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Retirement Plan for CTA Employees

Actuarial Valuation Report as of January 1, 2014

September 2014

Larry Langer
Principal and
Consulting Actuary

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September 2014

Board of Trustees and Executive Director
Retirement Plan for CTA Employees
10 S. LaSalle, Suite 1100
Chicago, IL 60602

Certification of Actuarial Valuation

Ladies and Gentlemen:

This report represents the results of the annual valuation of the assets and liabilities of The Retirement Plan for Chicago Transit Authority Employees ("the Plan") as of January 1, 2014, prepared in accordance with 40 ILCS 5/22-101(e). In addition it includes disclosure information as of December 31, 2013, as required under GASB Statements No. 25 and 27. The actuarial valuation of the Plan is performed annually and Buck Consultants was retained to perform the valuation as of January 1, 2014. This valuation has been conducted in accordance with all applicable Actuarial Standards of Practice (ASOPs) issued by the Actuarial Standards Board (ASB).

The actuarial valuation is based on unaudited financial and member data provided by the staff of the plan and summarized in this report. The benefits considered are those delineated in the plan and is governed by legislation contained in the Illinois Compiled statutes, particularly Chapter 40, as amended and restated effective December 31, 2012. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

Public Act 95-308, effective January 18, 2008, requires that the Plan's pension and retiree health care programs be separated into two distinct trusts by July 1, 2009 (40 ILCS 5/22-101B(a)). This January 1, 2014 valuation report for the Plan does not reflect the liabilities and assets that were spun off in the healthcare trust.

Contribution rates were determined in accordance with 40 ILCS 5/22-101(e) using the projected unit credit cost method and provide for a funded ratio of at least 60 percent no later than ten years after the implementation year (2012) through fiscal year end 2039. Contribution rates reflect the issuance of bond or notes by the Authority, as defined in 70 ILCS 3605/12c. Authority contribution rates are adjusted by a debt service credit, for debt service paid in the prior year, of up to six percent of compensation per year from 2009 to 2040, as defined in 40 ILCS 5/22-101(e)(2).

Based on the preceding provisions, the sum of current assets, net bond proceeds, future contributions and investment earnings, less benefit payments and expenses, the Plan is projected to be at least equal to 60 percent of actuarial liabilities by 2022 and through fiscal year end 2040, if the following contributions, expressed as a percentage of compensation, are made to the Plan and the Plan experiences no net actuarial losses in the future.

	Annual Contributions to the Plan (Percentage of Compensation)	
Fiscal Year	Authority	Employees
2014 to 2040	14.250%	10.125%

40 ILCS 5/22-101(e)(4) provides for a minimum contribution, determined either by the Board of Trustees or the Auditor General, to bring the funded ratio of the Plan “up to” or “no less than” 90% by December 31, 2059. Thus, the attached schedules contain funded ratios in the years just prior to 2059 which may enable a lowering of contribution rates at that point.

While not required by 40 ILCS 5/22-101(e)(3), GASB 25 suggests an annual required contribution (“ARC”) of approximately 27.72% (total contribution). Buck has recommended that the Board of Trustees consider, as appropriate, moving towards a contribution of the ARC over the next several years. The rates adopted by the Board pursuant to its ten-year plan are higher than the minimum required by 40 ILCS 5/22-101(e)(3). We understand that the Board anticipates an annual review of rates during the ten-year period.

The results documented in this report are estimated based on data that may be imperfect and on assumptions about future events. Assumptions may have been made about participant data or other factors. Reasonable efforts were made in this valuation to ensure that items that were significant in the context of the actuarial liabilities or costs are treated appropriately, and not excluded or included inappropriately. We believe that the use of approximation in our calculations, if any, has not resulted in a significant difference relative to the results we would have obtained using more detailed calculations.

A range of results, different from those presented in this report could be considered reasonable. The numbers are not rounded, but this is for convenience only and should not imply precision, which is not inherent in actuarial calculations.

This valuation was based on the actuarial assumptions and methods as approved by the Board of Trustees. Please see Section 6.2 and 6.3 of this report for a description of the assumptions and methods used. Actuarial Standards of Practice now require that the likelihood and extent of future mortality improvements be considered for valuations performed on or after June 30, 2011. Traditionally for the CTA Retirement Plan, experience studies are performed once in every five year period. Our initial conclusion is that the mortality tables currently in use and adopted by the Board provides for some future mortality improvements. The most recent study of the plan’s experience, used in developing the current actuarial assumptions, was based on a period from January 1, 2008 – December 31, 2013 and first used with the January 1, 2014 actuarial valuation; the next review will cover the period from January 1, 2014 through December 31, 2019. In our opinion, the actuarial assumptions used in the valuation are, in the aggregate, reasonable.

The following assumptions were updated due to the experience study completed as of January 1, 2014:

- Rates of Retirement
- Rates of Mortality
- Rates of Termination
- Rates of Disability
- Salary Increases

The earnings on plan assets were lowered from 8.50% to 8.25%.

The change in assumptions increased the liability by $148,841,651.

All other assumptions and methods used for this valuation are unchanged from the prior valuation.

Future actuarial measurements may differ significantly from the current measurement presented in this report due to such factors as: plan experience different from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

All historical valuation results presented in this report represent results taken from prior actuarial reports and reflect the funding methods and techniques used by the prior actuary. Our report/certification does not apply to those results other than to represent that our report has presented accurate information developed by prior actuaries.

Qualified actuaries completed the valuation in accordance with accepted actuarial procedures as prescribed by the Actuarial Standards Board. The qualified actuaries are members of the American Academy of Actuaries and are experienced in performing actuarial valuations of public employee retirement systems. To the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice. The undersigned with actuarial designations is qualified to render the opinions contained in this report.

No one may make any representations or warranties based on any statements or conclusions contained in the report without the written consent of Buck Consultants, LLC.

In our opinion the calculations also comply with Illinois law and where applicable, federal laws such as the Internal Revenue Code, and the Statements of the Governmental Accounting Standards Board. We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Plan as of January 1, 2014.

Respectfully submitted,

BUCK CONSULTANTS, LLC

Larry Langer, ASA, MAAA, EA
Principal and Consulting Actuary

Emily Urbaniak
Senior Consultant, Retirement

cc: Steve Evanego

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Executive Summary

Overview

The Retirement Plan for CTA Employees provides pension and ancillary benefit payments to the terminated and retired members of the Chicago Transit Authority. A Board of Trustees comprised of appointed representatives is responsible for administering the Plan and making investment decisions. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of January 1, 2014.

Purpose

An actuarial valuation is performed on the retirement plan annually as of the beginning of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

1. To certify the statutory contribution requirements for plan year 2014, as required under 40 ILCS 5/22-101(e)(3);
2. To disclose the funding assets, liability measures and funded ratio as of the valuation date;
3. To disclose the accounting measures for the Plan required by GASB No. 25 as of the end of the last fiscal year;
4. To compare actual and expected experience under the Plan during the last fiscal year;
5. And to report trends in contributions, assets, liabilities, and funded status over the last several years.

This actuarial valuation provides a “snapshot” of the funded position of the Retirement Plan based on the plan provisions, membership, assets, and actuarial assumptions as of the valuation date. Actuarial projections are also performed to provide a long-term view of the expected future funding status and contribution patterns.

Membership

Actives: As of January 1, 2014, there were 8,186 members in active service covered under the provisions of the Plan. The significant age, service, salary and accumulated contribution information for these members is summarized below, along with comparative figures from the last actuarial valuation one year earlier.

	January 1, 2014	January 1, 2013
Number of active members	8,186	8,317
Average age	48.1	47.8
Average years of service	14.2	14.3
Total annual valuation salary	550,616,338	548,515,157
Average annual salary	67,461	66,142
Total accumulated contributions	342,529,743	306,193,043
Average accumulated contributions	41,966	36,922

Note – Salary information does not include participants who have opted out of participation and are only entitled to a refund of contributions. These participants number 24 and 49 for 2013 and 2014, respectively.

The number of active members decreased by 1.6% from the previous valuation date. The average age of the active members increased by 0.3 years, and the average service decreased by 0.1 years. The total annual valuation salary increased by 0.4%. The average salary increased by 2.0% from the previous valuation.

Distributions of active members by age and service are given in Section 5.2.

Inactives: In addition to the active members, there were 95 inactive vested members who did not elect to receive their accumulated contributions when they left covered employment. The significant age and annual benefit information for these inactive members is summarized below with comparative figures from the last actuarial valuation one year earlier.

	January 1, 2014	January 1, 2013
Number of inactive members	95	81
Average age	55.4	55.2
Average annual benefit payments	25,701	25,716

The number of inactive vested members increased by 17.3% from the previous valuation. The average age of the inactive vested members increased by 0.2 years. The Average Monthly Pension Benefit for these members decreased by 0.1% from the previous valuation.

Distributions of inactive members by age and pension benefit are given in Section 5.4.

