City of Chattanooga

Fire and Police Pension Fund Task Force Meeting

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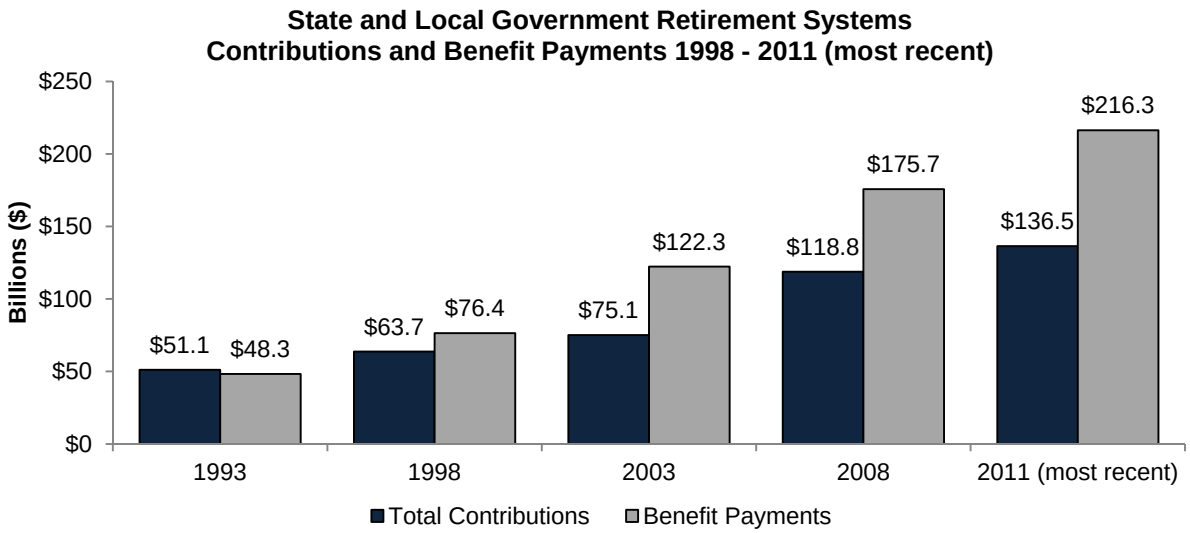
Outline

- National Retiree Benefit Funding Pressures
- Pension Basics
- Chattanooga's Challenge
- Pension Bond Overview
- Lexington, KY Case Study
- Next Steps

National Retiree Benefit Funding Pressures

Retiree Benefit Funding Pressures

- The Pew Center on the States reported that state retirement systems nationally faced a **$1.38 trillion** funding gap between benefits promised and their plan assets ($757 billion for pension and $627 billion for OPEB) as of FY2010. Those factors contributing to the rapid decline include:
  - Retirement of the baby boomer generation combined with increasing life expectancy is requiring more years of benefit payments to more retirees. From 1970 to 2011, life expectancy at age 65 increased by four years (up to 84.2)
  - Benefit payments by state and local retirement systems increased by 348% from 1993 to 2011, while combined employer and employee contributions to replenish the systems increased only by 167%
  - Unfunded benefit improvements given retroactively or made when pension funding levels appeared high in 1998-2000 resulted in millions of dollars in costs and exacerbated structural imbalances
  - During the same period, many retirement systems increased plan discount rate assumptions, effectively reducing liabilities in the short-term but increasing the long-term risk. Asset deterioration during and immediately following the Great Recession in 2007/2008 aggravated retirement system funding shortfalls



Source: "The Widening Gap Update," The Pew Center on the States (June 28, 2012); U.S. Centers for Disease Control, National Vital Statistics Reports (October 10, 2012); U.S. Census Bureau, State & Local Public Employee Retirement Systems, Annual Survey (1993 – 2011)

Unfunded Plans: Across the Country

Actuarial Funding Status of 25 plans in the Public Fund Survey with the Largest Unfunded Liabilities

Plan Name	Unfunded Liability ($ billions)	Funded Level (%)
California Teachers	$64.5	69.1
California PERF	$57.2	82.6
Illinois Teachers	$52.1	42.1
Ohio Teachers	$46.8	56.0
Pennsylvania School Employees	$26.5	69.1
Texas Teachers	$26.1	81.9
Virginia Retirement System	$22.6	69.9
New York City ERS	$22.5	64.2
Illinois SERS	$20.2	35.5
Florida RS	$20.2	86.4
Illinois Universities	$19.2	42.1
New Jersey Teachers	$19.1	62.8
Ohio PERS	$19.1	77.4
New York City Teachers	$18.4	62.9
Pennsylvania State ERS	$17.8	58.8
Michigan Public Schools	$17.6	71.1
Mississippi PERS	$14.5	58.0
Massachusetts Teachers	$14.3	60.7
New Jersey PERS	$14.0	67.3
NY State & Local ERS	$13.7	90.2
South Carolina RS	$12.4	67.4
Colorado School	$12.4	62.1
Kentucky Teachers	$12.3	54.5
Maryland Teachers	$11.7	65.8
Indiana Teachers	$11.1	42.7
Subtotal (25 plans)	**$586.3**	**70.8**
Total, Public Fund Survey	**$932.5**	**74.1**

Unfunded Liabilities
$932.5 billion

Actuarial Funding Ratio
74.1%

Source: Public Fund Survey, Findings for FY2011, November 2012 (Accessed September 3, 2013)

National Pension Reform

- According to data published by the National Conference of State Legislatures, almost every state in the US – including the State of Tennessee – has adopted some level of retirement benefit reform since the onset of the Great Recession. Among the widespread state reforms, many of which also applied to participating local governments, the most common cost containment actions were to:
  - Increase employee contributions
  - Raise normal retirement eligibility criteria (age and years of service)
  - Reduce benefit multipliers and the time period for calculating average final compensation
  - Increase vesting periods
  - Lower or eliminate post-retirement cost-of-living adjustments
- In **Maryland**, for example, the General Assembly reformed the defined benefit plan available for state workers hired after 7/1/2011. For State Troopers the following revisions to the defined benefit plan were enacted:
  - Increased the service retirement age from 50 or 22 YOS to 50 or 25 YOS
  - Increased the period for calculating final average salary from 3 to 5 years
  - Capped the post-retirement COLA at CPI up to a maximum of 2.5% when the fund achieves its rate of return is achieved and 1.0% when not achieved
  - Reduced the interest earned from 6% to 4% for employees in the DROP

Source: Various publications authored by the National Conference of State Legislatures, http://www.ncsl.org/issues-research.aspx?tabs=951,69,140#140 (Accessed 8/30/13)

National Pension Reform

- Other states – such as Georgia, Kansas, Kentucky, Michigan, Utah, and Virginia – made significant structural changes to their benefits that require broad groups of state employees to participate in hybrid or defined contribution plans
  - Pension reform in **Kentucky** (Chapter 120 of 2013) will require state employees hired after 1/1/2014, including members of the State Police Retirement System (SPRS) and other hazardous duty employees, to participate in a cash balance plan. Under the new SPRS plan, the state will contribute 7.5% of pay to a members individually tracked account and will credit the account with annual interest of 4.0% plus 75% of the 5-year average investment return above 4.0%
    - The new law also requires the General Assembly to pay 100% of the actuarially required contribution and suspends post-retirement COLA's until the System achieves a 100% funding ratio or when the General Assembly pre-funds a COLA through a specific budget line item
  - In **Michigan** State Police hired after 7/1/2012 are no longer eligible for a traditional defined-benefit pension. Instead, new hires will have a hybrid retirement plan that combines elements of a less generous defined-benefit pension with a 401(k) defined contribution account
  - **Utah** also enacted significant retirement benefit reform in 2011 for state workers and teachers hired after 7/1/2011. Under the reform, new hires (including Public Safety Officers and Firefighters) are required to make an irrevocable selection between a hybrid DB-DC plan or a defined contribution plan (SB 308 of 2011)
    - As part of the reform legislation, the state included statutory language that would allow for future adjustments to the DB component accrued or applied for future years of service

TCRS Optional Local Reforms

- Tennessee adopted substantial reforms in 2012 for political subdivisions participating in the Tennessee Consolidated Retirement System (TCRS). Under the new law (Chapter 939 of 2012), local governments were allowed to provide employees hired after 7/1/2012 with three alternative plan options (including the option to keep their current plan). Today, the four options available to political subdivisions include:

  - **Option 1: Current defined benefit plan**
    - Option to require employee contribution of 0.0% (current), 2.5%, or 5.0% for employees hired after 7/1/2012

  - **Options 2: Modified defined benefit with a reduced multiplier and increased retirement age**
    - Reduced annual service accrual multiplier from 1.5% to 1.4%
    - Increased retirement age to 65 or Rule of 90, up from age 60 with 5 YOS or 30 years of service at any age
    - Maximum benefit of $80,000 adjusted for CPI
    - Option to elect no COLA or an annual COLA capped at 3.0% (tied to CPI)
    - Option to require employee contribution of 0.0% (current), 2.5%, or 5.0% for employees hired after 7/1/2012

  - **Option 3: Hybrid DB-DC option with a less generous DB benefit and a 401(k)**
    - Annual service accrual multiplier of 1.0% (all other provisions under the “modified defined benefit” apply to the hybrid DB component)
    - Maximum employer contribution of 7.0% to the DC component
    - State recommends 5.0% combined employer/employee contribution to the DC plan

  - **Option 4: Defined contribution option**
    - Employers free to design any benefit and contribution level available under the third-party administrator’s record keeping system
    - Maximum employer/employee contributions subject to IRS limits
    - State made its defined contribution plan available to local governments

