplier change from 2.75% to 2.50%, (2) the change from a 100% Survivor Benefit to a 75% Survivor Benefit, and (3) the elimination of the 3% COLA.

Benefits - Analysis of 3% COLA

In addition to the significant normal cost component due to the COLA (over 4% of Base Plan payroll), there is a significant past service liability attributable to this benefit. Our estimates indicate that approximately \$177M of the Policemen's Fund liability and \$105M of the Firemen's Fund liability is attributable to the 3% COLA. This *excludes* the cost of 3% increases that have already been provided to retired Members.

The following chart demonstrates the cost impact to each Fund if instead of a 3% COLA, the Funds had either a 2%, 1%, or no COLA. These results are shown for information purposes only and do not reflect our opinion regarding whether this benefit may legally be changed.

		Funded Status of Current Plan Provisions	Funded Status if COLA is changed on a prospective basis only		
			2% COLA	1% COLA	0% COLA
P o l i c e	2012 Funding Ratio	72%	79%	85%	92%
	Contribution Margin (Actual - ARC)	(8.88%)	(2.31%)	3.28%	8.86%
	Amortization Period	Infinite	54 Years	26 Years	8 Years
F i r e	2012 Funding Ratio	74%	81%	86%	93%
	Contribution Margin (Actual - ARC)	(5.32%)	1.06%	5.88%	10.70%
	Amortization Period	76 Years	32 Years	17 Years	7 Years



Benefits - Analysis of 3% COLA

The previous page captures that the cost of providing prospective 3% COLAs is in excess of 15% of payroll for each plan. This excludes the cost of COLAs that have already been granted. This cost is based on current plan assumptions.

The cost of the COLA may have been valued differently when it was implemented back in 1987. At that time, assumptions most likely would have included a higher interest rate and shorter expected life spans. Both would have contributed to a lower cost estimate. We were unable to obtain any documentation for a cost study of the COLA when it was adopted back in 1987. However, a review of the contribution rate history seems to indicate that little, if any Member or City contribution rate increase was related to this change.

The following chart shows the Contribution Rates at various times from 1982 to the present. The source of this information was the Fund's 2006 report to the Texas State Pension Board.

Year	Contribution Rates		
	Police	Fire	City
1980	6.52%	8.13%	18.0%
1982	8.62%	12.34%	18.0%
1987	10.11%	12.99%	18.0%
2007	11.89%	15.28%	18.5%
2009	13.89%	15.28%	18.5%

Without historical data regarding how the COLA was initially determined, it is difficult to provide a precise analysis. However, it is likely reasonable to say that the costs were based on assumptions that may have been appropriate at that time, but did not bear out in the following decades. It is clear that whatever adjustment to contribution rates was applied, it did not ultimately cover the subsequent costs.