Retirees and Beneficiaries: In addition to the active and inactive members, there were 8,865 retired members and 828 beneficiaries who are receiving monthly benefit payments on the valuation date. The significant age and annual benefit information for these members are summarized below with comparative figures from the last actuarial valuation performed one year earlier.

	January 1, 2014	January 1, 2013
Number of members receiving payments		
• Retirees	8,865	8,811
• Beneficiaries	828	780
• Total	9,693	9,519
Average age	69.4	69.4
Annual benefit amounts		
• Retirees	229,293,648	223,965,930
• Beneficiaries	8,779,881	7,947,970
• Total	238,073,529	231,913,900
Average annual benefit payments	24,561	24,180

The number of retired members and beneficiaries increased by 1.8% from the previous valuation date. The average age of these members stayed the same as last year. The total annual benefit payments for these members increased by 2.7% from the previous valuation date.

Distributions of retired members by age and benefit amounts are given in Section 5.3.

In our opinion, the membership data collected and prepared for use in this actuarial valuation meets the data quality standards required under Actuarial Standards of Practice No. 23.

Plan Assets

The Plan's assets are held in trust and invested for the exclusive benefit of plan members. The trust is funded by member and employer contributions, and pays benefits directly to eligible members in accordance with plan provisions. The assets are audited annually and are reported at fair value. On a fair value basis, the Plan has Net Assets Available for Benefits of $1,892.7 million as of January 1, 2014. This includes an increase of $189.9 million over the Net Assets Available for Benefits of $1,702.8 million as of January 1, 2013. During the prior year, the investment return was 19.5% as reported by the Plan.

Starting with the January 1, 2012 valuation, the Board of Trustees adopted the market value of assets to determine the actuarial value of assets used for funding purposes. This method recognizes gains and losses, i.e. the difference between actual investment return during the year and the expected return based on the valuation interest rate, immediately.

A summary of the assets held for investment, a summary of changes in assets, and the development of the actuarial value of assets is shown in Section 2.

Actuarial Experience

Differences between the expected experience based on the actuarial assumptions and the actual experience create changes in the actuarial accrued liability, actuarial value of assets, and the unfunded actuarial accrued liability from one year to the next. These changes create an actuarial gain if the experience is favorable and an actuarial loss if the experience is unfavorable. The Plan experienced a total net actuarial gain of $113.2 million during the prior year. This net gain is about 4.0% of the plan's prior year actuarial accrued liability. The net gain is a combination of two principal factors, demographic experience and investment performance.

The demographic experience tracks actual changes in the plan's population compared to the assumptions for decrements such as mortality, turnover, and retirement, as well as pay increases. The Plan experienced a demographic loss of $40.9 million during the year ending December 31, 2013. This loss increased the unfunded actuarial accrued liability by $40.9 million and decreased the funded ratio by 0.8%.

Continued tracking of the demographic experience is warranted in order to confirm the appropriateness of the actuarial assumptions. Details of the demographic, economic, and other assumptions used to value the plan liabilities and normal cost can be found in Section 6. In our opinion, the economic assumptions comply with Actuarial Standards of Practice No. 27 and the demographic assumptions comply with Actuarial Standards of Practice No. 35.

On the asset side, the Plan experienced a gain on an actuarial value of assets basis. The actual rate of return on the actuarial value of plan assets was 19.5% for the year ending December 31, 2013 compared to the assumption of 8.5%, resulting in an asset gain of $154.1 million. This gain decreased the unfunded actuarial accrued liability by $154.1 million and increased the funded ratio by 5.0%.

A summary of the actuarial gains and losses experienced during the prior year is shown in Section 1.4.

GASB 25 Actuarial Contributions

Actual required contribution rates were determined in accordance with 40 ILCS 5/22-101(e) using the projected unit credit cost method and provide for a funded ratio of at least 60 percent no later than ten years after the implementation year (2012) through fiscal year end 2039 and 90 percent funding by fiscal year end 2059. Contribution rates reflect the issuance of bond or notes by the Authority, as defined in 70 ILCS 3605/12c. Authority contribution rates are adjusted by a debt service credit, for debt service paid in the prior year, of up to six percent of compensation per year from 2009 to 2040, as defined in 40 ILCS 5/22-101(e)(2).

While not required by 40 ILCS 5/22-101(e), GASB 25 suggests a funding policy be sufficient to pay the normal cost and amortize the unfunded actuarial accrued liability over a fixed period of 30 years. Buck has recommended that the Board of Trustees consider, as appropriate, moving towards a contributions of the ARC over the next several years. The rates adopted by the Board pursuant to its ten-year plan are higher than the minimum required by 40 ILCS 5/22-101(e)(3). We understand that the Board anticipates an annual review of rates during the ten-year period.

The normal cost represents the cost of the benefits that accrue during the year for active members under the Projected Unit Credit Cost Method. It is determined as the present value of the unit of benefit attributable to the respective plan year. The normal cost for 2014 has been determined to be $57.1 million, or 10.36% of pay. This represents an increase in the normal cost rate of 1.01% of pay from last year's normal cost rate of 9.35%.

The cost method under which the actuarial accrued liability is determined is the projected unit credit cost method. Under the projected unit credit cost method, the actuarial accrued liability (AAL) is equal to the present value of benefits accrued to the measurement date using a service pro-rate method. The normal cost is equal to the difference between the AAL at the end of the plan year, including one year of expected salary increases, and the AAL at the beginning of the plan year, adjusted for interest. This amount is compared to the actuarial value of assets to determine if the Plan is ahead or behind in funding as of the valuation date. The difference between the total actuarial accrued liability and the actuarial value of assets equals the amount of unfunded actuarial accrued liability or surplus (if negative) on the valuation date. This amount is amortized and added to the normal cost to determine the annual required contribution for the year suggested by GASB 25.

The unfunded actuarial accrued liability as of January 1, 2014 is $1,212.9 million. This represents an increase of $48.4 million in the unfunded actuarial accrued liability from last year's amount of $1,164.5 million. The annual payment required to amortize the unfunded actuarial accrued liability of $1,212.9 million as of January 1, 2014 is $101.9 million, or 18.50% of pay.

The ARC for 2014 is $165.5 million, or 30.05% of pay. This represents an increase of $7.9 million in the contribution amount of $157.6 million for 2013, or an increase of 1.32% of pay from last year's ARC contribution rate of 28.73%.

The actuarial liabilities and development of the ARC is shown in the Comparative Summary and Section 1.1.

In our opinion, the measurement of the benefit obligations and determination of the actuarial cost of the Plan is performed in compliance with Actuarial Standards of Practice No. 4.

Funded Status

The funded status is a measure of the progress that has been made in funding the plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. A ratio of over 100% represents a plan that is ahead in funding, and a ratio of less than 100% represents a plan that is behind in funding on the valuation date.

As of January 1, 2014 the funded ratio of the Plan is 60.9%. This represents an increase of 1.5% from last year's funded ratio of 59.4% as of January 1, 2013.

A history of the unfunded actuarial accrued liability and the funded ratio is shown in Section 1.5.

Accounting Information

The Governmental Accounting Standards Board (GASB) issues statements which establish financial reporting standards for defined benefit pension plans and accounting for the pension expenditures and expenses for governmental employers. The required financial reporting information for the Plan and the Employer under GASB No. 25 can be found in Section 3.

Projections

As part of the annual actuarial valuation, a forecast of expected future valuation results is performed over a 50 year period beginning on the valuation date. This analysis provides a dynamic look into the future to identify trends in future employer contributions and funded status. The forecast replaces active members who are assumed to decrement (terminate, retire, etc.) during the period with new members resulting in a stable active membership. The forecast assumes all actuarial assumptions are exactly realized each year during the forecast period. The results of these forecasts can be found in Section 4.

Changes in Plan Provisions

There have been no significant changes in the plan provisions which changed the meaning of the Plan according to Plan Counsel since the last actuarial valuation performed as of January 1, 2013.

Changes in Actuarial Assumptions, Methods, or Procedures

Buck Consultants performed an experience review for the five-year period ending January 1, 2013 to analyze the appropriateness of the assumptions. Buck Consultants recommended that the following changes be adopted by the Board:

- Demographic (future events that relate to people)
    - Retirement – modify rates for participants with service over 25 years or over age 67
    - Termination – lower rates
    - Disability – remove suppression of rates for participants with service over 25 years
    - Death – change rates to RP2000 Blue Collar table, generational to 2016 based on scale BB and then fully generational
- Economic (future events that relate to money)
    - Investment return – reduce to 8.25%
    - Salary increase – reduce salary increases
    - Inflation – reduce to 3.25%
- New entrant profile – update for 2014 projections to more closely reflect actual population

The change in assumptions increased the liability by $148,841,651.

The Board approved these assumptions for use beginning with the January 1, 2014 actuarial valuation.

All other assumptions and methods used for this valuation are unchanged from the prior valuation.