- Under all options, local government employers may (for new hires only) freeze, suspend or modify benefits, employee contributions, plan terms and design prospectively for employees hired after the 7/1/2012. Accrued benefits cannot be altered

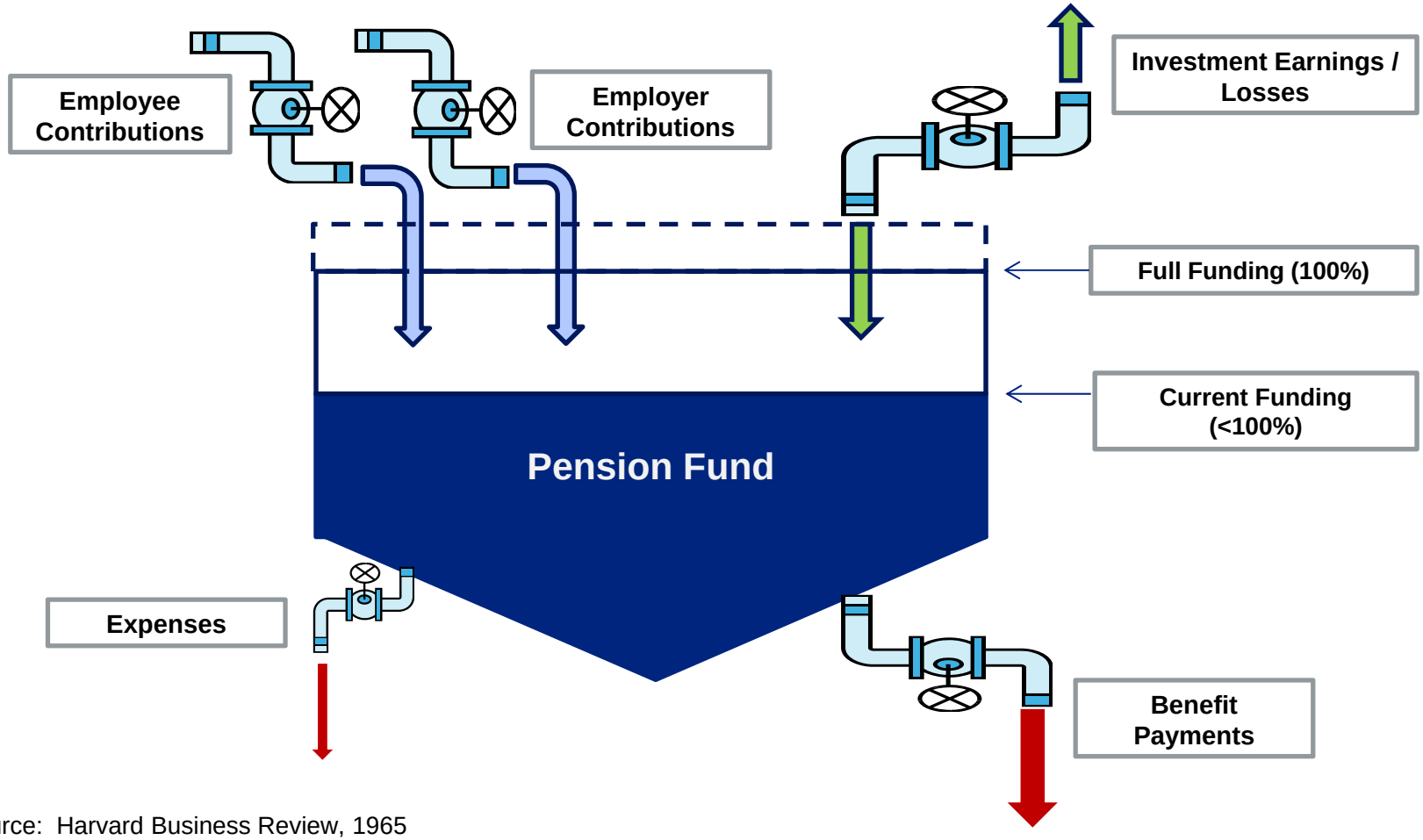
TCRS State Employee Reforms

- In 2013 the General Assembly took additional actions to modify the retirement benefit available to state employees and K-12 teaches hired after 7/1/2014 (Chapter 259 of 2013). Under the new law, all state employees, including public safety officers, hired after 7/1/2014 will be required to participate in a hybrid DB-DC plan. Highlights of the new hybrid DB-DC plan include:
  - 1.0% multiplier for all state employees. Public Safety Officers receive a bridge benefit of .75% until attainment of Social Security Normal Retirement Age (state employees participate in Social Security)
  - Increased retirement age to 65 or when age plus years of service equal 90 (rule of 90). Public Safety Officers are still eligible to retire at age 55 with 25 YOS without a reduction (no change)
  - Employee contribution of 5% toward the DB component (current employees do not contribute toward their benefit). The state established a target employer contribution toward the DB plan of 4%
  - The state contributes 5% of pay to the employees 401(k). Employees are automatically enrolled in the DC plan with a 2% employee contribution, but may opt out of making a contribution altogether
  - The plan includes mechanisms to control the unfunded liabilities by allowing the state to modify or reduce benefits on a prospective basis, including changes to the COLA, shift the employer contribution from the DC to the DB plan when the employer contribution to the DB exceeds 4%, increase employee contributions, or reduce future service accruals

Pension Basics

Pension Fund – Inflows and Outflows

- The diagram below reflects the hypothetical inflow and outflow of pension fund assets that determine the plan funded level



Source: Harvard Business Review, 1965

Key Terms Defined

- **Present Value of Benefits (PVB)** - The value of all benefits from the past, the present, and the future that are expected to be owed to employees
- **Actuarial Accrued Liability (AAL)** - The present value of benefits that have accrued during prior periods
- **Unfunded Actuarial Accrued Liability (UAAL)** - The excess of the Actuarial Accrued Liability over the actuarial value of assets that is pledged to make benefit payments
- **Normal Cost (NC)** - The present value of future benefits that employees accrue over the course of a year for their service. In Chattanooga a portion of the Normal Cost is covered by member contributions
- **Annually Required Contribution (ARC)** - The Normal Cost plus an amortized payment of the Unfunded Actuarial Accrued Liability for a particular year

1. Present Value of Benefits		
a. Active members	$202,459,207	
b. Retired and vested terminated members	$261,821,219	
c. Total	$464,280,426	*(1a + 1b)*
2. Present Value of Future Contributions	$56,001,612	
3. Actuarial Accrued Liabilities		
a. Retired members	$261,821,219	
b. Active members	$146,457,595	
c. Total	$408,278,814	*(3a + 3b)*
4. Actuarial Value of Assets	$258,596,818	
5. Unfunded Actuarial Accrued Liability	$149,681,996	*(3c – 4)*
6. Covered Payroll	$37,215,933	
7. Normal Cost		
a. Member	8.54%	$3,187,931
b. City	9.48%	$3,529,720
c. Total	18.02%	$6,708,651
8. Level % of Payroll Amortization of UAAL	25.06%	$9,327,836
9. Employer Contribution *(7b + 8)**	35.86%	$13,346,490

** Includes adjustment for timing*

Source: City of Chattanooga Fire and Police Pension Fund, Actuarial Valuation as of January 1, 2013, The Segal Group

Current Benefit Structure

- The Chattanooga City Code (Article III, Division 18, Sections 2-400 – 2-429) sets out the specific parameters regarding the Chattanooga Fire and Police Pension Fund (CFPPF) and the benefits available to members
- The CFPPF is funded through a combination of City and member contributions and investment earnings
- **Police and fire fighters are NOT in Social Security**

	City of Chattanooga
Plan Name	Fire and Police Pension Fund
Employee Contribution	Pre-1/1/2009 hires: Optional 8% or 9% contribution* Post-1/1/2009 hires: 8% **Election impacts DROP account interest rate (see below)*
Normal Retirement Age	Any age with 25 years of service
Vesting	10 years
Participate in Social Security	No
Basis for Final Average Compensation (FAC)	Highest 3 years of base salary, excludes overtime
Benefit Formula	2.75% of FAC x YOS up to 25 years + 1.25% of FAC x YOS from 25 to 30 years, up to 75% maximum
Post-Retirement COLA	3.0% received on each January 1
Deferred Retirement Option	Available to employees with 25 YOS: Contribution of 9%: 7% interest Contribution of 8%: Valuation rate less 3% (7% max) Post-1/1/2009 hires: No interest

Source: City of Chattanooga Fire and Police Pension Fund, Actuarial Valuation as of January 1, 2013, The Segal Group

Actuarial Assumptions

- Actuarial assumptions are key determinants of plan funding levels and contribution requirements

Actuarial Cost Method

- Entry Age Normal Cost Method

Amortization Method

- Level percent of payroll

Amortization Period

- 30-year closed (26 years remaining as of January 1, 2013)

Investment Rate of Return

- 7.75%

Payroll growth

- 3.25% (rages from 3.25% - 7.5% for Firefighters and from 3.25% - 7.0% for Police Officers depending on YOS)

Cost-of-Living Adjustments

- 3%

Asset Valuation Method

- Market value of assets less unrecognized returns in each of the last ten years. Unrecognized return is equal to the difference between the actual market return and the expected return on the actuarial value. Effective 2008, unrecognized returns are recognized over ten years, while unrecognized return for plan years prior to 2008 will continue to be recognized over a five-year period. A 25% corridor around the market value of assets is in place for the 2013 plan year, (reduced to 20% for 2014 and future plan years)

Source: City of Chattanooga Fire and Police Pension Fund, Actuarial Valuation as of January 1, 2013, The Segal Group

