STATE OF ILLINOIS

OFFICE OF THE AUDITOR GENERAL

2012 ANNUAL REVIEW

INFORMATION SUBMITTED BY THE RETIREMENT PLAN FOR CTA EMPLOYEES

NOVEMBER 2012

WILLIAM G. HOLLAND

AUDITOR GENERAL

SPRINGFIELD OFFICE:
ILES PARK PLAZA
740 EAST ASH • 62703-3154
PHONE: 217/782-6046
FAX: 217/785-8222 • TTY: 888/261-2887
FRAUD HOTLINE: 1-855-217-1895

CHICAGO OFFICE:
MICHAEL A. BILANDIC BLDG. • SUITE S-900
160 NORTH LASALLE • 60601-3103
PHONE: 312/814-4000
FAX: 312/814-4006
FRAUD HOTLINE: 1-855-217-1895

OFFICE OF THE AUDITOR GENERAL
WILLIAM G. HOLLAND

To the Legislative Audit Commission, the Speaker and Minority Leader of the House of Representatives, the President and Minority Leader of the Senate, the members of the General Assembly, and the Governor:

This is our 2012 Annual Review of Information Submitted by the Retirement Plan for Chicago Transit Authority Employees.

The review was conducted pursuant to Public Act 95-708 which amended the Illinois State Auditing Act by adding a requirement for the Auditor General to annually review and report on information submitted by the Board of Trustees of the Retirement Plan for Chicago Transit Authority Employees.

The report for this review is transmitted in conformance with Section 5/3-2.3(e) of the Illinois State Auditing Act.

WILLIAM G. HOLLAND
Auditor General

Springfield, Illinois
November 2012

STATE OF ILLINOIS
OFFICE OF THE
AUDITOR GENERAL
William G. Holland, Auditor General

SUMMARY REPORT DIGEST

REVIEW OF INFORMATION SUBMITTED BY THE RETIREMENT PLAN FOR CHICAGO TRANSIT AUTHORITY EMPLOYEES

2012 ANNUAL REVIEW
Release Date: November 2012

SYNOPSIS

The Illinois State Auditing Act requires the Retirement Plan for Chicago Transit Authority Employees (Retirement Plan) to submit its most recent audit, annual statement, and actuarial statement to the Office of the Auditor General (OAG) by September 30 of each year. These documents were submitted by the Retirement Plan on September 28, 2012. The OAG reviewed these documents and concluded that the Retirement Plan had complied with the requirements established in the Auditing Act.

The Illinois Pension Code (40 ILCS 5/22-101(e)(3)) requires the Retirement Plan determine, based on a report prepared by an enrolled actuary, the estimated funded ratio of the total assets of the Retirement Plan to its total actuarially determined liabilities. The Retirement Plan is also required to determine the contribution rates needed to meet the funding requirements established by the Pension Code. The Auditor General is then required to review the Retirement Plan's determination and assumptions to determine whether they are "*unreasonable in the aggregate*". This report does not constitute an audit as that term is defined in generally accepted government auditing standards.

- The OAG reviewed the Retirement Plan's assumptions in the January 1, 2012 Actuarial Valuation and concluded they were not unreasonable in the aggregate.
  - As in our prior Annual Reviews, we continue to conclude that the investment return assumption used by the Plan is an optimistic assumption. According to the Plan, its actuary conducted an analysis and concluded that the 8.50 percent investment rate of return falls within the 25^{th} to 75^{th} percentile of expected returns and is thus compliant with Actuarial Standard of Practice No. 27. However, the 8.50 percent return is at the upper range of investment returns for comparable plans. The Plan indicated that the investment return assumption will be reviewed in its next experience study, scheduled for 2013.
- In September 2012, the Retirement Plan increased the employer and employee contribution rates for 2013 as delineated in the January 1, 2012 Actuarial Valuation: the employer rate increased from 11.3 to 14.250 percent (which is net of the employer debt service credit of 6% of pay); the employee rate increased from 8.65 to 10.125 percent. The January 1, 2012 Actuarial Valuation noted that contribution increases were necessary to have the Plan's funded ratio at the statutorily required 60 percent level within 10 years of 2012 (i.e., by 2022) and all subsequent years through 2039.
- The funded ratio of the Retirement Plan declined from 70.1 percent as of January 1, 2011 to 59.2 percent as of January 1, 2012. The actuarial value of assets was $1.662 billion at January 1, 2012 and the actuarial accrued liability was $2.808 billion.