Comparative Summary of Key Actuarial Valuation Results

	January 1, 2014	January 1, 2013
1. Investment Return Assumption	8.25 %	8.50 %
2. Membership Data		
a. Active Employees		
Number	8,186	8,317
Annualized Salaries (in thousands)	550,616	548,515
Average Pay	67,461	66,142
b. Terminated Participants with Vested Benefits		
Number	95	81
Total Monthly Accrued Benefit	203,467	173,585
Average Monthly Accrued Benefit	2,142	2,143
c. Retirees and Beneficiaries		
Number	8,636	8,574
Total Monthly Pension	18,488,291	18,061,170
Average Monthly Pension	2,141	2,107
d. Disabled Recipients		
Number	1,057	1,017
Total Monthly Pension	1,351,169	1,264,988
Average Monthly Pension	1,278	1,244
3. Statutory Minimum Contribution Rates (as a percentage of Payroll)[1]		
a. Employer Contribution Rate		
Gross Employer Rate	20.250 %	20.250 %
Credit for Debt Repayment	6.000 %	6.000 %
Net Employer Rate	14.250 %	14.250 %
b. Employee Contribution Rate	10.125 %	10.125 %
4. GASB Annual Required Contribution		
a. Amortization Payment for UAAL		
i. Amount	101,880,647	99,872,539
ii. As a % of pay	18.50 %	18.21 %
b. Normal Cost		
i. Amount	57,062,746	51,297,024
ii. As a % of pay	10.36 %	9.35 %
c. Interest Adjustment to Mid-Year		
i. Amount	6,556,415	6,424,706
ii. As a % of pay	1.19 %	1.17 %
d. Actuarial Contribution		
i. Amount	165,499,808	157,594,269
ii. As a % of pay	30.05 %	28.73 %

[1] Contribution rate applicable for the plan year following the year of valuation.

	January 1, 2014		January 1, 2013	
5. Actuarial Funded Status ($ in thousands)				
a. Actuarial Accrued Liability	3,105,567		2,867,335	
b. Actuarial Value of Assets (AVA)	1,892,714		1,702,788	
c. Unfunded Accrued Liability	1,212,853		1,164,547	
d. Funded Ratio	60.9	%	59.4	%
e. Market Value of Assets (MVA)	1,892,714		1,702,788	
f. Return on MVA (prior year)	19.5	%	11.3	%
g. Return on AVA (prior year)	19.5	%	11.3	%

Section 1
Actuarial Funding Results

Section 1.1 - Actuarial Liabilities and Normal Cost

Actuarial Accrued Liability	January 1, 2014	January 1, 2013
1. Active Members		
a. Retirement Benefits	923,438,582	806,591,328
b. Withdrawal Benefits	24,143,161	25,642,598
c. Disability Benefits	35,915,163	33,869,206
d. Death Benefits	14,053,376	13,314,787
Total	997,550,282	879,417,919
2. Inactive Members with Deferred Benefits	10,986,538	8,660,053
3. Retired Members and Beneficiaries Receiving Benefits	2,097,030,009	1,979,257,341
4. Total Actuarial Accrued Liability (1. + 2. + 3.)	**3,105,566,829**	**2,867,335,313**

Normal Cost	January 1, 2014	January 1, 2013
1. Active Members		
a. Retirement Benefits	50,832,985	44,986,911
b. Withdrawal Benefits	2,377,311	2,529,493
c. Disability Benefits	2,873,025	2,838,914
d. Death Benefits	979,426	941,706
2. Employer Normal Cost (Dollar amount)	**57,062,747**	**51,297,024**
3. Total Normal Cost (As a % of pay)	**10.36%**	**9.35%**

Section 1.2 - Actuarial (Gain) / Loss

Development of Actuarial (Gain) / Loss	Amount
1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability at January 1, 2013	2,867,335,313
b. Normal Cost at January 1, 2013	51,297,024
c. Interest on a. + b. to End of Year	248,083,749
d. Benefit Payments and Administrative Expenses for 2013, with Interest to End of Year	250,847,034
e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. - d.)	2,915,869,052
f. Change in Actuarial Accrued Liability at January 1, 2014 due to Change in Actuarial Assumptions	148,841,651
g. Change in Actuarial Accrued Liability at January 1, 2014 due to Change in Plan Provisions	0
h. Expected Actuarial Accrued Liability at January 1, 2014 (e. + f. + g.)	3,064,710,703
2. Actuarial Accrued Liability at January 1, 2014	3,105,566,829
3. Liability (Gain) / Loss (2. – 1.h.)	40,856,126
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at January 1, 2013	1,702,787,884
b. Interest on a. to End of Year	144,736,970
c. Contributions Made for 2013	136,310,397
d. Interest on c. to End of Year	5,675,056
e. Benefit Payments and Administrative Expenses for 2013, with Interest to End of Year	250,847,034
f. Change in Actuarial Value of Assets at January 1, 2014 due to Change in Method	0
g. Expected Actuarial Value of Assets at January 1, 2014 (a. + b. + c. + d. – e. – f.)	1,738,663,273
5. Actuarial Value of Assets as of January 1, 2014	1,892,714,102
6. Actuarial Asset (Gain) / Loss (4.g. - 5.)	(154,050,829)
7. Actuarial (Gain) / Loss (3. + 6.)	(113,194,703)

Section 1.3 - Actuarial Balance Sheet

Financial Resources	January 1, 2014	January 1, 2013
1. Actuarial Value of Assets (market)	1,892,714,102	1,702,787,884
2. Present Value of Future Contributions	493,241,843	485,887,087
3. Unfunded Actuarial Accrued Liability/(Reserve)	1,212,852,727	1,164,547,429
4. Total Assets (1 + 2 + 3)	3,598,808,672	3,353,222,400

Benefit Obligations	January 1, 2014	January 1, 2013
1. Present Value of Future Benefits		
a. Active Members	1,490,792,125	1,365,305,006
b. Inactive Members	10,986,538	8,660,053
c. Retirees, disabilities and beneficiaries	2,097,030,009	1,979,257,341
d. Total	3,598,808,672	3,353,222,400

Section 1.4 - Analysis of Financial Experience

Analysis of Actuarial (Gains) and Losses

Resulting From Differences Between Assumed Experience and Actual Experience

Type of (Gain) or Loss	Year End December 31, 2013	As a % of Last Year's AAL
(1) COLA Experience	0	0.00%
(2) Salary Experience	27,608,587	0.96%
(3) Investment Experience	(154,050,829)	-5.37%
(4) Retiree Mortality Experience	1,228,694	0.04%
(5) Other (turnover, retirement ages, service purchase, etc.)	(1,893,249)	-0.07%
(6) Active Decrements	8,414,591	0.29%
(7) (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5) + (6)	(118,692,206)	-4.14%
(8) Asset Valuation Method	0	0.00%
(9) New Entrants	5,497,503	0.19%
(10) Assumption and Method Changes	148,841,651	5.19%
(11) Benefit Changes	0	0.00%
(12) Other	0	0.00%
(13) Total (Gain) or Loss During Year, (7) + (8) + (9) + (10) + (11) + (12)	35,646,948	1.24%

Section 1.5 - History of UAAL and Funded Ratio

($'s in 000's)

Valuation Date	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Funded Ratio (AVA as a % of AAL)	Unfunded Actuarial Accrued Liability (UAAL)
January 1, 2014	3,105,567	1,892,714	60.95%	1,212,853
January 1, 2013	2,867,335	1,702,788	59.39%	1,164,547
January 1, 2012	2,808,184	1,662,196	59.19%	1,145,988
January 1, 2011	2,724,191	1,909,967	70.11%	814,224
January 1, 2010	2,588,462	1,936,849	74.83%	651,613
January 1, 2009	2,632,356	1,995,953	75.82%	636,403
January 1, 2008	2,531,440	941,864	37.21%	1,589,576
January 1, 2007	2,466,106	1,007,305	40.85%	1,458,801
January 1, 2006	2,354,125	810,336	34.42%	1,543,789
January 1, 2005	2,291,162	902,117	39.37%	1,389,045

Section 1.6 - Solvency Test - Comparative Summary of Accrued Liability and Actuarial Value of Assets

	Accrued Liability for:				Portion of Accrued Liability Covered by Actuarial Value of Assets		
Valuation as of January 1	(1) Active Member Contributions	(2) Retirees, Beneficiaries, TVRs and Disabled	(3) Active Member (Employer Financed Portion)	Actuarial Value of Assets[1]	(1)	(2)	(3)
2014	342,529,743	2,108,016,547	655,020,539	1,892,714,102	100.00 %	73.54 %	0.00 %
2013	306,193,043	1,987,917,394	573,224,876	1,702,787,884	100.00 %	70.25 %	0.00 %
2012	271,327,054	1,945,958,148	590,898,382	1,662,195,612	100.00 %	71.47 %	0.00 %
2011	242,723,521	1,866,770,851	594,696,243	1,909,967,120	100.00 %	88.36 %	0.00 %