Chattanooga’s Challenge

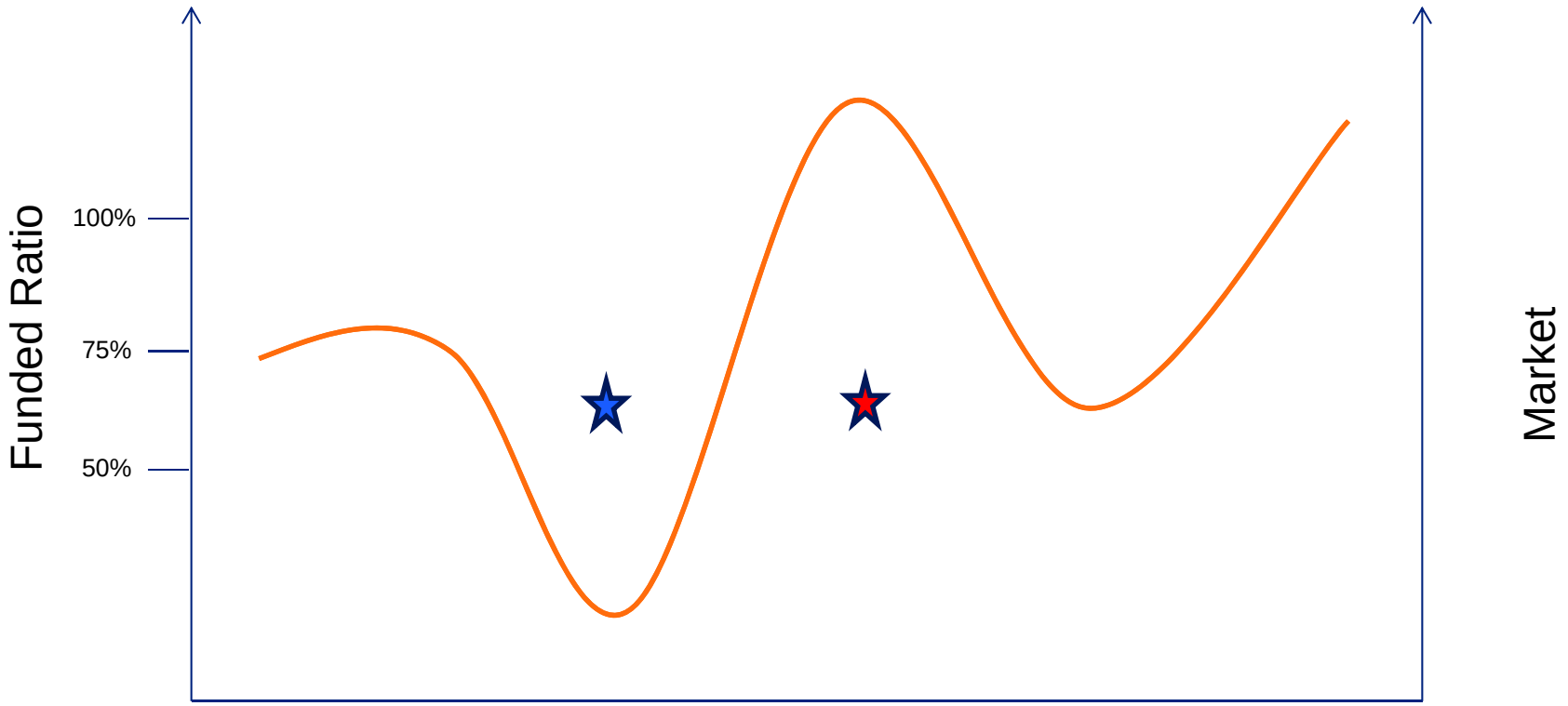
Summary of Pension Situation

- Chattanooga is **not** Detroit, but based on our initial review, we have concerns with the CFPPF's current funding status. Given the size of the unfunded liabilities compared to available resources, we think a comprehensive solution is required to ensure the long-term health of the fund to pay benefits, the ability to recruit and retain a talented workforce, to be fair to taxpayers, and to maintain the City's fiscal health and its services
  - Per the FY13 valuation report, the CFPPF is **63.3%** funded on an actuarial basis and **51.8%** funded on a market basis
  - The CFPPF's unfunded liabilities are currently **$149.7 million**, an amount that is more than **71%** of the City's FY13 budget
- Credit rating agencies are now placing more emphasis on the ability of local governments to manage their overall liabilities, with a particular focus on unfunded pension obligations
  - A high credit rating grade ensures continued access to the bond markets at lower rates

What Should the Funding Level Be?

- "100% funded", "Overfunded"
  - Actuarial estimates of a measure of assets versus a measure of liabilities with a quotient of 100% or higher
  - Point in time measurements that largely ignore market and business cycles
  - May lead to assumption that benefits increases can be provided or demanded
- "Underfunded"
  - Actuarial estimates of a measure of assets versus a measure of liabilities with a quotient of less than 100%
  - Point in time measurements that largely ignore market and business cycles
  - May lead to assumption that the plan is not healthy
- To properly understand a plan's "health," one needs to look at the plan's funding level in context
  - Not only does this include looking at when the valuation was completed, but also understanding the actuarial assumptions

Which Plan is Healthier?



Assume both plans have same investments in the market.
For illustrative purposes only

What's a Healthy Funding Level?

- Some publications and reports have cited **80%** as a sufficiently healthy ratio, a "mythical" funding standard that contradicts the advice of most actuaries and pension experts
- While an 80% funding ratio may be manageable at the bottom of a market cycle, being 80% funded at the peak of a cycle puts a system at high risk should the market move downward
- The Pension Protection Act of 2006 (PPA) characterizes private sector pension plans that fall at or below a funding ratio of 80% as being "at-risk." These "at-risk" plans are subject to a number of restrictions including:
  - Limitations on benefit improvements
  - Prohibitions on lump sum payments
  - Restrictions on uses of funding balances

"The funded ratio is most meaningful when viewed together with other relevant information. Other factors that might be considered in assessing the fiscal soundness of a pension plan include:

- Size of the pension obligation relative to the financial size (as measured by revenue, assets, or payroll) of the plan sponsor.
- Financial health (as measured by level of debt, cash flow, profit or budget surplus) of the plan sponsor.
- Funding or contribution policy and whether contributions actually are made according to the plan's policy.
- Investment strategy, including the level of investment volatility risk and the possible effect on contribution levels.

Each of these factors should be examined over several years and in light of the economic environment."

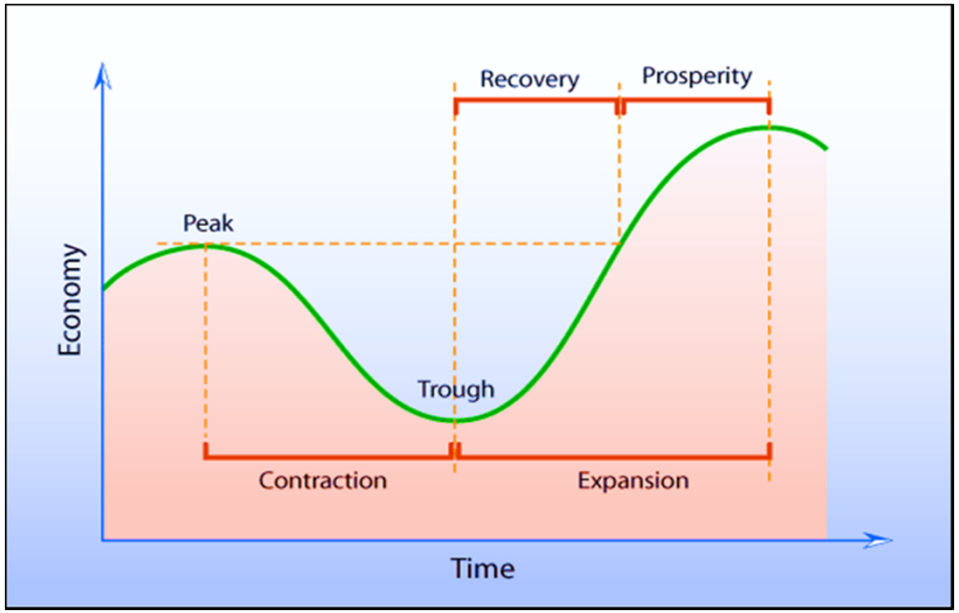
Source: "The 80% Pension Standards Myth," American Academy of Actuaries, Issue Brief, July 2012

Source: Cornell University Law School, Legal Information Institute, SC Title 29, Chapter 18, Subsection 1083 (http://www.law.cornell.edu/uscode/text/29/1083, Accessed 8/30/2013;

Target Funding Level

- The City's long-range objective should be to achieve a funding ratio of 100% with no unfunded liability
- In practice, there will be some volatility in the funded ratio due to the normal effects of the business cycle
  - At the peak of a business cycle, it is desirable to be above 100% funded as the potential for asset loss is greatest
  - In contrast, at the trough of a business cycle, it is expected that most plans would be less than 100% funded