ANNUAL REVIEW
RESULTS AND CONCLUSIONS

STATUTORY REQUIREMENTS

The Illinois State Auditing Act (30 ILCS 5/3-2.3(e)) requires the Retirement Plan for Chicago Transit Authority Employees (Retirement Plan) to submit an audit, annual statement, and actuarial statement to the Office of the Auditor General (OAG) by September 30 of each year.

OAG reviewed the documents submitted by the Retirement Plan and concluded the Retirement Plan had complied with the Auditing Act.

- On September 28, 2012, the Retirement Plan submitted these documents to the Auditor General.

- The OAG reviewed these documents and concluded that the Retirement Plan had complied with the requirements established in the Auditing Act.

In addition, the Illinois Pension Code (40 ILCS 5/22-101(e)(3)) requires the Retirement Plan determine the estimated funded ratio of the total assets of the Retirement Plan to its total actuarially determined liabilities, based on a report prepared by an enrolled actuary.

- The Retirement Plan is also required to determine the contribution rates needed to meet the funding requirements established by the Pension Code.

- The Auditor General is then required to review the determination and the assumptions to determine whether they are "*unreasonable in the aggregate*". (pages 3-5)

REVIEW OF ACTUARIAL VALUATION

The Retirement Plan submitted the Actuarial Valuation as of January 1, 2012 to the OAG on September 28, 2012. This Actuarial Valuation was accepted by the Retirement Plan's Board of Trustees (Board) at its September 25, 2012 meeting.

The OAG and our consultants, Aon Hewitt, reviewed the Retirement Plan's assumptions contained in the January 1, 2012 Actuarial Valuation and concluded that they were not unreasonable in the aggregate. Our report does not constitute an audit as that term is defined in generally accepted government auditing standards.

The Retirement Plan's assumptions were not unreasonable in the aggregate.

As in our prior Annual Reviews, we continue to conclude that the investment return assumption used by the Plan is an optimistic assumption. According to the Plan, its actuary conducted an analysis and concluded that the 8.50 percent investment rate of return falls within the 25th to 75th percentile of expected returns and is thus compliant with Actuarial Standard of Practice No. 27. Also, since 1990, the Plan has averaged an 8.99 percent rate of return on its investments, according to the Plan's Investment Report for the period ending December 31, 2011. However, the 8.50 percent return is at the upper range of investment returns for comparable plans. The Plan indicated that the investment return assumption will be reviewed in its next experience study, scheduled for 2013. (pages 5-8)

January 1, 2012:

- **Assets . . . . $1.662 billion**
- **Liabilities . . . .$2.808 billion**
- **Funded Ratio 59.2%**

The funded ratio of the Retirement Plan declined from 70.1 percent as of January 1, 2011 to 59.2 percent as of January 1, 2012. The actuarial value of assets was $1.910 billion at January 1, 2011. At January 1, 2012, the actuarial value of assets was $1.662 billion and the actuarial accrued liability was $2.808 billion. According to the Retirement Plan's January 1, 2012 Actuarial Valuation, there were two major reasons for the decline in the actuarial value of assets and the funded ratio.

- First, the Plan revised its asset valuation method from a five year smoothed method to the actual market value of the assets as of January 1, 2012. According to the January 1, 2012 Actuarial Valuation, this resulted in a $183.3 million reduction in the actuarial value of assets and decreased the Plan's funded ratio by 6.5 percent.

- Second, the Plan's experience differed from the assumptions that were used in the prior Valuation. The largest contributing factor was that the assumed 8.50 percent rate of return was not met -- the actual rate of return on the actuarial value of assets before the asset valuation method change for the year ending December 31, 2011 was 2.87 percent, resulting in an asset loss of $104.3 million. This loss increased the unfunded actuarial accrued liability by $104.3 million and decreased the funded ratio by 3.7 percent. Also, demographic experience (such as mortality, turnover, retirement, pay increases, etc.) that differed from actuarial projections increased the Plan's unfunded accrued actuarial liability by $34.5 million. (pages 11-12)

CONTRIBUTION RATES

The Pension Code requires the CTA to contribute 12 percent of pay, less up to a 6 percent credit for debt service paid on the bonds issued for contribution to the Retirement Plan; employees are required to pay 6 percent of pay. The Pension Code further requires that contribution rates be increased if the funded ratio declines, or is projected to decline, below 60 percent prior to 2040, with the CTA paying two-thirds and employees one-third of the required contribution.