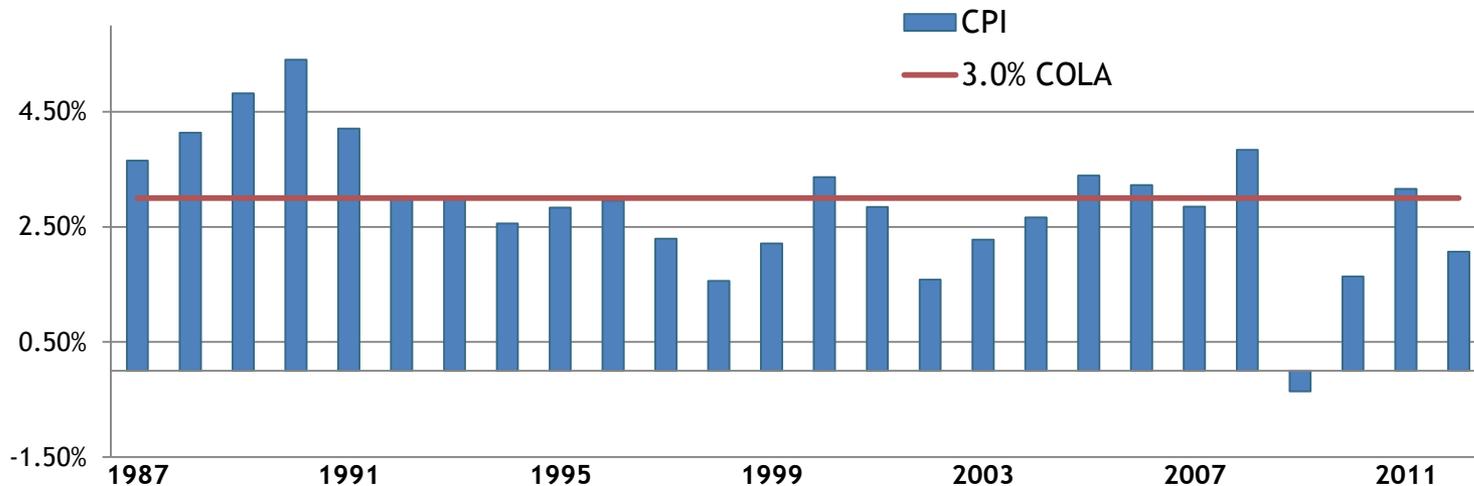


Benefits - Analysis of 3% COLA

The goal of most COLAs are to protect purchasing power for a retiree. The next two pages discuss how the current COLA has exceeded that goal.

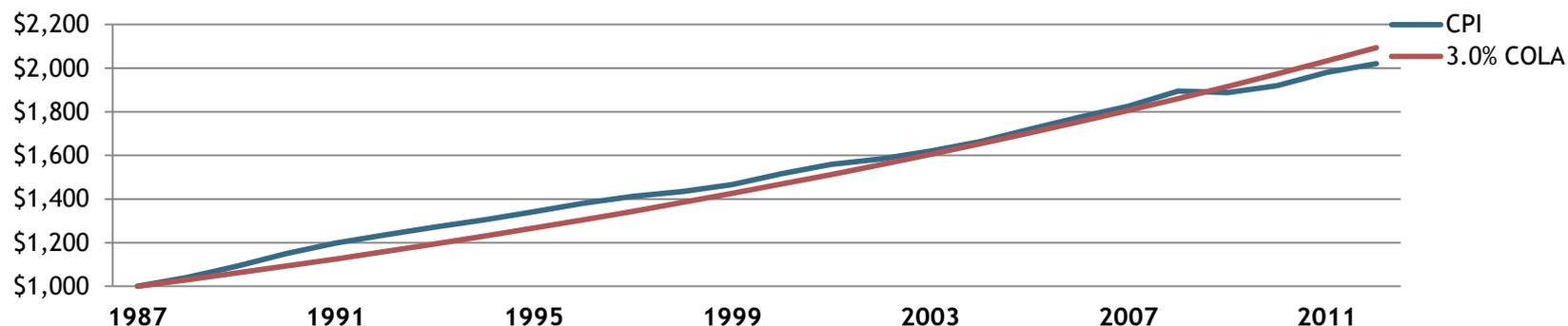
Cost of Living Adjustments (COLAs) became effective in each Fund for members retiring after March 23, 1980. The increase amount is 3%/year and commences at age 60 or 2 years from retirement if earlier for Policemen (5 years for Firemen). COLAs were removed from each Fund for employees hired on or after July 1, 2007.

The chart below compares the 3.0% Cost of Living Adjustment (COLA) vs. average Consumer Price Index (CPI) increase since the COLA was implemented. CPI shown below is based on the All Urban Consumers CPI table published monthly by the U.S. Bureau of Labor Statistics.