1. Excludes health care assets.

Section 1.7 - Projected Actuarial Results

Projection of Funded Status based on Board Adopted Contribution Rates

	Board Adopted Contribution Rates			Board Adopted Contributions					
Year	Employee Contribution Percent	Employer Contribution Percent	Total Percent	Employee Contribution	Employer Contribution	Total Contribution	Actuarial Accrued Liability	Actuarial Value of Assets (Market)	Funded Ratio
2014	10.125%	14.250%	24.375%	55,528,527	78,151,260	133,679,787	3,105,566,829	1,892,714,102	60.95%
2015	10.125%	14.250%	24.375%	57,269,549	80,601,588	137,871,137	3,169,577,953	1,932,512,134	60.97%
2016	10.125%	14.250%	24.375%	59,023,860	83,070,618	142,094,478	3,233,849,446	1,972,996,221	61.01%
2017	10.125%	14.250%	24.375%	61,056,133	85,930,854	146,986,987	3,298,173,237	2,014,091,795	61.07%
2018	10.125%	14.250%	24.375%	63,584,076	89,488,700	153,072,776	3,362,522,905	2,056,789,864	61.17%
2019	10.125%	14.250%	24.375%	66,278,613	93,281,011	159,559,624	3,427,705,886	2,102,890,004	61.35%
2020	10.125%	14.250%	24.375%	69,088,717	97,235,972	166,324,689	3,493,991,942	2,153,131,761	61.62%
2021	10.125%	14.250%	24.375%	71,957,504	101,273,524	173,231,028	3,561,160,712	2,207,670,404	61.99%
2022	10.125%	14.250%	24.375%	74,889,192	105,399,604	180,288,796	3,628,572,599	2,266,480,396	62.46%
2023	10.125%	14.250%	24.375%	78,008,026	109,789,074	187,797,100	3,695,996,574	2,329,971,964	63.04%
2024	10.125%	14.250%	24.375%	81,285,894	114,402,369	195,688,263	3,763,973,976	2,399,149,396	63.74%
2025	10.125%	14.250%	24.375%	84,687,653	119,190,030	203,877,683	3,832,519,139	2,475,053,956	64.58%
2026	10.125%	14.250%	24.375%	88,202,045	124,136,212	212,338,257	3,901,691,593	2,558,287,141	65.57%
2027	10.125%	14.250%	24.375%	91,858,532	129,282,378	221,140,910	3,971,388,872	2,649,478,652	66.71%
2028	10.125%	14.250%	24.375%	95,691,995	134,677,622	230,369,617	4,041,384,959	2,749,458,380	68.03%
2029	10.125%	14.250%	24.375%	99,701,264	140,320,298	240,021,562	4,112,320,882	2,859,875,319	69.54%
2030	10.125%	14.250%	24.375%	103,863,568	146,178,355	250,041,923	4,185,161,116	2,982,534,703	71.26%
2035	10.125%	14.250%	24.375%	126,256,853	177,694,830	303,951,683	4,629,194,032	3,860,355,160	83.39%
2036	10.125%	14.250%	24.375%	130,829,625	184,130,583	314,960,208	4,740,237,219	4,102,542,468	86.55%
2037	10.125%	14.250%	24.375%	135,546,025	190,768,480	326,314,505	4,859,783,630	4,370,877,450	89.94%
2038	10.125%	14.250%	24.375%	140,379,289	197,570,851	337,950,140	4,989,136,825	4,668,121,664	93.57%
2039	10.125%	14.250%	24.375%	145,469,067	204,734,242	350,203,309	5,130,160,152	4,997,489,521	97.41%

Section 2
Plan Assets

Section 2.1 - Statement of Net Plan Assets

($'s in 000's)

	As of December 31	
	2013	**2012**
ASSETS		
1. Total investments, at fair value	1,876,128	1,695,644
2. Invested securities lending cash collateral	274,156	250,856
3. Receivables:		
a. Employer contributions	13,755	4,874
b. Employee contributions	9,778	3,667
c. Securities sold, but not received	14,534	12,957
d. Accrued interest and dividends	2,194	1,926
e. Other	1,150	1,347
4. Total assets	2,191,695	1,971,270
LIABILITIES		
1. Payable upon return of securities	274,156	250,856
2. Accounts payable	3,856	3,991
3. Other payables	0	0
4. Securities purchased, but not paid	20,969	13,635
5. Total liabilities	298,981	268,482
Net assets held in trust for Plan benefits	**1,892,714**	**1,702,788**

Section 2.2 - Changes in Net Plan Assets

($'s in 000's)

	As of December 31	
	2013	2012
ADDITIONS		
1. Net investment (loss) income	299,369	168,235
2. Employer contributions	79,518	62,788
3. Employee contributions	56,792	48,342
4. Other income	0	0
Total additions	435,679	279,365
DEDUCTIONS		
1. Benefit payments	238,732	232,639
2. Contribution refunds, including interest	4,932	4,022
3. Administrative expenses	2,089	2,112
Total liabilities	245,753	238,773
NET ASSETS HELD IN TRUST FOR PLAN BENEFITS		
1. Beginning of year	1,702,788	1,662,196
2. Net (decrease) increase	189,926	40,592
End of year	**1,892,714**	**1,702,788**

Section 2.3 - Actuarial Value of Assets

The actuarial value of assets is the market value as of January 1, 2014 of $1,892,714,102.

Section 2.4 - Historical Asset Rate of Return

Year Ending December 31	Actuarial Value Annual Recognized Rate of Return	Fair Value Annual Market Rate of Return
2014	19.50% [1]	19.50% [1]
2013	11.27% [1]	11.27% [1]
2012	3.13% [1]	3.13% [1]
2011	4.80%	11.80%

[1] As reported by the Plan.

Section 2.5 - Forecast of Expected Benefit Payments

Year Ending December 31	Active Members	Inactive Members	Total Payments
2014	8,167,382	237,253,947	245,421,329
2015	19,972,952	232,062,368	252,035,320
2016	31,839,363	226,852,086	258,691,449
2017	43,581,729	221,417,248	264,998,977
2018	54,945,696	215,837,565	270,783,261
2019	66,386,346	210,024,616	276,410,962
2020	78,198,925	204,195,220	282,394,145
2021	90,733,945	198,034,075	288,768,020
2022	103,299,688	191,821,475	295,121,163
2023	115,841,557	185,376,643	301,218,200
2024	129,030,422	178,872,229	307,902,651
2025	142,485,073	172,265,244	314,750,317
2026	156,367,264	165,407,332	321,774,596
2027	170,389,937	158,428,537	328,818,474
2028	183,914,735	151,308,837	335,223,572
2029	196,820,683	144,146,951	340,967,634
2030	208,841,660	136,887,539	345,729,199
2031	219,354,562	129,567,142	348,921,704
2032	229,032,791	122,167,049	351,199,840
2033	237,864,488	114,764,048	352,628,536
2034	245,405,582	107,360,634	352,766,216
2035	251,086,374	100,042,284	351,128,658
2036	255,275,801	92,841,359	348,117,160
2037	258,367,780	85,704,704	344,072,484
2038	260,032,244	78,707,886	338,740,130
2039	260,181,951	71,903,331	332,085,282
2040	259,179,840	65,327,490	324,507,330
2041	257,235,545	59,016,131	316,251,676
2042	254,466,668	53,001,938	307,468,606
2043	250,884,425	47,311,323	298,195,748
2044	246,798,511	41,965,584	288,764,095
2045	242,077,426	36,985,546	279,062,972
2046	237,061,842	32,386,476	269,448,318
2047	231,468,229	28,173,205	259,641,434
2048	225,303,154	24,344,841	249,647,995
2049	218,623,693	20,892,070	239,515,763
2050	211,597,123	17,802,639	229,399,762
2051	204,127,369	15,059,440	219,186,809
2052	196,048,716	12,643,441	208,692,157
2053	187,709,919	10,534,356	198,244,275
2054	179,083,975	8,709,644	187,793,619
2055	170,227,719	7,144,663	177,372,382
2056	161,208,438	5,813,183	167,021,621
2057	152,101,606	4,691,087	156,792,693
2058	142,980,647	3,754,386	146,735,033
2059	133,895,372	2,980,659	136,876,031
2060	124,908,794	2,347,681	127,256,475
2061	116,061,786	1,835,069	117,896,855
2062	107,400,992	1,424,032	108,825,024
2063	98,973,420	1,097,675	100,071,095
2064	90,813,075	840,991	91,654,066
2065	82,961,017	640,837	83,601,854
2066	75,445,713	486,051	75,931,764