For 2013, the Board increased employee contribution rates from 8.65% to 10.125% of pay and employer contribution rates from 11.3% to 14.250% of pay (the employer contribution rate is net of debt service credit of 6% of pay).

- In September 2012, the Retirement Plan increased the employer and employee contribution rates for 2013 as delineated in the January 1, 2012 Actuarial Valuation: the employer rate increased from 11.3 to 14.250 percent (which is net of the employer debt service credit of 6% of pay); the employee rate increased from 8.65 to 10.125 percent.

- The January 1, 2012 Actuarial Valuation noted that contribution increases were necessary to have the Plan's funded ratio at the statutorily required 60 percent level within 10 years of 2012 (i.e., by 2022) and all subsequent years through 2039. (page 11)

WILLIAM G. HOLLAND
Auditor General

WGH:JS

This Annual Review was conducted by OAG staff with the assistance of our consultants, Aon Hewitt.

TABLE OF CONTENTS

2012 Annual Review

Information Submitted by the Retirement Plan for CTA Employees

The Illinois State Auditing Act (30 ILCS 5/3-2.3(e)), as amended by Public Act 95-708, requires the Auditor General to review certain documents submitted by the Board of Trustees of the Retirement Plan for Chicago Transit Authority Employees (Retirement Plan). In addition, the Illinois Pension Code (40 ILCS 5/22-101(e)(3)) requires the Retirement Plan to determine, based on a report prepared by an enrolled actuary, the estimated funded ratio of the Retirement Plan's total assets to its total actuarially determined liabilities. The Plan is also required to determine the employee and employer contribution rates needed to meet funding requirements established by the Pension Code. The Auditor General is then required to review the determination and the assumptions on which it is based and determine whether they are "unreasonable in the aggregate".

REPORT CONCLUSIONS

The Auditing Act (30 ILCS 5/3-2.3(e)) requires the Retirement Plan to submit to the Office of the Auditor General (OAG) an audit, an annual statement, and an actuarial statement by September 30 of each year. On September 28, 2012, the Retirement Plan submitted these documents to the OAG. The OAG reviewed these documents and concluded that the Retirement Plan had complied with the requirements established in the Auditing Act.

In addition, the Illinois Pension Code (40 ILCS 5/22-101(e)(3)) requires the Retirement Plan to determine, based on a report prepared by an enrolled actuary, the estimated funded ratio of the Retirement Plan's total assets to its total actuarially determined liabilities. The Plan is then required to determine the employee and employer contribution rates needed to meet funding requirements established by the Pension Code. The Auditor General is required to review the determination and the assumptions on which it is based and determine whether they are "unreasonable in the aggregate".

The Retirement Plan submitted the Actuarial Valuation as of January 1, 2012, to the OAG on September 28, 2012. This Actuarial Valuation was presented to the Retirement Plan Board at its September 25, 2012 meeting. At that meeting, the Board of Trustees accepted the January 1, 2012 Actuarial Valuation and certified the employer and employee contribution rates for 2013.

The OAG and our consultants, Aon Hewitt, reviewed the Retirement Plan's assumptions contained in the January 1, 2012 Actuarial Valuation and concluded that they were not unreasonable in the aggregate. As in our prior Annual Reviews, we continue to conclude that the investment return assumption used by the Plan is an optimistic assumption. According to the Plan, its actuary conducted an analysis and concluded that the 8.50 percent investment rate of return falls within the 25th to 75th percentile of expected returns and is thus compliant with Actuarial Standard of Practice No. 27. Also, since 1990, the Plan has averaged an 8.99 percent rate of return on its investments, according to the Plan's Investment Report for the period ending December 31, 2011. However, the 8.50 percent return is at the upper range of investment returns for comparable plans. The Plan indicated that the investment return assumption will be reviewed in its next experience study, scheduled for 2013.