Hypothetical Representation of the Business Cycle

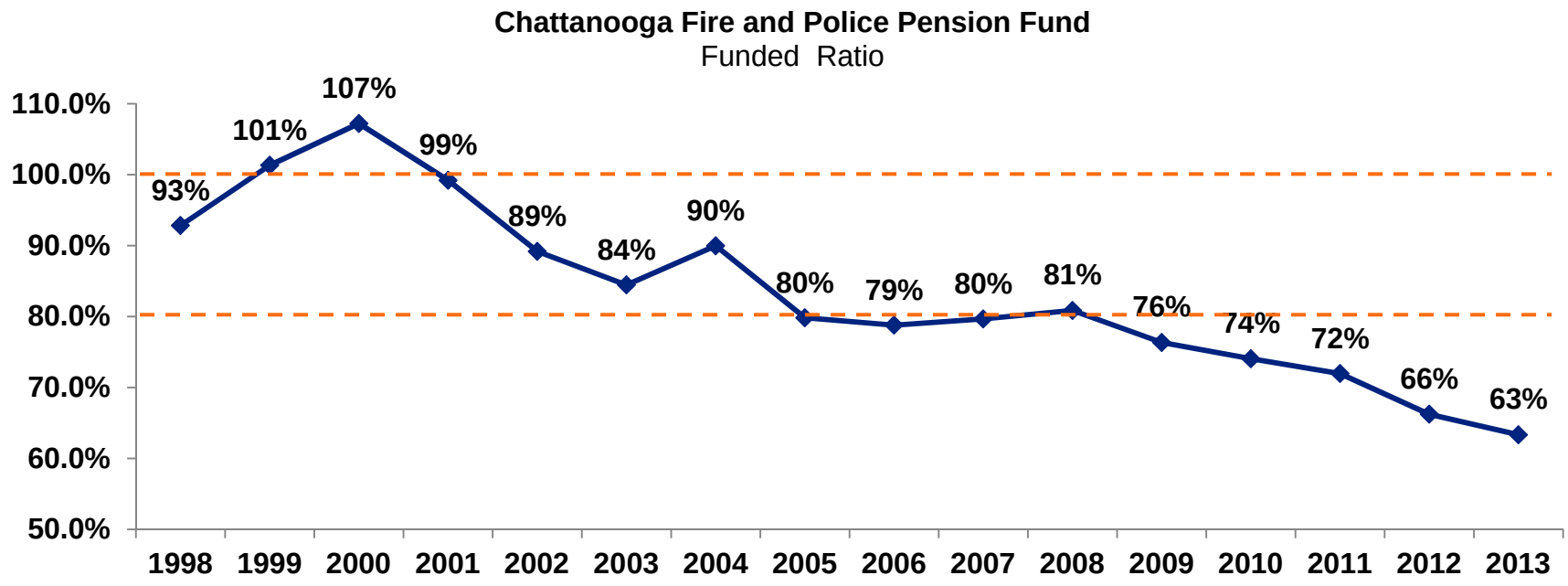


For illustrative purposes only

- The inability of experts to precisely predict where we are in the business cycle adds an additional layer of complexity to developing a target funding ratio at any one point in time. Given that the U.S. economy is several years into an expansion period, it is concerning that the CFPPF's funding level is 63.3% on an actuarial basis (51.8% on a market basis)
- Without a long-term strategy to address the funding short-fall, the position of the CFPPF could result in unaffordable growth in contributions and reduced sustainability and benefit security for members. Managing these risks require a comprehensive strategy that takes into account benefit levels, funding strategies, and investment policies

CFPPF Funding Levels

- As of the January 1, 2013 actuarial valuation report, the City of Chattanooga's Fire and Police Pension Fund had a total unfunded actuarial accrued liability of **$149,681,996** – more than **71%** of the City's entire FY2013 General Fund budget
- As of the 2013 actuarial valuation, the CFPPF was **63.3%** funded on an actuarial basis (**51.8%** on a market basis), a decline from the peak funding level of 107.2% achieved in 2000. Over the five-year period from 2008 through 2013, the Plan's funding level declined from 80.9% funded to 63.3% funded on an actuarial basis

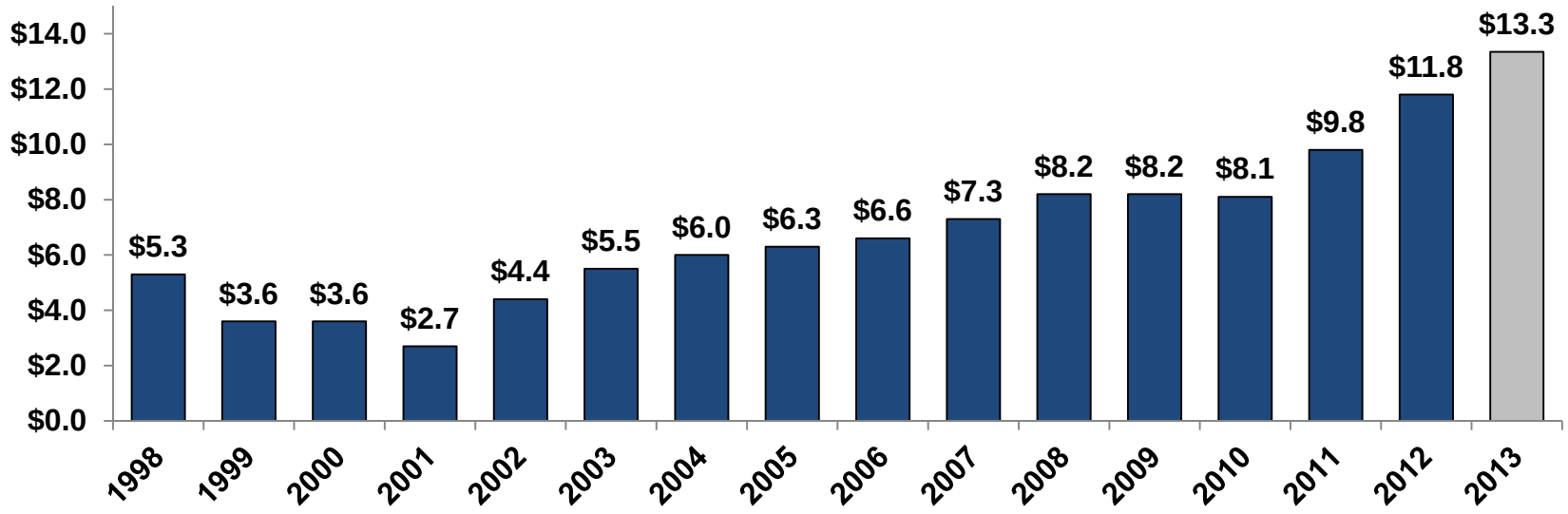


Source: City of Chattanooga Fire and Police Pension Fund, Actuarial Valuation as of January 1, 2013, Other CFPPF Valuation Reports; City of Chattanooga, FY2013 Budget Resolution;

Historical City Contributions

- From 1998 through 2012, the City's actual contribution to the CFPPF increased by nearly 123% from $5.3 to $11.8 million. For 2013, the City's recommended contribution is $13.3 million, reflecting a year-over-year increase of more than 13% from 2012 levels
- Over the 10-year period measured from 2003 (actual) through 2013 (recommended), the City's contribution to the CFPPF grew by **9.3%** annually on a compounded basis (CAGR), for a total increase of nearly 143%

City Contribution to Fire and Police Pension Fund
Actual and Recommended Contributions

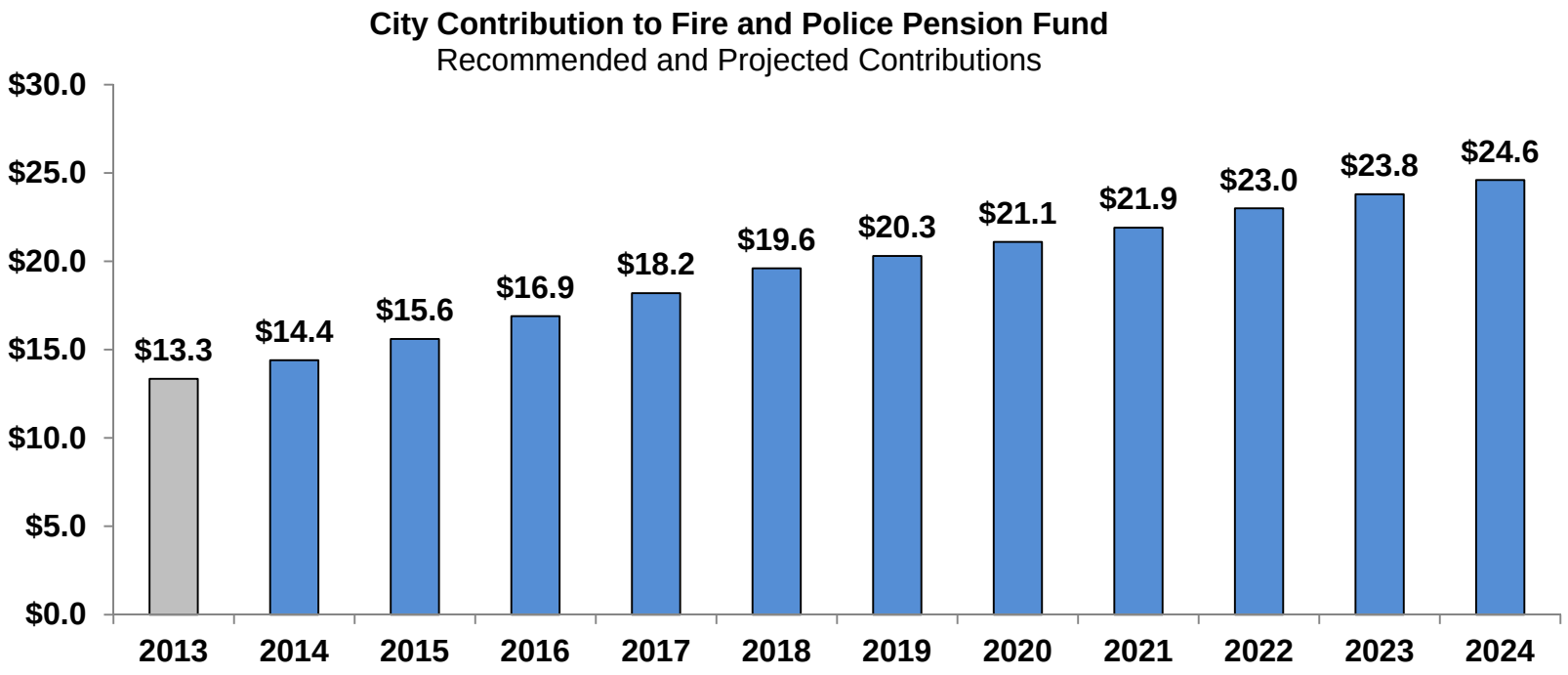


Note: Recommended City contribution shown for 2013.