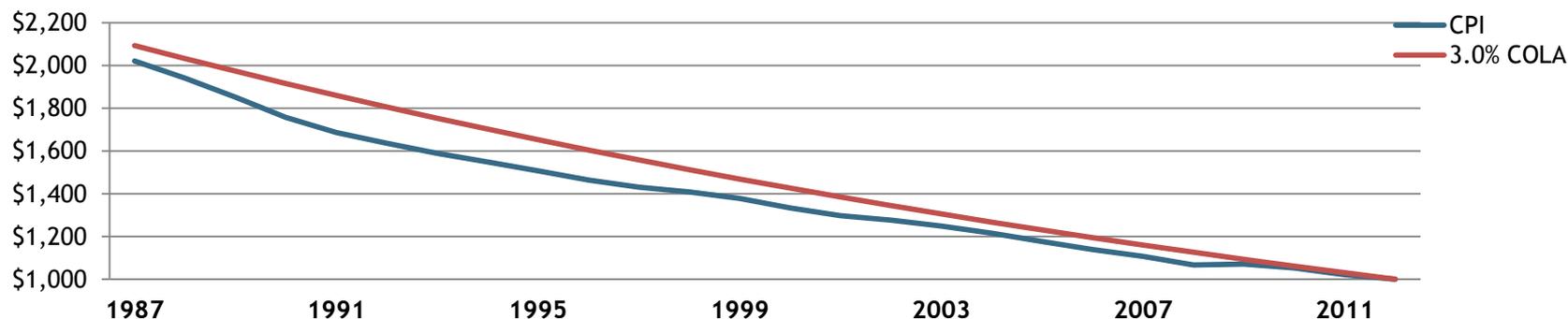


Benefits - Analysis of 3% COLA

The first chart (below) tracks the monthly benefit payment made to a retiree receiving \$1,000/mo. in 1987 indexed with CPI, compared to a retiree with that same \$1,000/mo. benefit receiving a guaranteed 3.0% COLA. By 2012, the monthly benefit of the retiree indexed to CPI is approximately \$2,021, whereas the monthly benefit of the retiree receiving a 3.0% annual COLA is \$2,094.



The second chart compares the 2012 monthly benefits described above for retirees at varying years of commencement (1987 through 2012). As illustrated below, a retiree commencing in any year on or after 1987 would have a higher benefit in 2012 under a 3.0% COLA than a CPI-indexed benefit.



Benefits - Analysis of 3% COLA Conclusions

Conclusions from the 3% COLA analysis:

1. The 3% COLA is a very valuable and thus a very costly benefit.
2. Without historical data regarding how the COLA was initially determined, it is difficult to provide a precise analysis. However, it is likely reasonable to say that the costs were based on assumptions that may have been appropriate at that time, but did not bear out in the following decades. It is clear that whatever adjustment to contribution rates was applied, it did not ultimately cover the subsequent costs.
3. The current cost to provide the 3% COLA on a prospective basis only is over 15% of payroll. This rate is based on current assumptions and a 30-year amortization period.
4. The 3% COLA was implemented following a period of relatively high inflation. The instances of inflation rates over 3% have been rare since it was implemented.
5. Those benefitting from the 3% COLA have achieved an increase in their purchasing power since they started receiving benefits. In some instances, retiree's current benefits are as much as 10% more valuable than if it had been indexed exclusively at the CPI rate.
6. The CPI may not be an accurate reflection of the retirees' spending habits. For example, retirees might spend a greater portion of their income on healthcare than is reflected in the CPI. Also, as the price of a goods increases a person might shift their spending toward a substitute good.



Contributions - Impact of Increased Rate

Another option for improving the status of a Fund is to increase contributions being made by Members and/or the City. The January 1, 2012 valuation reports show the contribution increases necessary to amortize the UAAL over a 40-year period (based on Section 14A of Article 6243b).