The Pension Code requires the CTA to contribute 12 percent of pay, less up to a 6 percent credit for debt service paid on the bonds issued for contribution to the Retirement Plan; employees are required to pay 6 percent of pay. The Pension Code further requires that contribution rates be increased if the funded ratio is projected to decline below 60 percent prior to 2040, with the CTA paying two-thirds and employees one-third of the required contribution.

The funded ratio of the Retirement Plan declined from 70.1 percent as of January 1, 2011 to 59.2 percent as of January 1, 2012. The actuarial value of assets was $1.910 billion at January 1, 2011. At January 1, 2012, the actuarial value of assets was $1.662 billion and the actuarial accrued liability was $2.808 billion. According to the Retirement Plan's January 1, 2012 Actuarial Valuation, there were two major reasons for the decline in the actuarial value of assets and the funded ratio.

- First, the Plan revised its asset valuation method from a five year smoothed method to the actual market value of the assets as of January 1, 2012. According to the January 1, 2012 Actuarial Valuation, this resulted in a $183.3 million reduction in the actuarial value of assets and decreased the Plan's funded ratio by 6.5 percent.

- Second, the Plan's experience differed from the assumptions that were used in the prior Valuation. The largest contributing factor was that the assumed 8.50 percent rate of return was not met -- the actual rate of return on the actuarial value of assets before the asset valuation method change for the year ending December 31, 2011 was 2.87 percent, resulting in an asset loss of $104.3 million. This loss increased the unfunded actuarial accrued liability by $104.3 million and decreased the funded ratio by 3.7 percent. Also, demographic experience (such as mortality, turnover, retirement, pay increases, etc.) that differed from actuarial projections increased the Plan's unfunded accrued actuarial liability by $34.5 million.

Since the funded ratio of the Plan declined below 60 percent, the Pension Code requires the Plan to "determine the increased contribution required each year as a level percentage of payroll during the years after the then current year . . . so the funded ratio is projected to reach at least 60% no later than 10 years after the then current year and include that determination in its report." The Retirement Plan increased the employer and employee contribution rates for 2013 as delineated in the January 1, 2012 Actuarial Valuation: the employer rate increased from 11.3 to 14.250 percent (which is net of the employer debt service credit of 6% of pay); the employee rate increased from 8.65 to 10.125 percent. The January 1, 2012 Actuarial Valuation noted that contribution increases were necessary to have the Plan's funded ratio at the statutorily required 60 percent level within 10 years of 2012 (i.e., by 2022) and all subsequent years through 2039.

BACKGROUND

The Retirement Plan for CTA Employees was significantly underfunded, with a funded ratio of 34 percent as of January 1, 2006. In addition, the Plan was responsible for administering both the retirement benefits and retiree health care benefits. Public Act 94-839 required the CTA to separate the funding for retiree health care benefits from the funding of the retirement system by January 1, 2009.

Public Act 95-708 made sweeping changes to the Retirement Plan for CTA Employees. Public Act 95-708 gave the CTA the authority to issue bonds to help fund both the retirement and retiree health care plans. Public Act 95-708 also established the Retiree Health Care Trust to handle the retiree health care benefits. The Retiree Health Care Trust was established in May 2008.

The legislation required that the contributions from the CTA and employees must be at a level so that the funded ratio of the Retirement Plan does not decline below 60 percent for each year up to and including fiscal year 2039, and achieve 90 percent funding by fiscal year 2059. If the Plan's funded ratio declines below 60 percent, the Pension Code requires the Board to "determine the increased contribution required each year as a level percentage of payroll during the years after the then current year . . . so the funded ratio is projected to reach at least 60% no later than 10 years after the then current year and include that determination in its report." It also stipulates that employees are required to pay one-third of the annual required contribution and the CTA is required to pay two-thirds of the required contribution. During the time period 2009 through 2040, the amount paid by the CTA 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 the compensation paid by the CTA in the following year.

REVIEW OF RETIREMENT PLAN SUBMISSIONS

The Auditing Act (30 ILCS 5/3-2.3(e)) requires the Retirement Plan to submit certain specific documents to the Auditor General by September 30 of each year:

1. **Audit.** The most recent audit or examination of the Retirement Plan;

2. **Annual Statement.** An annual statement containing the information specified in Section 1A-109 of the Illinois Pension Code (see inset); and

3. **Actuarial Statement.** A complete actuarial statement applicable to the prior plan year, which may be the annual report of an enrolled actuary retained by the Retirement Plan specified in Section 22-101(e) of the Illinois Pension Code.