Section 2.5 – Continued
Forecast of Expected Benefit Payments

Year Ending December 31	Active Members	Inactive Members	Total Payments
2067	68,290,988	366,972	68,657,960
2068	61,515,715	275,942	61,791,657
2069	55,131,244	206,897	55,338,141
2070	49,150,826	154,837	49,305,663
2071	43,574,900	115,832	43,690,732
2072	38,396,532	86,749	38,483,281
2073	33,608,524	65,195	33,673,719
2074	29,205,506	49,221	29,254,727
2075	25,179,983	37,453	25,217,436
2076	21,523,661	28,792	21,552,453
2077	18,228,723	22,474	18,251,197
2078	15,285,434	17,897	15,303,331
2079	12,682,439	14,609	12,697,048
2080	10,407,205	12,242	10,419,447
2081	8,439,871	10,525	8,450,396
2082	6,759,938	9,263	6,769,201
2083	5,344,944	8,313	5,353,257
2084	4,171,130	7,571	4,178,701
2085	3,209,919	6,968	3,216,887
2086	2,435,183	6,448	2,441,631
2087	1,820,630	5,966	1,826,596
2088	1,341,570	5,496	1,347,066
2089	974,567	5,024	979,591
2090	698,123	4,544	702,667
2091	493,306	4,058	497,364
2092	343,968	3,564	347,532
2093	236,858	3,068	239,926
2094	160,971	2,603	163,574
2095	108,017	2,180	110,197
2096	71,627	1,796	73,423
2097	46,938	1,458	48,396
2098	30,393	1,160	31,553
2099	19,423	902	20,325
2100	12,255	681	12,936
2101	7,622	498	8,120
2102	4,664	349	5,013
2103	2,813	240	3,053
2104	1,672	161	1,833
2105	978	106	1,084
2106	558	68	626
2107	316	43	359
2108	175	27	202
2109	90	16	106
2110	45	10	55
2111	22	6	28

Note: Forecast based on the present members without assumption about replacement members.

Section 3
Accounting Information

Section 3.1 - Schedule of Funding Progress

($'s in 000's)

The GASB Statement No. 25 liabilities and assets resulting from the last ten actuarial valuations are as follows:

Actuarial Valuation Date		Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Projected Unit Credit (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
January 1, 2014	1	1,892,714	3,105,567	1,212,853	60.95%	550,616	220.27%
January 1, 2013		1,702,788	2,867,335	1,164,546	59.39%	548,515	212.31%
January 1, 2012	2	1,662,196	2,808,184	1,145,988	59.19%	541,354	211.69%
January 1, 2011	3	1,909,967	2,724,191	814,224	70.11%	528,288	154.13%
January 1, 2010		1,936,849	2,588,462	651,613	74.83%	567,173	114.89%
January 1, 2009		1,995,953	2,632,356	636,403	75.82%	594,139	107.11%
January 1, 2008	4	941,864	2,531,440	1,589,576	37.21%	571,314	278.23%
January 1, 2007	5	1,007,305	2,466,106	1,458,801	40.85%	562,567	259.31%
January 1, 2006		810,336	2,354,125	1,543,789	34.42%	547,532	281.95%
January 1, 2005		902,117	2,291,162	1,389,045	39.37%	544,442	255.13%

1 Effective January 1, 2014, the rate of return for disclosure purposes was changed to 8.25 percent.

2 Effective January 1, 2012, the actuarial value of assets was changed to market value.

3 Effective January 1, 2011, the rate of return for disclosure purposes was changed to 8.50 percent.

4 Effective January 1, 2008, the rate of return for disclosure purposes was changed to 8.75 percent. Prior year's information is based on a rate of 9.00 percent as defined in the terms of the bargaining agreement.

5 Effective January 1, 2007, retiree healthcare assets have been marked to the market value of the retiree healthcare account, and are disclosed under GASB No. 43. Previously, retiree healthcare assets disclosed under GASB No. 25 were allocated in proportion to actuarial accrued liabilities. Note that the increase in funded ratio is predominantly due to this change and without this change the funded ratio would have declined.

Section 3.2 - Schedule of Employer Contributions

($'s in 000's)

The GASB Statement No. 25 required contributions and actual percentages contributed over the last ten years are as follows:

Fiscal Year Ended December 31	Valuation Date December 31	Authority Contribution	Annual Required Contribution	Percentage Contributed
2013	2012	79,518	157,594	50.5%
2012	2011	62,788	155,600	40.4%
2011	2010	60,318	123,158	49.0%
2010	2009	56,216	108,478	51.8%
2009	2008	41,448	118,717	34.9%
2008	2007	1,165,947	206,670	564.2%
2007	2006	25,038	198,457	12.6%
2006	2005	23,931	194,926	12.3%
2005	2004	19,850	180,227	11.0%
2004	2003	20,210	153,253	13.2%

Section 3.3 - Notes to Trend Data

Actuarial Assumptions, Method and Additional Information under GASB No. 25

Valuation Date:	January 1, 2014
Actuarial Cost Method:	Projected Unit Credit
Amortization Method:	Level Dollar
Amortization Period:	30
Asset Valuation Method:	Market Value
Investment Rate of Return	8.25%
Salary Increases (including merit increases and wage inflation)	Service graded table starting at 9% with 4% ultimate rate after 5 years of service

Section 4
Actuarial Funding Projections

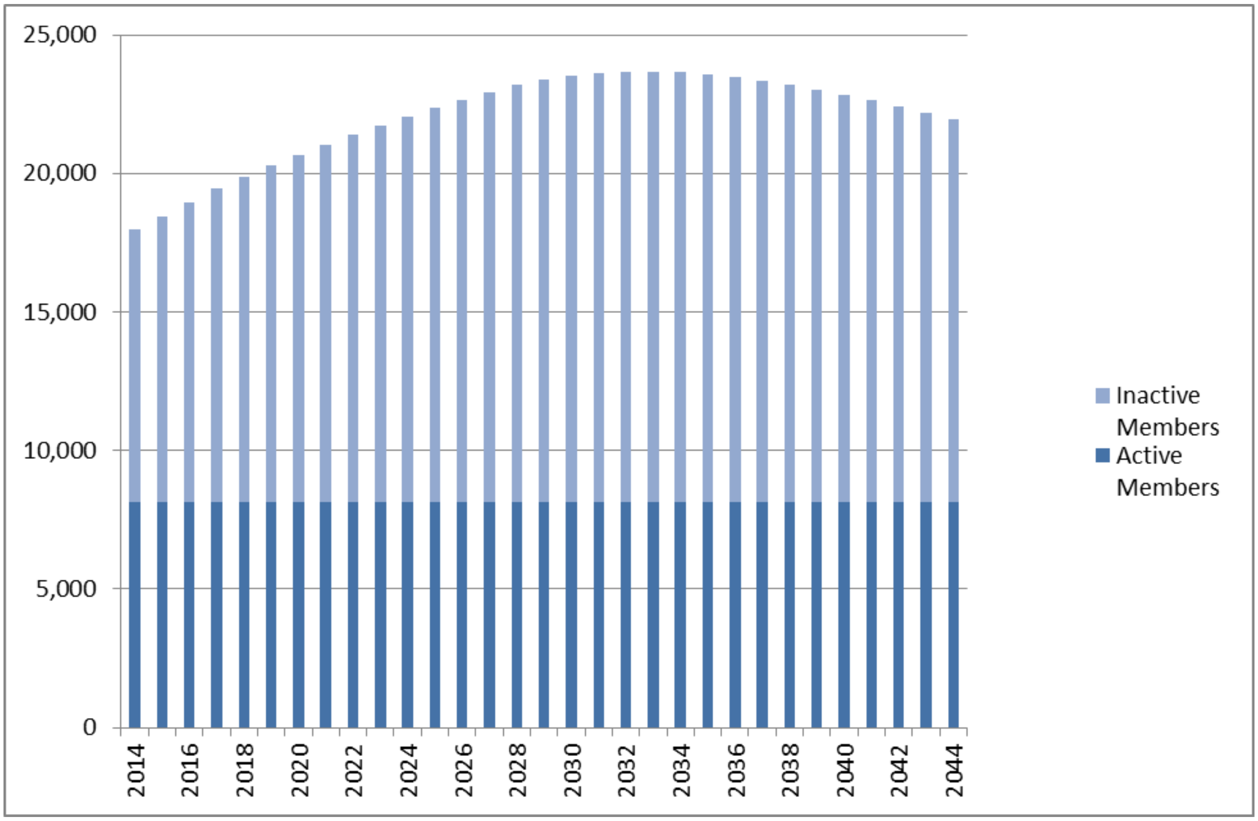
Section 4.1 - Projection Assumptions and Methods

Key Assumptions

- 8.25% investment return on the Fair Value of Assets in all future years.
- The Actuarial Value of Assets is the Market Value of Assets.
- Actuarial assumptions and methods as described in Section 6. All future demographic experience is assumed to be exactly realized.
- The actuarially calculated contribution is contributed each year.
- Projections assume a 0% increase in the total active member population. All new future members are expected to enter the plan after 12 months of continuous service and contribution rates are determined as a percent of total payroll.