Source: City of Chattanooga Fire and Police Pension Fund, Actuarial Valuation as of January 1, 2013; Other CFPPF Valuation Reports

Projected City Contributions

- From the 2013 recommended contribution level through 2024, the City's contribution is expected to grow from $13.3 to $24.6 million, an increase of more than 84%
- Over the next five years, City Contributions are projected to increase an average of $1.26 million each year, ranging from $1.1 million to $1.4 million



Note: Recommended City contribution shown for 2013. Projected City contributions shown for 2014 – 2024 under current plan assumptions.

Source: The Segal Group, 2014-2024 Projections

Chattanooga's Credit Rating

- The City of Chattanooga's General Obligation (GO) debt is currently rated AA+ by Fitch and AA+ by S&P (Moody's does not maintain a rating, except on some older debt)
- It is important for the City to maintain a high grade credit rating in order to maintain access to the capital markets at affordable rates
- Rating agencies have long considered a jurisdiction's unfunded benefit obligations when determining an appropriate credit rating. In recent years, however, credit rating agencies have begun to place a greater focus on an issuers' ability to manage overall liabilities including both debt and unfunded pension obligations
- The concerns expressed by the credit rating agencies have been intensified in recent months following a series of high-profile local governments facing financial distress:
  - The City of Detroit's Emergency Manager filed for bankruptcy on 7/8/2013, seeking to list its unfunded pension obligations on par with GO debt (rather than as senior obligations). The outcome of legal challenges could create a strong precedent for the treatment of pension liabilities in Michigan and perhaps beyond
  - In April 2013, Moody's placed 29 local governments (including Chicago, Cincinnati, Minneapolis, and Portland) on review for potential downgrade due to changes in their assessment of unfunded pension obligations. To date, 15 of the 20 completed reviews have resulted in a downgrade. Notably, Chicago's rating was downgraded from Aa3 to A3 with a continued negative outlook

Source: Moody's Investor Services , 4/16/2010; Fitch Ratings, 9/26/2011; Standards & Poor's, 9/21/2011; Moody's Investor Services, "Detroit's Path to Bankruptcy" 8/6/2013; Moody's Investor Services, "Chicago: Key Drivers of the Rating Downgrades" 7/23/2013

Rating Impacts

- Moody's affirmed its "negative" outlook for the US local government sector as a whole despite raising the outlook for states to "stable" on 8/20/2013. Moody's pointed to the uneven economic recovery, marked by a volatile housing market, as key factors in assigning the negative outlook
- Fitch and S&P continue to have a similar sentiment as shown in the excerpt at right

"In our view, however, the road to pension funded level improvement will be bumpy. Although a decelerating rate of decline is positive, we expect states will need to actively manage pension funds to ensure their long-term sustainability. Contributing to the ups and downs we expect in pension valuations are market volatility, the implementation of Governmental Accounting Standards Board (GASB) Statements 67 and 68, ongoing pension reform efforts, and, for those with weaker funded systems, a problematic funding environment as growth in pension contributions consumes a larger part of those states' budgets. We believe this increased level of volatility will require a continued emphasis on pension liabilities management."

Source: "A Bumpy Road Lies Ahead For U.S. Public Pension Funded Levels" Standards & Poor's Ratings Services, 7/16/2013

Source: Moody's Investor Services, "Why US Local Governments Still Have a Negative Outlook Despite Our Revised Outlook For States" 8/20/2013

Moody's Methodology Reforms

- In April 2013, Moody's released its final adjustments to state and local government pension reporting data that will result in significant increases in unfunded pension liabilities for state and local governments as calculated by Moody's. As plan actuarial assumptions vary widely across jurisdictions and with the growth in pension liabilities continuing to strain governmental financial positions, Moody's is endeavoring to provide a more consistent basis for their evaluations
- While some of Moody's adopted changes are similar to the new pension reporting standards set forth in GASB 68, others, such as the use of a much lower discount rate based on a high-grade long-term corporate bond index rate for normalizing the size of actuarial liabilities, represent substantial deviations that will have a fundamental impact on a jurisdiction's pension obligations as reported
- The proposed adjustments to Moody's reported pension information fall into four main categories:
  - Multiple-employer cost-sharing plan liabilities will be allocated to specific employers based on their proportionate shares of total plan contributions
  - Accrued actuarial liabilities will be adjusted based on a high-grade long-term corporate bond index discount rate (approximately 4.05% for a valuation date of 1/1/2013)
  - Asset smoothing will be replaced with market or fair value as of the actuarial reporting date.
  - Annual pension contributions will be adjusted to reflect these changes as well as a common amortization period (20-year level amortization).

Source: Moody's Investor Services, Adjustments to U.S. State and Local Government Reported Pension Data, April 17, 2013.

Moody's Revised Pension Methodology

- Using Moody's adjusted methodology, the funding ratio is reduced from **63%** to **33%** for the CFPPF

PFM Pension Plan Calculation Model
Reflects Moody's Changes to State & Local Government Pension Plans

INSTRUCTIONS:

1. Enter in all pension data points for governmental entities in column E. Cells that have **blue borders and blue font** are inputs.
   NOTE: Moody's changes include allocating Cost Sharing Plans' UAALs amongst employers based on their respective percentage of the total plan's contribution. This allocated amount should be used for inputs into the calculator.
2. The model should automatically calculate the figures in black font. To manually calculate the model press "F9" on your keyboard.
3. Figures are final as of the April 17, 2013 confirmation by Moody's of the new methodology. Please read important Disclaimer below.

ISSUER: **City of Chattanooga Fire and Police Pension Fund**

Pension Data Item ($000)	Currently Reported Pension Data	Moody's Adjusted Values	Difference (Gross Change)	Difference (% change)
Current Discount Rate	7.75%	4.05% (1)	(3.70%)	-
Govt Share of Accrued Actuarial Liability	408,278,814	643,034,642 (2)	234,755,828	57.50%
Actuarial Value of Assets	258,596,818	258,596,818	-	-
Market Value of Assets	211,617,792	211,617,792	-	-
UAAL/ANPL	149,681,996 (3)	431,416,850 (4)	281,734,854	188.22%
Funded Ratio	63.34%	32.91%	(30.43%)	-
Amortized ANPL	-	30,644,030 (5)		

(1) Moody's Adjusted Discount Rate should use the Citibank Pension Liability Index as of the most recent pension valuation date.
To find this value, please go to the "Discount Rate Selection" tab and follow the instructions there.
(2) Calculated by future valuing reported AAL 13 years at reported discount rate and then discounting back using Moody's adjusted discount rate.
(3) Calculated by subtracting Actuarial Value of Assets from AAL.
(4) Calculated by subtracting Market Value of Assets from AAL.
(5) Uses adjusted UAAL/ANPL to create a 20 year level dollar amortization utilizing the Moody's proposed discount rate.

DISCLAIMER:
The calculations performed above are calculations of adjusted pension values based on PFM's interpretation of Moody's adjustments to US State and local government reported pension data in the April 17, 2013 Moody's Report. Calculations do not represent actual figures nor are they definitive representations of Moody's final calculations. Calculations are subject to change based on changes to the underlying data and ongoing changes to Moody's proposed assumptions. Results are estimates only and should not be used for actual reporting or assumptions regarding Moody's calculations. Resultant figures are not confirmed by Moody's.

Moody's RFC on Local Government GO

- On 8/14/2013, Moody's released a Request for Comment regarding several proposed changes to its methodology for rating US local government General Obligation (GO) bonds. These proposed changes are in addition to those discussed later in this report that enacted by Moody's to standardize the process for assessing pension liabilities across jurisdictions. In its most recent RFC, Moody's seeks to:
  - Increase the weight their analysis assigns to debt and **pensions** from 10% to 20%
  - Decrease the weight their analysis assigns to economic factors from 40% to 30%
  - Introduce a scorecard for US local governments that enhances transparency in their ratings approach

EXHIBIT 2

New Methodology Weights

Factor	Previous Methodology Weight	New Methodology Weight
Economy/Tax Base	40%	30%
Finances	30%	30%
Management	20%	20%
Debt/Pensions	10%	20%

Source: Moody's Investor Services, Request for Comment, US Local Government General Obligation Bond Methodology, August 13, 2013.