The valuations also provide the contribution margin necessary to fund the Annual Required Contribution (ARC), which would amortize the UAAL over a 30-year period. The following table summarizes these contribution increases:

Policemen's Fund		Firemen's Fund	
If the Total Contribution is:	The Amortization Period will be:	If the Total Contribution is:	The Amortization Period will be:
32.39% (baseline)	Infinite	33.78% (baseline)	76 Years
+4.63%	40 Years	+2.77%	40 Years
+8.88%	30 Years	+5.32%	30 Years

As noted earlier in this study, we are already aware of investment gains in 2012 and a good likelihood of investment gains in 2013. This would reduce the amount of contributions stated above in order to meet the desired funding period.

An alternative to increasing rates sufficient to reach a 40 or 30 year period is to consider a rate change only when necessary to achieve a finite amortization period. In this instance, a rate change would only be needed for the Policemen's Plan. A rate increase of about 2.5% for the Policemen's Fund would put it in a comparable status to the Firemen's Fund. When considering a Member rate change, it is important to keep in mind the value of benefits earned under the 2nd Tier plan. It may not be viewed as fair for a rate change to apply to 2nd Tier members given the difference in benefit value form Base Plan members.

Final Conclusions

The following are final conclusions that can be drawn from this study:

1. The extensive asset losses experienced by both Funds over the past four years are the only significant cause of the worsening of the funded status. If the asset returns had met the assumption, the funded status of each Fund would have improved at a rate better than expected. Had all assumptions been met, and the City only funded the 30-year Annual Required Contribution, the Unfunded Actuarial Accrued Liability would have been reduced over the four year period ending 1/1/12. The City's contribution significantly exceeded the 30-year Annual Required Contribution.
2. The current combined rate of City and Member contributions is not sufficient to cover the cost of annual Member benefit accruals (the total normal cost) plus the interest on the Unfunded Actuarial Accrued Liability for either Fund. However positive investment returns in 2012, and a good chance that the assumed return in 2013 will be met will result in an expected amortization period of less than 76 years in 2014 for the Firemen's Fund while the Policemen's Fund is expected to continue to have an infinite amortization period. The long term outlook, if all assumptions are met, appear favorable for the Firemen's Fund and unfavorable for the Policemen's Fund. The two Funds currently are on separate and distinct paths.
3. When looking at various combinations of alternative assumptions, the importance of assumptions becomes apparent. If the assumptions are aggressive (generally associated with a high investment return assumption), the amortization period can be quite low for both Funds. If the assumptions are conservative, both Funds would have an infinite amortization period. We do not advocate any assumption changes. The purpose of the analysis is to demonstrate both the potential positive and negative outcomes that come with slightly different future expectations.

Final Conclusions (continued)

4. It is possible for the UAAL to grow while a Fund maintains a constant funding ratio. The Policemen's Fund is an example of this situation. Over the next ten years, if the 7.75% assumption is met, the UAAL would increase. However, the increase would be proportional to the total growth of the Fund and the funded ratio would not decrease.
5. Investment returns can be very volatile and scenarios of relatively extreme funding status improvement or decline can happen within a 10 year period. This is a strong argument in favor of achieving a 100% funding ratio. If the funding ratio is near 100%, economic downturns such as the one that occurred in the past four years can be weathered. If the Fund is less than 80% funded, it is very vulnerable to economic downturns.
6. The 3% COLA is a very valuable and thus a very costly benefit. Without historical data regarding how the COLA was initially determined, it is difficult to provide a precise analysis. However, it is likely reasonable to say that the costs were based on assumptions that may have been appropriate at that time, but did not bear out in the following decades. It is clear that whatever adjustment to contribution rates was applied, it did not ultimately cover the subsequent cost. What was likely intended to be a modest benefit, provided at a small cost, has turned out to be a very generous benefit at a very high cost. The COLA has already been removed from the 2nd Tier benefit. If any benefit changes are considered to protect the long term funded status of the Fund, revisiting the format for the COLA may be desirable.
7. Additional contributions would definitely improve the long term funded status of the Fund. However, it may be reasonable to only consider additional contributions necessary to achieve a finite amortization period.