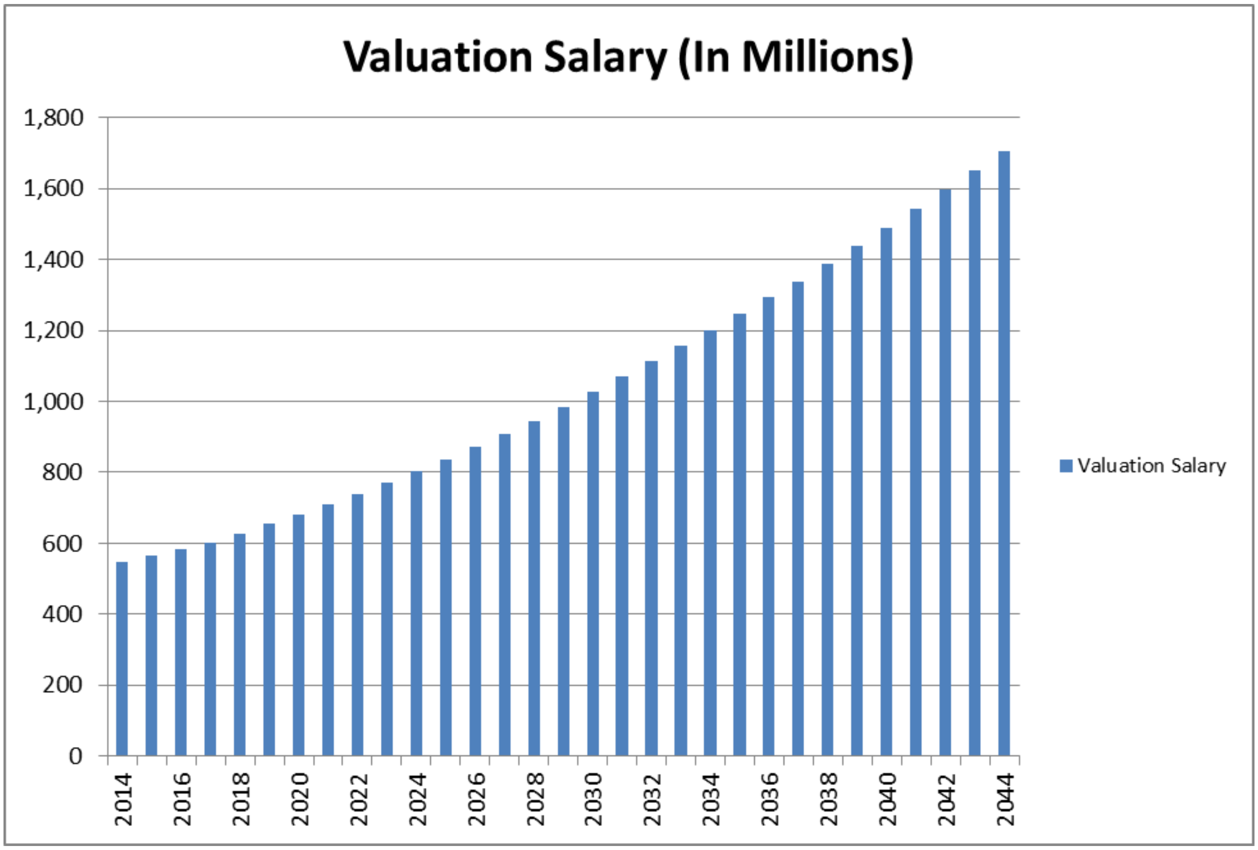
Section 4.2 - Membership Projection

Projected Member Count

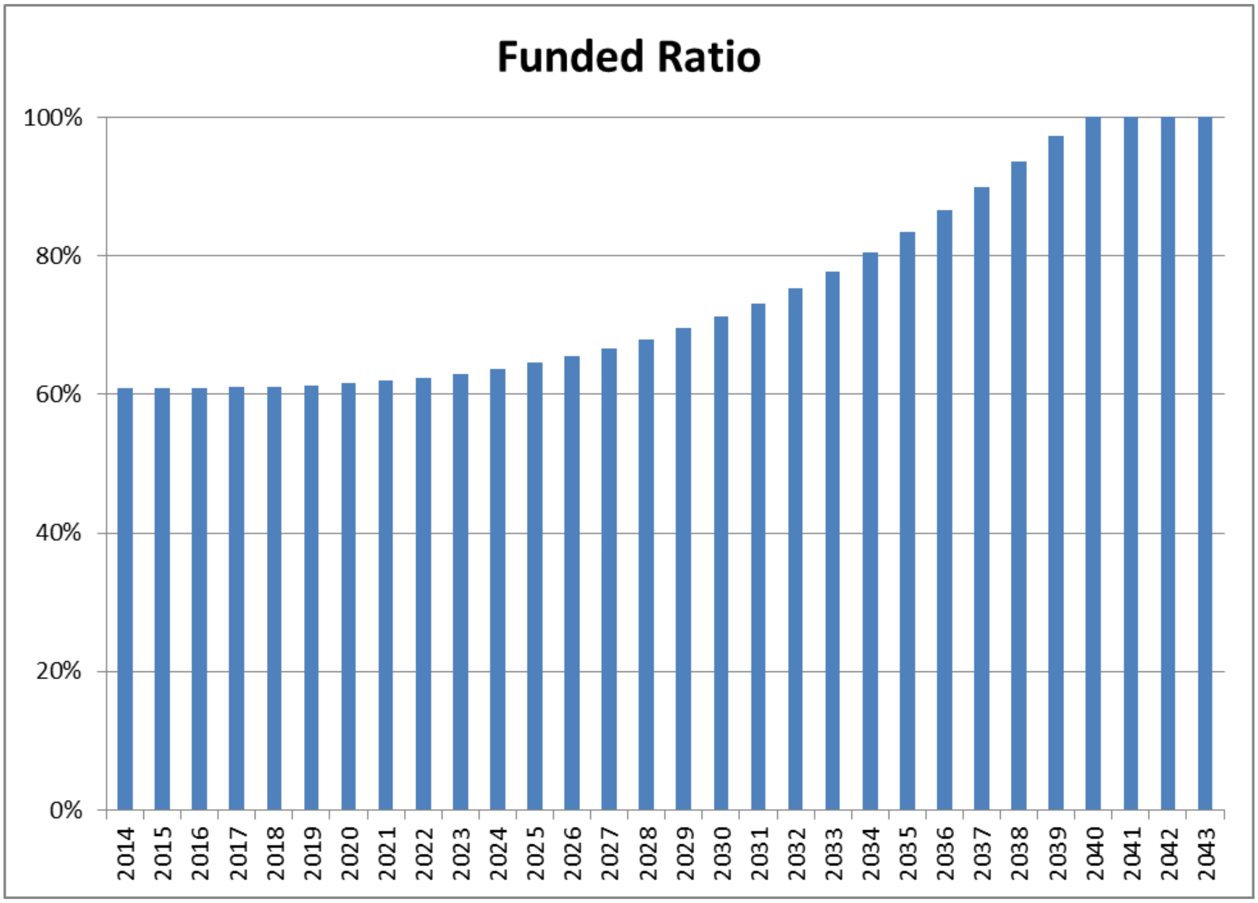


Section 4.2 – Continued
Membership Projection

Projected Current and New Member Payroll



Section 4.3 - Projection of Funded Status



Section 5
Member Data

Section 5.1 - Summary of Membership Data as of January 1, 2014

($ in 000's)

Active Employees

Item	Male	Female	Total
Number of Members [1]	5,712	2,474	8,186
Annual Salaries [2]	$403,637	$146,979	$550,616
Average Age [1]	48.38	47.34	48.06
Average Service [1]	14.72	12.98	14.19

Terminated Vested Employees

Item	Male	Female	Total
Number of Members	69	26	95
Annual Accrued Benefit	$1,814	$628	$2,442
Average Age	55.59	54.89	55.40

Retirees and Beneficiaries

Item	Male	Female	Total
Number of Members	6,576	2,060	8,636
Annual Retirement Benefit	$182,563	$39,297	$221,860
Average Age	69.9	71.04	70.17

Disabled Retirees

Item	Male	Female	Total
Number of Members	614	443	1,057
Annual Disability Benefit	$10,039	$6,175	$16,214
Average Age	63.62	62.07	62.97

1 Active statistics include all participants who are actively employed which includes 17 participants who are on leave and 49 participants who have opted out of participating in the Plan and are only entitled to a return of their contributions.