On September 28, 2012 the Retirement Plan Board submitted the three documents below. We reviewed the documents and concluded the information required by Section 5/3-2.3(e) of the Auditing Act was contained in these reports:

- Audited Financial Statements for the Plan for the year ended December 31, 2011;
- Investment Performance Report for the period ending December 31, 2011; and
- January 1, 2012 Actuarial Valuation for the Retirement Plan.

ILLINOIS PENSION CODE REQUIREMENTS
The Auditing Act requires the CTA Retirement Plan to annually file with the Auditor General the following information specified in Section 1A-109 of the Pension Code: (1) a financial balance sheet as of the close of the fiscal year; (2) a statement of income and expenditures; (3) an actuarial balance sheet; (4) statistical data reflecting age, service, and salary characteristics concerning all participants; (5) special facts concerning disability or other claims; (6) details on investment transactions that occurred during the fiscal year covered by the report; (7) details on administrative expenses; and (8) such other supporting data and schedules as in the judgement of the Division may be necessary for a proper appraisal of the financial condition of the pension fund and the results of its operations. The annual statement shall also specify the actuarial and interest tables used in the operation of the pension fund.
Source: Pension Code (40 ILCS 5/1A-109) and Auditing Act (30 ILCS 5/3-2.3(e))

Review of Actuarial Determination and Assumptions

The Illinois Pension Code (40 ILCS 5/22-101(e)(3)) places an additional reporting requirement on the Auditor General. The Code requires that the Retirement Plan, *"By September 15 of each year beginning in 2009 and ending on December 31, 2039, on the basis of a report prepared by an enrolled actuary retained by the Plan, the Board of Trustees of the Retirement Plan shall determine the estimated funded ratio of the total assets of the Retirement Plan to its total actuarially determined liabilities. A report containing that determination and the actuarial assumptions on which it is based shall be filed with the . . . Auditor General . . . ."* The Pension Code requires the Auditor General to review the determination and the assumptions on which it is based to determine whether they are unreasonable in the aggregate.

The January 1, 2012 Actuarial Valuation was presented to the Retirement Plan Board at its September 25, 2012 meeting. At that meeting, the Board of Trustees accepted the January 1, 2012 Actuarial Valuation and certified the employer and employee contribution rates for 2013. The rates adopted increased the contribution rates for 2013. The employer contribution rate will increase from 11.3 percent in 2012 to 14.25 percent in 2013 (which is net of the employer debt service credit of 6% of pay). The employee contribution rate increased from 8.65 percent in 2012 to 10.125 percent in 2013.

Review of Actuarial Assumptions Used

On September 28, 2012, the Retirement Plan submitted to the Auditor General its Actuarial Valuation as of January 1, 2012, pursuant to 40 ILCS 5/22-101(e)(3). We reviewed the assumptions used in the Retirement Plan's Actuarial Valuation and found that the assumptions used were not unreasonable in the aggregate.

Investment Return Assumption

While the assumptions used in the January 1, 2012 Actuarial Valuation were not unreasonable in the aggregate, one assumption, the investment return assumption, warrants additional discussion. In our 2009 and 2010 Annual Reviews, we noted that the Retirement Plan's investment return assumption of 8.75 percent, while selected using established standards for pension plans and not unreasonable in the aggregate, was an optimistic assumption. In the January 1, 2011 Actuarial Valuation, the Board's actuary recommended, and the Board approved, a reduction in the investment return assumption to 8.5 percent.

In the January 1, 2012 Actuarial Valuation, the investment return assumption remains at 8.50 percent. The January 1, 2012 valuation contained no analysis justifying the reasonableness of the 8.50 percent rate of return or a presentation of different rates of return and the impact they would have on the required contribution rates.

The investment rate of return assumption is comprised of two components: the projected rate of inflation and the expected real rate of return. For example, several other public pension plans with a rate of return of 8.50 percent use an inflation assumption of 3 percent and an assumed real rate of return of 5.50 percent, which yields a total return of 8.5 percent.