- Though not yet final, this proposed change reflects Moody's ongoing efforts to consider unfunded pension obligations as debt-like liabilities that are likely to present local governments with long-term challenges and reduced financial flexibility in the future

GASB 67 & 68

- In June 2012, the Governmental Accounting Standards Board (GASB) adopted two statements, GASB 67 and 68, to improve the accounting and financial reporting of state and local government pension plans
- Under the new guidelines, governmental employers who sponsor a pension plan or participate in a multi-employer plan will be required to report total pension obligations and costs beginning in Fiscal Year 2015
- According to GASB, the new standards were designed to increase the transparency and comparability of pension reporting data across jurisdictions, resulting in a more complete representation of the full impact of unfunded pension liabilities on a governments balance sheet as reported in their Comprehensive Annual Financial Report (CAFR)
- Industry analysts and participants expect that these new GASB standards will effectively "divorce" pension accounting and financial reporting from plan funding. Up until now, for many systems, funding and accounting have historically been the same
  - Going forward, it is anticipated that plan funding policies will be different. Nevertheless, many governments and system actuaries are expected to conform *some* of their funding methodologies to the new accounting rules – thereby reducing the confusion that may arise between reports reflecting two entirely different actuarial approaches and unfunded pension obligations
  - **NOTE**: CFPPF's actuary is in process of determining impact of GASB changes on the fund reported liabilities

Source: GASB 67 & 68, "Financial Reporting for Pension Plans" and "Accounting and Financial Reporting for Pensions", June 2012.

GASB 67 & 68

- Under prior GASB standards, employers have been required to recognize a net pension obligation on their balance sheet if their contributions were less than the annual required contribution (ARC) on a cumulative basis. Unfunded actuarial accrued liabilities (UAAL) have been reflected as a footnote in the disclosure statement
- With the new standards, the UAAL, now called the net pension liability (NPL), will be carried by all employers on their balance sheet as a liability, much more akin to how a government would report other long-term obligations, such as debt
- In addition to requiring employers to publish more details in the notes section on their financial statements, the new GASB standards will:
  - Require employers to report the fair value or market value of assets
  - Limit the recognition in the difference between expected earnings on plan investments and actual investment earnings to a five-year closed period
  - Reduce the amortization period of the UAAL from the current standards of 30 years (open or closed) to a period that does not exceed the average remaining service lives of its employees (both active and retired)
  - Change how the discount rates are calculated if the plan is failing to systematically collect enough contributions to avoid running out of money over time. As long as the projected contributions are grater than the projected benefit payments, the employer can continue to use its long-term expected rate of return

Source: GASB 67 & 68, "Financial Reporting for Pension Plans" and "Accounting and Financial Reporting for Pensions", June 2012.

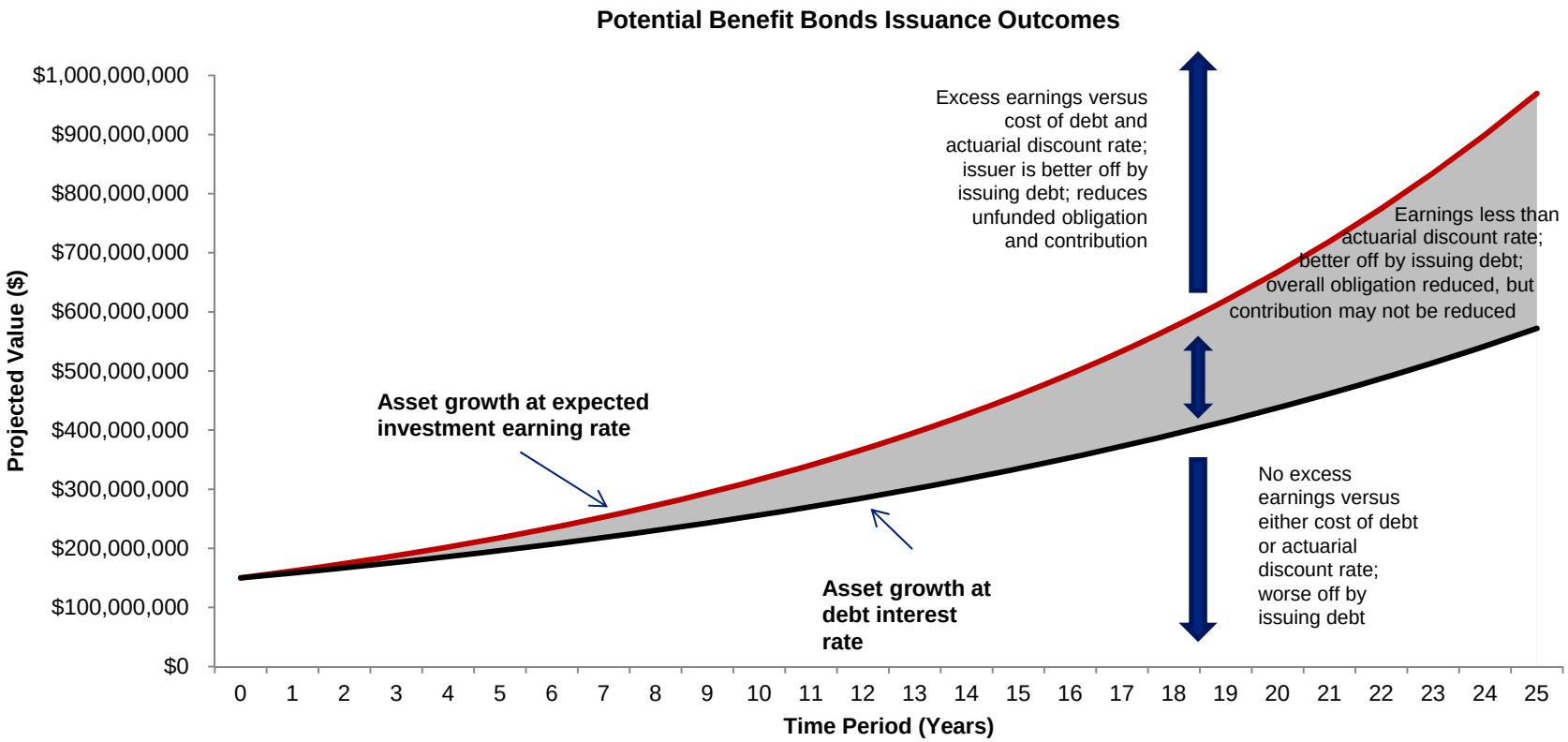
Pension Bond Overview

Basics of Pension Bonds

- During some of our preliminary discussions with stakeholders, we were asked about using pension bonds to address the unfunded liability. To respond to these questions, this section is an overview of how pension bonds work, their benefits and their risks. It is neither a recommendation for nor against their use
- Pension bonds are issued with a primary objective of achieving lower-cost long-term funding for a pension plan
- The primary economic driver is the potential to earn a higher return on the invested bond proceeds than the cost of capital (which is a taxable-municipal bond interest rate)
  - Generally, it makes little sense to sell bonds to buy bonds
  - Most of the "arbitrage profit" is derived from potential long-term returns on stock portfolios
- But, as everyone knows, stock prices fluctuate, and the risk of loss in the first recession after a pension bond sale must be evaluated carefully

Pension Bonds in Today's Market

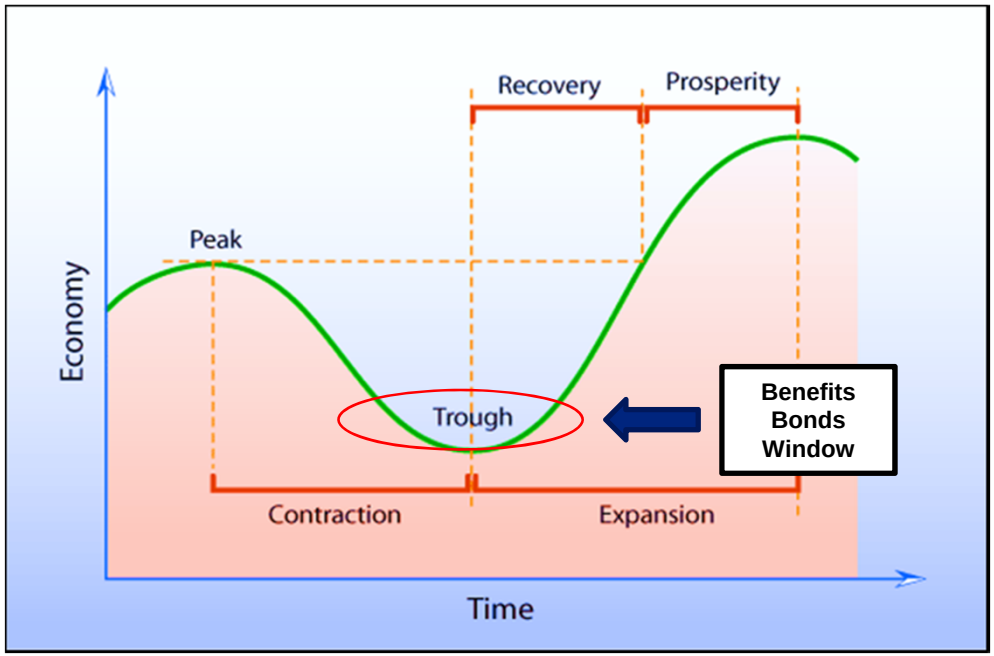
- Pension bonds are primarily issued to purchase securities and invest the proceeds in a manner that provides a rate of return in excess of the cost of capital and, hopefully, the plan discount rate
- The illustrative chart provided below reflects a hypothetical example of the potential outcomes for a benefit bonds issuance



For illustrative purposes only

Benefit Bonds Window

- Benefit bond issuances have historically been reactive efforts to improve funding ratios or replace annual contributions that governments cannot afford
- Though equity-oriented investments are likely to outperform the cost of a benefit bond issuance over a 20 or 30 year period, there can be a high degree of volatility in the results that may lead to short-term lags in the performance of a portfolio relative to the cost of debt