2 The salary information for the 49 participants who have opted out of participating in the Plan is not included.

Section 5.2 - Age and Service Distribution of Active Members as of January 1, 2014

Number of Participants

Age	Years of Service Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	Over 40	Total
Under 25	23	2	-	-	-	-	-	-	-	25
25-29	100	96	1	-	-	-	-	-	-	197
30-34	185	276	130	4	-	-	-	-	-	595
35-39	132	258	348	92	3	-	-	-	-	833
40-44	163	274	451	355	64	1	-	-	-	1,308
45-49	143	225	433	394	338	94	1	-	-	1,628
50-54	103	215	400	341	289	234	32	1	-	1,615
55-59	71	145	272	224	234	161	67	20	1	1,195
60-64	32	68	134	124	108	75	26	33	10	610
Over 65	11	26	32	33	26	19	9	9	15	180
Total	963	1,585	2,201	1,567	1,062	584	135	63	26	8,186

Section 5.3 - Retirement Retiree and Beneficiary Data as of January 1, 2014

Number and Average Annual Allowance

Age Last Birthday	Number	Annual Allowance	Average Allowance
Retired Annuitants			
Under 50	37	$1,460,403	$39,470
50-54	200	$7,937,193	$39,686
55-59	628	$23,187,012	$36,922
60-64	1,378	$43,853,680	$31,824
65-69	2,157	$61,156,023	$28,352
70-74	1,621	$40,828,758	$25,187
75-79	899	$19,722,961	$21,939
Over 79	888	$14,933,584	$16,817
Total	7,808	$213,079,614	$27,290
Surviving Spouses			
Under 50	6	$70,451	$11,742
50-54	20	$309,352	$15,468
55-59	37	$383,434	$10,363
60-64	62	$1,007,086	$16,243
65-69	110	$1,499,215	$13,629
70-74	145	$1,640,573	$11,314
75-79	119	$1,168,067	$9,816
Over 79	329	$2,701,703	$8,212
Total	828	$8,779,881	$10,604
Disability Allowances			
Under 50	104	$1,589,983	$15,288
50-54	126	$2,242,469	$17,797
55-59	150	$2,690,265	$17,935
60-64	204	$3,259,722	$15,979
65-69	231	$3,396,891	$14,705
70-74	134	$1,737,207	$12,964
75-79	77	$945,456	$12,279
Over 79	31	$352,041	$11,356
Total	1,057	$16,214,034	$15,340

Section 5.4 - Inactive Vested Employee Data as of January 1, 2014

Number and Average Accrued Benefit

Age Last Birthday	Number	Annual Accrued Benefit	Average Accrued Benefit
Terminated Vested			
Under 35	-	-	-
35-39	-	-	-
40-44	6	$123,424	$20,571
45-49	12	$349,357	$29,113
50-54	26	$760,104	$29,235
55-59	27	$771,569	$28,577
60-64	24	$437,150	$18,215
65-69	-	-	-
Over 70	-	-	-
Total	95	$2,441,604	$25,701

Section 6
Basis of the Actuarial Valuation

Section 6.1 - Summary of Plan and Contribution Provisions

Eligibility—All full-time permanent employees of the Chicago Transit Authority are included in the Plan after completing 12 months of continuous service unless specifically excluded by the terms of a collective bargaining agreement. Exempt non-vested employees may opt out of the plan. Chicago Transit Authority Board members are not included.

Contributions—The Chicago Transit Authority will contribute a percent of compensation for all participating employees and each participating employee will contribute a percent of his compensation to the Plan:

Annual Contributions to the Plan (Percentage of Compensation)	
Authority	Employees
14.250%	10.125%

For years through 2040, the amount paid by the Authority with respect to debt service on bonds issued for contribution to the Retirement Plan shall be treated as a credit against the amount of required contribution up to an amount not to exceed six percent of compensation paid by the Authority in the following year. The amount paid in debt service is always greater than six percent of projected compensation.

In order to be eligible for the credit, the debt service payment may not be paid with the proceeds of bonds or notes issued by the CTA for any calendar year after 2008. Buck has confirmed that the debt service payment for the year triggering the credit was not paid with the proceeds of bonds or notes issued by the CTA for any calendar year after 2008.

Minimum contributions as set forth elsewhere in this report may also apply.

Normal Retirement—The normal retirement age is 65. For employees retiring on or after January 1, 2001 the annual normal retirement pension is equal to the sum of (a) and (b) below, but not greater than 70.0% of the employee's average annual compensation:

(a) 1% of the employee's past service compensation as of May 31, 1948, for each full year of continuous service prior to June 1, 1949, plus

(b) 2.15% of average annual compensation for each year (and fraction of completed calendar months) of continuous service after June 1, 1949.

Average annual compensation is equal to the highest average compensation over any four calendar years out of the final 10 calendar years prior to normal retirement (or actual retirement, if later). If an employee has at least 20 years of service, his minimum annual pension is $2,220.

Section 6.1 – Continued
Summary of Plan and Contribution Provisions

Early Retirement:

Employees hired before January 18, 2008: An employee may retire early after attaining age 55 and completing at least three years of continuous service, or after completion of 25 years of continuous service. The early retirement pension is equal to the accrued normal retirement pension based on compensation and service at early retirement, reduced by 5% for each year or fraction younger than age 65. The 5% per year reduction is not applied if the employee has at least 25 years of service. Employees hired after September 5, 2001 may retire early with unreduced benefits after attaining age 55 and completing at least 25 years of service.

Employees hired on and after January 18, 2008: An employee may retire with unreduced benefits upon attainment of age 64 with 25 years of service. An employee may retire with a benefit reduced as described above upon attainment of age 55 with 10 years of continuous service.

Disability Allowance:

An employee is eligible for a disability allowance if he becomes disabled after completing 10 years of service, or if his disability after completing five years of service is covered under the Workmen's Compensation Act. An employee is disabled if he either (a) is totally and permanently disabled or (b) is unable to return to work after receiving 26 weeks of benefits under the Authority's Group Accident and Sickness Insurance or from the Authority under the Workmen's Compensation Act. The disability allowance is equal to the normal retirement pension based on compensation and service at disability subject to a minimum annual pension of $4,800.

Death Benefits:

If an employee dies prior to retirement or disability and after one year of service, his contributions, accumulated with interest, are paid to his beneficiary. "Interest" is equal to the rate of interest earned by the Fund (to a maximum of 2%) prior to January 1, 1971, 1/2 of the rate of interest earned by the Fund (to a maximum of 3%) between January 1, 1971, and January 1, 1980, and 3% after December 31, 1979. If an employee dies after 90 days of service but prior to one year of service, his contributions, without interest, are paid to his beneficiary; and if he dies prior to 90 days of service, his contributions are not refunded.

If an employee is eligible for early retirement, he is automatically covered by a surviving spouse benefit, payable upon his death prior to retirement, in lieu of a return of his contributions. The spouse benefit is equal to 1/2 of the pension which would have been payable to the employee if he had retired on the first day of the month of his death and had elected an optional form of pension providing 1/2 of his reduced pension to his surviving spouse. Employees may elect not to be covered by this option and provide for the payment of their contributions with interest to their beneficiary in lieu thereof.

If an employee dies after his retirement pension has commenced, his beneficiary receives the excess, if any, of his contributions, accumulated with interest to his retirement date, over the sum of the pension payments made to him. However, if his surviving spouse is entitled to a pension after his death, such excess will not be paid to his beneficiary. At the death of the surviving spouse, the excess, if any, of the contributions accumulated with interest to his retirement date over the sum of the pension payments made to him and his surviving spouse will be paid.

Section 6.1 – Continued
Summary of Plan and Contribution Provisions

A retired employee's beneficiary will receive a death benefit equal to the amount from the following schedule according to the employee's age and service at retirement:

Age	Service	Age + Service	Death Benefit
65	20	N/A	$8,000
60	N/A	90	$8,000
N/A	25	N/A	$8,000
N/A	N/A	94	$8,000
60-64	20	N/A	$6,000
55-59	20	N/A	$5,000
All Others			$2,000

Termination Benefits:

If an employee terminates his employment prior to eligibility for retirement or disability and after completing one year of service, he receives a refund of his contributions plus interest (3% after December 31, 1979). If he terminates after 90 days but prior to one year, he receives his contributions without interest, and if he terminates less than 90 days after hire, he receives no refund. If an employee has completed 10 years of continuous service and elects to leave his contributions in the Plan, he remains entitled to his normal retirement pension beginning at age 65 but based on his compensation and service at termination.

Optional Benefit Forms:

In lieu of a normal pension, an employee may elect an optional annuity of equivalent actuarial value providing payments of 1/2, 2/3, or all of his reduced pension to his spouse after his death (Option A). Alternatively, an employee may elect an optional annuity of equivalent actuarial value providing payments of 1/2, 2/3, or all of his reduced pension to his spouse after his death with the further provision that his benefit will be restored to the full amount to him after the death of his spouse (Option B).

Retired Employees:

Benefits for retired employees have been valued according to benefits in effect at time of retirement as modified by subsequent amendments. Such benefits are kept on records maintained by the Authority.

Voluntary Early Retirement Incentive Program:

During 1997, the Plan was amended to offer enhanced retirement benefits to all employees who have at least 25 years of continuous service on or before December 31, 1999, and who have not retired prior to January 1, 1997. Those eligible on or before June 30, 1997 must elect to participate during the period March 1, 1997, to June 30, 1997. Employees eligible during the period July 1, 1997, to December 31, 1999, must elect to participate between July 1, 1997, and February 28, 1998. All eligible employees who elect to participate must retire no later than December 31, 1999. The benefit is determined based on a formula multiplier of 2.40% of average annual compensation with the benefit cap at 70.0% of such average annual compensation.