According to the Plan's Executive Director, an inflation assumption of 3.25 percent is used by the Plan. Therefore, a 5.25 percent real rate of return is assumed to yield the Plan's total investment return of 8.50 percent. However, the Plan's Investment Performance Report for the period ending December 31, 2011 stated that "**The Fund should achieve real (in excess of inflation) rate of return of 4% per year over long periods of time.**" [emphasis added] Adding the 3.25 percent inflation assumption and the 4 percent projected real rate of return would yield a total rate of return of 7.25 percent, not the 8.50 percent used in the Actuarial Valuation.

We followed-up with the Plan to obtain an explanation as to how the 8.50 percent rate was justified and how it complied with actuarial standards of practice. The Plan's Executive Director stated that the Plan's actuary performed an independent review and analysis of the investment return assumption to support that the 8.50 percent investment return assumption is in compliance with Actuarial Standards of Practice (ASOP). For an open plan like the CTA Retirement Plan, a return that falls within the 25th to 75th percentiles over a period of at least 30 years satisfies ASOP 27. The Plan's actuary ran a forward-looking projection of returns based on the portfolio allocation of the CTA Retirement Plan and determined a gross return range of 7.31 percent to 10.84 percent in investment returns, with the 50th percentile being 9.14 percent. Reducing for expected investment expenses of 40 basis points, the rate of return falls within a range of 6.91 percent to 10.44 percent. The Executive Director concluded that based upon their analysis, the Plan's actuary reported that the current assumption of 8.50 percent complies with Actuarial Standards of Practice.

At the September 25, 2012 Board of Trustees meeting where the January 1, 2012 Actuarial Valuation was approved, a Board member asked the Plan's actuary whether he thought the Plan would earn 8.5 percent on its investments. The actuary responded that the 8.50 percent rate fell around the 50th percentile of likelihood, meaning that the Plan's likelihood of achieving that return was about 50/50 over time. The Plan's actuary also noted that the investment return assumption would be examined as part of the next experience review.

The Executive Director noted that it was Board policy to conduct a formal experience review every five years (the last experience study was conducted in 2009). The next review is planned to be conducted during 2013 and implemented with the January 1, 2014 actuarial valuation. An experience review provides critical information to the actuary by assessing how well assumptions used by the plan align with the actual experience of the plan.

Comparison with Rates of Returns for Other Pension Plans

An investment return assumption of 8.50 percent is at the upper range of investment returns for comparable plans. The Public Fund Survey includes data on 126 public pension plans. The highest investment return assumption found in the 2010 Public Fund Survey was 8.50 percent; the median investment return assumption was 8.0 percent. The *Public Fund Survey Summary of Findings for FY 10* states "Public pension plan investment return assumptions have received growing attention recently, especially in the wake of investment returns over the past decade that have fallen short of expectations. . ." Data provided by the Public Fund Survey shows that in 2001, 25 plans had assumed rates of return of 8.5 percent or higher. By 2010, only 11 plans had assumed rates of return of 8.5 percent (none were higher than 8.5 percent).

Further, the CTA Retirement Plan's assumed real rate of return of 5.25 percent was toward the upper range of rates used by other public pension plans in the FY2010 Public Fund Survey. The Public Fund Survey's median assumed *real rate of return* was 4.5 percent. The highest real return in the Public Fund Survey was 5.50 percent (8 systems).

In their *2012 Report on City & County Retirement Systems: Funding Levels and Asset Allocation*, Wilshire Consulting examined the asset allocation for 106 city and county retirement systems, 103 of which reported actuarial values on or after June 30, 2011. Wilshire forecasts that the long-term median expected return on city and county pension fund assets to be equal to 6.20 percent, based on beta-only asset class assumptions and excludes active management alpha. The 6.20 percent return is lower than the 6.30 percent noted in the 2011 Wilshire City and County Report and is lower than the median actuarial interest rate of 7.75 percent for plans in the study as well as lower than the 8.50 percent selected for the Retirement Plan. The report states "Using Wilshire's 2012 long-term return and risk forecasts, none of the 106 city and county retirement systems is expected to earn long-term asset returns that equal or exceed their actuarial interest rate assumption." The report notes that the Wilshire return assumption may differ in time horizon (10+ years) from the methodologies underlying actuarial interest rate assumptions (20 to 30+ years).