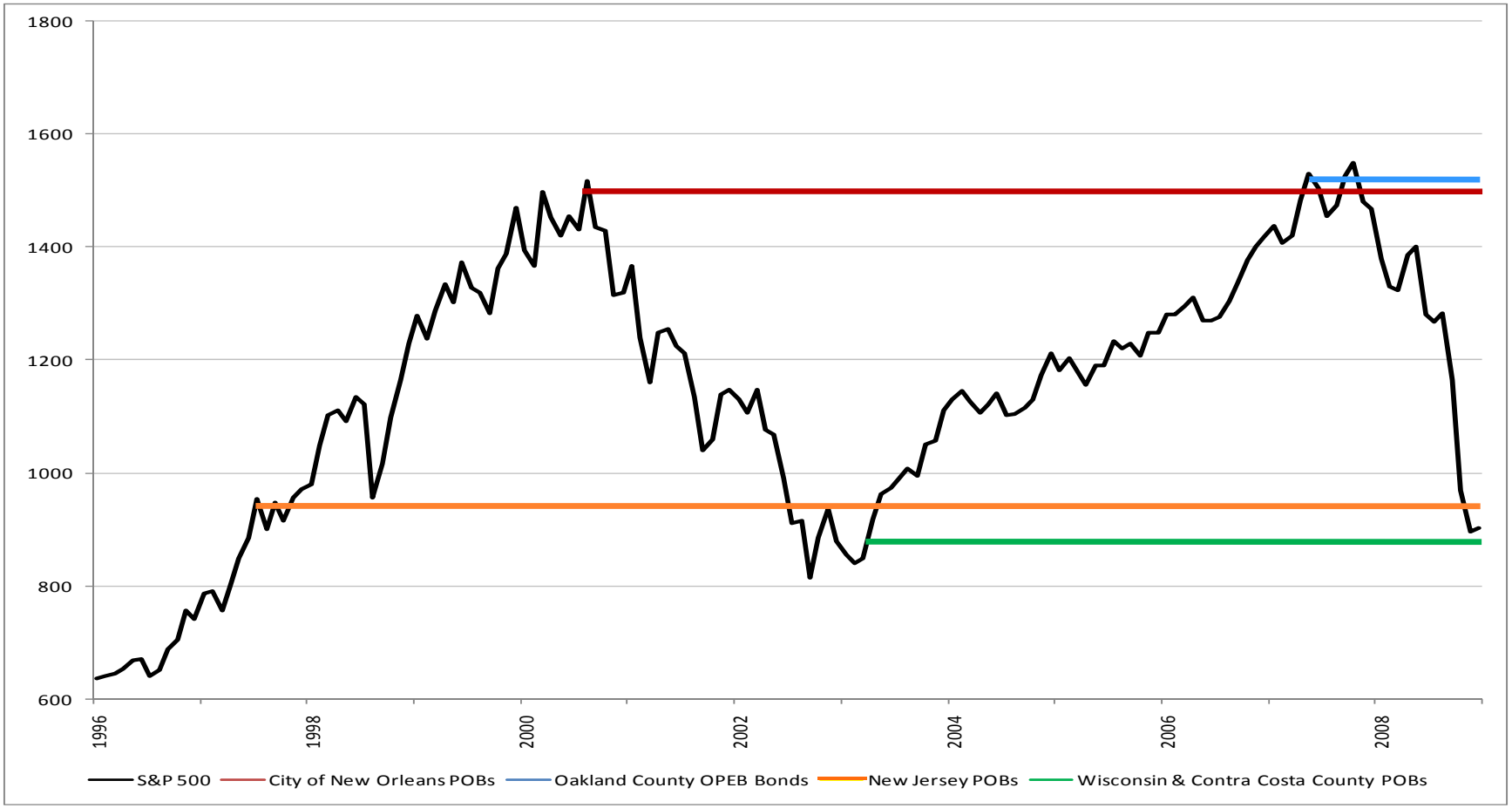


For illustrative purposes only

- In order to avoid these short-term risks, governments considering this option, should issue debt at a time when interest rates are relatively low and when stock prices are depressed on a long-term valuation basis
- This low interest rate and low stock price combination is rare except in the late stages of a recession as reflected in the illustrative graphic above
- **Quantifiable only in hindsight; No one can ever predict in real-time when there is a bottom**

Pension Bond Risks: Timing

Those who sold POBs and OPEB-OBs at market peaks were doomed at the outset



Source: Yahoo Finance
S&P 500 Chart

Moody's Perspective on Benefit Bonds

- The issuance of benefit bonds does not really increase the employer's total obligations, but it does increase its explicit indebtedness
- As a credit matter, the rating agencies have a generally dim view of benefits bonds without accompanying benefit changes, although when viewed through the prism of a long-term plan, the view has not typically resulted in an explicit ratings action
- Benefit bonds have traditionally been viewed more negatively when they are used to provide short-term deficit financing of annual contributions rather than as part of a long-term strategic plan to create a healthy system
- Nonetheless, as Moody's points out, the issuance of benefits bonds changes the nature of the liability (from soft to hard) and increases risk

"If pension bonds merely shifted an issuer's long term obligations from one similar form to another, in this case from an unfunded pension liability to bonded debt, they would tend to have a neutral credit impact. However, issuance of pension bonds changes the nature of the liability and typically creates additional risks, including:

- Budgetary risk – stemming from the government's anticipation of future savings on annual pension funding contributions which may not materialize;
- Default risk – a missed payment on bonded debt constitutes a default, while a missed pension contribution payment generally does not;
- Loss of flexibility – under-payment of pension contributions is a budgeting option for financially stressed governments which may reduce default risk on bonded debt."

Source: "US State and Local Governments Face Risks with Pension Funding Bonds" Moody's Investor Service, 12/11/2012

Lexington, KY Case Study

Relevance of Case Study

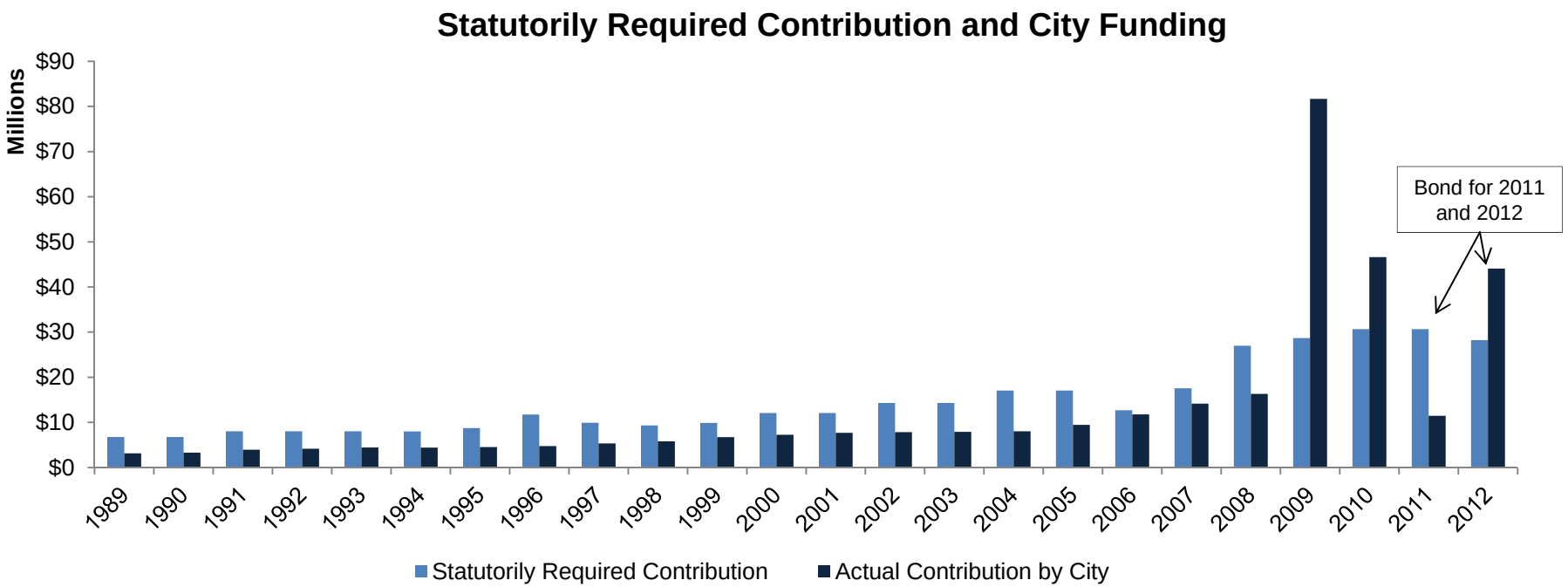
- Although Chattanooga and Lexington are different in many ways, we believe that there are some lessons from the process in Lexington that would be helpful for the Task Force to understand
- There are also several similarities between Chattanooga's and Lexington's situations:
  - Both cities have their own police and fire pension plan in states where most other public safety employees are in state plans
  - The funding status of the respective plans is relatively similar. Chattanooga's most recent funded status was 63.3%. Lexington's funded status prior to any changes was 63.9%. (Note that plans have different actuarial assumptions and amortization methodologies)
  - Neither city's police and fire fighters are in Social Security

Lexington Background

- Unlike every other police and fire employee in the Commonwealth of Kentucky, Lexington public safety officers had their own pension fund. Though funded by their contributions and the City's contributions, the Legislature determined the benefit level. Therefore, changes to the benefit would require Legislative action
  - Pension board had equal numbers of City and employee representatives (2 retiree spots) with no dispute resolution mechanism
- As of July 1, 2011, the plan was 66% funded with an unfunded liability of **$257,781,662**, **over 80%** of the City's FY2012 annual budget. In the 2012 draft valuation, by changing the investment return assumption from 8% to 7.5%, and with additional changes recommended in the experience study (increased life expectancy), the valuation showed an unfunded actuarial accrued liability $39,024,830 or 15.1% greater than 2011 for a total liability of **$296,806,492**. Based on the new valuation, the plan was 63.9% funded
  - Increase came in spite of additional money from pension bonds in previous years
- In late 2011, Mayor Jim Gray convened a Task Force of business leaders, union leaders, city officials, council members, and legislators to reach a consensus on addressing the unfunded liability. PFM was engaged in November 2012 to provide technical assistance to the Task Force towards reaching consensus