Section 6.1 – Continued
Summary of Plan and Contribution Provisions

Ad hoc increases in retiree benefits:

As part of the Arbitration Award ruling of November 13, 2003, the following ad hoc increases were given to retirees in payment status as of January 1, 2000:

(a) $75 per month for members retired before January 1,1980

(b) $50 per month for members who retired on or after January 1, 1980, but before January 1, 1991

(c) $40 per month for members who retired on or after January 1, 1991, but before January 1, 2000

As part of an Arbitration Award ruling of June 26, 2007, another ad hoc adjustment was made for participants.

Contribution Requirements Under P.A. 95-0708

Beginning January 18, 2008, the Authority shall make contributions to the Retirement Plan in an amount equal to 12 percent of compensation and participating employees shall make contributions in an amount equal to six percent of compensation. For years through 2040, the amount paid by the Authority with respect to debt service on bonds issued for contribution to the Retirement Plan shall be treated as a credit against the amount of required contribution, up to an amount not to exceed six percent of compensation paid by the Authority in the following year.

If the funded ratio is projected to decline below 60 percent in any year before 2040 using reasonable actuarial assumptions and the projected unit credit funding method, the contribution shall be increased so that the funded ratio is not projected to drop below 60 percent. If the funded ratio actually drops below 60 percent in any year before 2040, the contribution shall be increased so that the funded ratio is projected to reach 60 percent within 10 years. The increase in contributions shall be effective as of the January 1 following the determination, or 30 days following the determination, whichever is later. One-third of the increase in contributions shall be paid by participating employees and two-thirds by the Authority.

Beginning in 2040, the minimum contribution for each fiscal year shall be predetermined each year as the amount required to bring the total assets of the Retirement Plan up to 90 percent of the total actuarial liabilities by the end of 2059, using the projected unit credit funding actuarial cost method and reasonable actuarial assumptions. Participating employees shall be responsible for one-third of the required contribution and the Authority shall be responsible for two-thirds of the required contribution.

Beginning in 2060, the minimum contribution for each year shall be an amount needed to maintain the total assets of the Retirement Plan at 90 percent of the total actuarial liabilities of the Plan and the contribution shall be funded one-third by participating employees and two-thirds by the Authority.

Section 6.2 - Description of Actuarial Methods and Valuation Procedures

A. Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the **Projected Unit Credit Cost Method** of funding.

Sometimes called a "funding method," this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Projected Unit Credit Cost Method, the **Normal Cost** for the given year is computed as the present value of the unit of benefit attributable to that year for each active Member. The Normal Cost for the Plan is determined by summing individual results for each active Member.

The **Actuarial Accrued Liability** under this method at any point in time is equal to the present value of benefits accrued to the measurement date using a service pro-rate method.

The **Unfunded Actuarial Accrued Liability** is the excess of the Actuarial Accrued Liability over the Actuarial Value of Plan Assets actually on hand on the valuation date. The Unfunded Actuarial Accrued Liability is amortized as a level dollar amount over a fixed period of 30 years.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the Unfunded Actuarial Accrued Liability.

Section 6.2 – Continued
Description of Actuarial Methods and Valuation Procedures

B. Asset Valuation Method

The actuarial value of assets equals the market value of assets.

C. Valuation Procedures

No actuarial liability is included for members who terminated non-vested prior to the valuation date, except those due a refund of contributions.

The compensation amounts used in the projection of benefits and liabilities were January 1, 2014, rates of pay provided by staff of the Retirement Board of Trustees.

No termination or retirement benefits were projected to be greater than the dollar limitation required by the Internal Revenue Code Section 415 for governmental plans.

Annual increases in salary were limited to the dollar amount defined under Internal Revenue Code Section 401(a)(17) for affected members.

Section 6.3 - Summary of Actuarial Assumptions and Changes in Assumptions

Retiree Benefits: The benefit amounts received for retirees were compared to information received from the Authority for the prior valuation.

Earnings on Plan Assets: 8.25% per annum, compounded annually.

Salary Inflation: 3.25%

Compensation Increases: According to the following table, compounded annually, assumed end of year (includes inflation):

Years of Service	Rate
1	9.00%
2	11.00%
3	16.00%
4	5.00%
>=5	4.00%

Mortality:

(a) *Active Members* — RP2000 Blue Collar Table, generational to 2016 based on Scale BB and then fully generational.

(b) *Retirees & Survivors* — RP2000 Blue Collar Table, generational to 2016 based on Scale BB and then fully generational.

(c) *Disabled Employees* — RP2000 Disabled Table, generational to 2016 based on Scale BB and then fully generational.

Section 6.3 – Continued
Summary of Actuarial Assumptions and Changes in Assumptions

Withdrawals from Service: According to the following table shown for illustrative ages:

Age	Rates of Termination for Reasons Other than Death or Disability
25	7.00%
30	5.10%
35	4.10%
40	2.90%
45	2.40%
50	1.90%
55 & Older	0.00%

If service is 25 or greater, no withdrawal is assumed.

Recovery from disability without returning to work: Disabled members are assumed to recover according to the following table as shown for illustrative ages:

Sample Attained Ages	Disabled Recovery [1]	
	Men	Women
30	0.412%	0.461%
35	0.406%	0.447%
40	0.382%	0.422%
45	0.326%	0.393%
50	0.216%	0.343%
55	0.013%	0.248%
60	0.000%	0.012%
65	0.000%	0.000%
70	0.000%	0.000%
75	0.000%	0.000%
80	0.000%	0.000%

1. Disability recovery after verification of the ability to return to work in the same position as determined by the Plan's Disability manager.

Section 6.3 – Continued
Summary of Actuarial Assumptions and Changes in Assumptions

Disability Allowance: According to the following table as shown for illustrative ages:

Age	Rate of Disability
25	0.10%
30	0.10%
35	0.20%
40	0.30%
45	0.40%
50	0.50%
55	0.60%
60	0.70%
65 & older	0.78%

Section 6.3 – Continued
Summary of Actuarial Assumptions and Changes in Assumptions

Service Retirements:

Age	Pre 1/19/2008 Hires Probability of Retirement		Post 1/18/2008 Hires Probability of Retirement	
	Service<25	Service>25	Service<25	Service>25
45-54	0.00%	20.00%	0.00%	0.00%
55	1.50%	20.00%	1.50%	1.50%
56	1.50%	22.50%	1.50%	1.50%
57	2.00%	25.00%	2.00%	2.00%
58	2.00%	27.50%	2.00%	2.00%
59	2.00%	30.00%	2.00%	2.00%
60	2.50%	32.50%	2.50%	2.50%
61	4.00%	35.00%	4.00%	4.00%
62	15.00%	37.50%	20.00%	20.00%
63	15.00%	40.00%	15.00%	15.00%
64	20.00%	42.50%	15.00%	15.00%
65	30.00%	45.00%	60.00%	60.00%
66	30.00%	45.00%	25.00%	25.00%
67	30.00%	45.00%	25.00%	25.00%
68	30.00%	45.00%	25.00%	25.00%
69	30.00%	45.00%	25.00%	25.00%
70-74	30.00%	45.00%	30.00%	30.00%
75	100.00%	100.00%	100.00%	100.00%

Spouse Data: 75% of employees eligible at retirement are assumed to be married, 50% of those married are assumed to elect a spouse option (Option A–50%) and the average equivalency factor to convert their accrued pension to a spouse option (Option A–50%) is assumed to be 85%. A wife is assumed to be 3 years younger than her husband. Actual dependent coverage data was used for participants retired as of the valuation date.

Section 6.3 – Continued
Summary of Actuarial Assumptions and Changes in Assumptions

Miscellaneous and Technical Assumptions:

Pay Increase Timing:	End of (Fiscal) year.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service from date of participation is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used directly based on assumptions, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and turnover do not operate after 25 years of service.

Summary of changes since January 1, 2013 Valuation

The following assumptions were updated due to the experience study completed as of January 1, 2014.

- Rates of Retirement
- Rates of Mortality
- Rates of Termination
- Rates of Disability
- Salary Increases

The earnings on plan assets was lowered from 8.50% to 8.25%.

Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund pension benefits arising from service in all prior years.
Actuarial Cost Method	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension plan for a group of plan members to the years of service that give rise to that cost.
Actuarial Present Value of Future Benefits	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
Actuarial Valuation	Study of probable amounts of future pension benefits and the necessary amount of contributions to fund those benefits.
Actuary	Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.
Annual Required Contribution	Disclosure measure of annual pension cost.
GASB 25	Governmental Accounting Standards Board Statement Number 25 which specifies how the Annual Required Contribution (ARC) is to be calculated.
Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the plan as a whole.
Unfunded Actuarial Accrued Liability (UAAL)	The portion of the actuarial accrued liability not offset by plan assets.