Historical City Funding

- The City historically paid less than the statutorily required contribution for PFRF. In FY2009, FY2010, and FY2012, the City issued pension bonds, but the City required contributions continued to increase. Although authorized by Council, pension bonds were NOT part of the Consensus Agreement



Baesler Administration	Miller Administration	Isaac Administration	Newberry Administration	Gray Administration

** Due to the timing of the FY2012 pension bond, a portion of the bond issuance was dedicated to the City's FY2011 statutory requirement*
Sources: FY2012 and FY2013 statutory required contributions based on 2010 actuarial valuation; 2011 Lexington-Fayette Urban County Government CAFR; 2004, 2006, 2008, 2010 PFRF Valuations

Plan Benefit Changes

A number of benefit changes occurred to the Policemen's and Firefighters' Retirement Fund since 1974:

- **Retirement Eligibility:**
  - **1978:** Normal retirement eligibility was age 50 and 20 YOS
  - **1994:** Normal retirement eligibility reduced to age 46 and 20 YOS (HB 380)
  - **2006: Minimum retirement age (46) eliminated**. Police and fire fighters can retire with full benefits after 20 YOS
- **Employee Contributions:**
  - **1974:** Employee contributions increased from 6% to 8% of salary (KRS 67A). Employer contributions remained at 12%
  - **1982: Employee contributions increased from 8% to 10% of salary**
  - **1990:** Employee contributions increased from 8% to 10.5%-11% based on date of hire. Employer contributions increased from 15% to 17% of payroll (HB 697)
  - **2006:** Puckett v. LFUCG case determined that the Pension Board has authority to set City contribution rates
- **Cost of Living Adjustments (COLAs):**
  - **1978:** Employees receive 2% COLA after reaching age 60 or 3 years of retirement, whichever is later
  - **1982: COLAs amended to provide employees between 2% and 5% annually after age 51 or 1 year of retirement, whichever is later**
  - **1990:** COLA benefits provided for **previous retirees** (HB 697)
- **Service Benefit:**
  - **1996:** Minimum monthly annuity set at 1996 US poverty level (HB 747)
  - **2000: Members permitted to purchase 4 years of service (ghost time)**; 75% average wage cap on annuities eliminated (HB636)
  - **2001:** Minimum monthly annuity increased to $1,000 (SB 20)
  - **2002: Special pay and hazardous duty pay included in benefit calculation**; widows permitted to receive pension benefits upon remarriage (SB 184)
  - **2006:** Minimum monthly annuity increased from $1,000 to $1,250 (SB 108)
- **Disability Benefits:**
  - **1994: Minimum disability benefit reduced from 75% to 60% plus half of the amount by which a member's percentage of disability exceeds 20% with overall cap of 75% (HB 380)**
  - **2001:** Disability retirees receive same COLA as service retirees (SB 20)

Summary of Consensus Agreement

- 30-year level dollar ($) amortization
- Minimum age retirement of 41 for actives
- Occupational Disability reduced from 60% to 50% of FAS with current increases for catastrophic injuries
- Increase employee contribution from 11% to 12%
- New hire defined benefit plan:
  - 2.25% multiplier
  - Vesting after 25 years; Age 50 requirement to draw pension
  - 12% employee contribution
  - Same tiered COLA structure as proposed for retirees; COLA rate of between 0-3% once plan reaches 85% funding level (inclusive of COLA)
  - Elimination of ghost time purchases (no change to military time purchase)
- Tiered COLA structure based on pension amounts with 2-5% COLAs resuming when Plan reaches 85% funding level (inclusive of COLA) for current retirees and current actives. No COLA for pensions above $100,000 until January 1, 2016
- Requirement of 5 years or age 50 (whichever sooner) for new retirees to receive a COLA
- Increase line of duty death benefit from 60% to 75%
- Increased required City contributions
- Conduct annual actuarial valuation
- Agreement did not need to utilize benefit bonds

COLA Changes

- **Provision:** Provide following COLAs based on pension annuity until fund is 85% funded (inclusive of COLA grant):

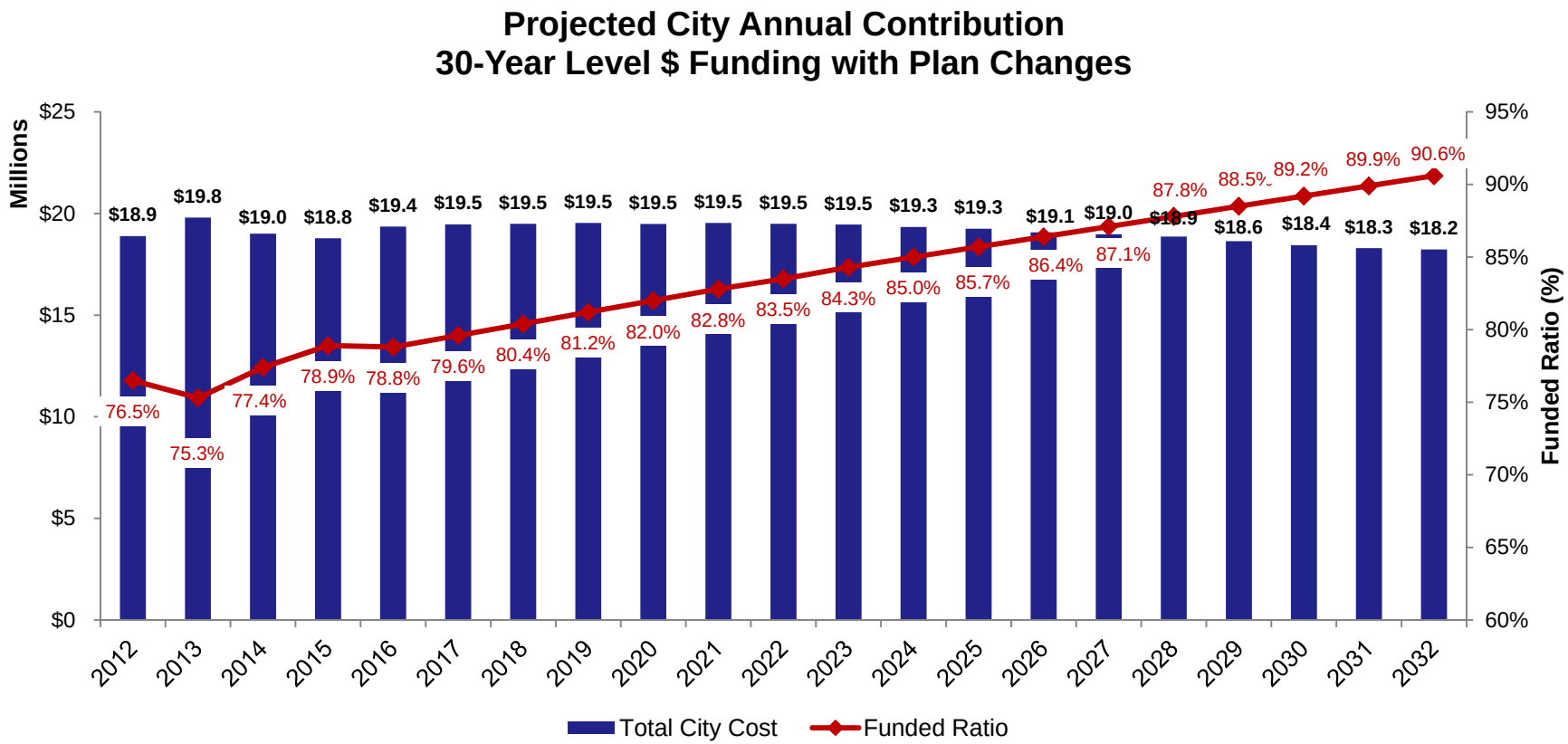
Pension	COLA Benefit
$100,000 and above	No COLA until January 1, 2016, then 1%
$75,000-$99,999	1%
$40,000-$74,999	1.5%
$39,999 and Below	2%

  – Additionally, new retirees do not receive a COLA for 5 years or until age 50, whichever comes first

- **Rationale:** Recognition by the parties that COLA change had to be part of solution, but a desire to minimize the impact on those least able to absorb it

Impact of Changes on Employer Contributions

- Implementing recommended plan reduced projected unfunded actuarial accrued liability from $296,806,491 to approximately $161,960,044 – a $134,846,447 or 45% reduction



**Note: Analysis assumes that assumptions are met. Gains or losses will be amortized each year based on the remaining years left in the 30-year amortization period. Also assumes new hire defined benefit plan with 2% multiplier and 25 years of service. Does not include savings from no COLA for over $100,000 until 1/1/2016 or costs from line of duty death*

Next Steps

Next Steps

- Request that Task Force members send us their initial ideas on options for a consensus agreement that they would consider
  - Happy to do via phone (215.557.1258) or email (kapoorv@pfm.com)
  - Will be kept confidential
- Next Task Force meeting on October 7, 2013. Presentation will include:
  - Historical background on pension fund benefits, City contributions, assumptions and funding levels
  - Comparison of current CFPPF plan benefits to those of other cities
  - Outline of some of the initial ideas (see above)
  - PFM's high-level thoughts on possible approaches toward a consensus agreement