Wilshire Consulting also published their *2012 Report on State Retirement Systems: Funding Level and Asset Allocation*. Wilshire Consulting examined the asset allocation and funding levels for 126 state retirement systems. Wilshire estimated that the median state pension fund has an expected return of 6.40 percent. This median expected return is lower than the current median actuarial interest rate assumption of 8.0 percent used by the plans in the study and is lower than the 8.50 percent assumption selected for the CTA Retirement Plan. This Wilshire report also notes that Wilshire's assumptions range over a conservative 10+ year time horizon, while pension plan interest rate assumptions typically project over 20 to 30 years.

The National Conference on Public Employee Retirement Systems and Cobalt Community Research released the *2012 NCPERS Fund Membership Study*. NCPERS is a trade association for public sector pension funds, representing more than 550 funds in the United States and Canada. The 2012 Study includes responses from 147 state and local government pension funds with assets exceeding 1.2 trillion dollars and reflects feedback based on the most recent data available. According to the study, the average investment return assumption was 7.70 percent which was the same as in 2011. The inflation assumption dropped from 3.50 percent in 2011 to 3.40 percent in 2012. The gross 20-year investment return was 8.70 percent.

Aon Hewitt Analysis

Actuarial Standard of Practice No. 27 allows for the use of a "best estimate range" when selecting economic assumptions. A return assumption is generally assumed to be reasonable if it falls within the 25th to 75th percentile range. However, selecting an assumption at the edge of this interval can be overly optimistic.

Using Aon Hewitt's Expected Return Tool (as of the 1st Quarter of 2012 with an inflation assumption of 2.10%) and the Target Asset Allocation found in the CTA Retirement Plan's Investment Performance Report for the Period Ending December 31, 2011, Aon Hewitt determined that the 25th to 75th percentile range of the CTA Retirement Plan's investment returns to be 5.65 percent to 8.75 percent, with the 50th percentile rate equal to 7.19 percent. The Retirement Plan's investment return assumption of 8.50 percent represented the 28th percentile in Aon Hewitt's tool. The Aon Hewitt Expected Return Tool calculates the expected portfolio growth rate (50th percentile, geometric return) before any value added from active management. The projected rates of return calculated by Aon Hewitt for the Plan's investments are significantly lower than the rates projected by the Plan's actuary.

Historical Rates of Return Experienced by the Plan's Investments

Over the past 22 years, the rate of return on Retirement Plan investments has exceeded its current 8.5 percent assumed rate of return. Since 1990, the Plan's return on investments has averaged 8.99 percent, according to the Plan's 2011 Investment Report. However, over a shorter time period – 10 years – the Plan's investments have experienced only a 5.91 percent rate of return.

Conclusion: Investment Return Assumption

The 8.50 percent rate of return assumption used by the Retirement Plan is an optimistic assumption. Historical rates of return experienced by the Retirement Plan on its investments have exceeded the 8.5 percent level over the past 22 years, with the return on investments averaging 8.99 percent. Also, the Plan's actuary concluded that the rate complies with the Actuarial Standard of Practice No. 27 which sets forth parameters to assess the reasonableness of rates of return. However, the 8.50 percent rate of return assumption is at the upper end of rates of return used by other retirement plans in the United States. It also exceeds other rates of return projected by other industry indices.

The Plan indicated that they will conduct an experience review in 2013 at which time they will review the 8.50 percent rate of return. Furthermore, in future actuarial valuations, the Plan should provide additional details as to the analysis conducted to justify the 8.50 percent rate of return.

Valuing of Assets

In the Plan's prior actuarial valuations, the value of the assets used was based on a 5 year smoothing of the market value of the assets. Smoothing of market gains and losses over a period of five years to determine the actuarial value of assets is a generally accepted approach in valuing assets. In the January 1, 2012 Actuarial Valuation, the asset valuation method was changed from the previously utilized 5 year smoothed value to the actual market value as of December 31, 2011.

We inquired of the Plan why the change was made to use the actual market value of the assets. The Executive Director responded that the new actuary that the Plan contracted with to prepare the January 1, 2012 Actuarial Valuation questioned how assets should be valued for the purpose of the determination. Plan counsel was consulted and concluded that the decision to use actual market value was supported by the plain language of the statute (i.e., the statute refers to "total assets"). The Board of Trustees determined that defining the term "assets" in the CTA Plan statute as the market value of assets is well-supported and should be given deference, even if an alternate definition (such as the smoothed value of assets) may also be reasonable.

Both methods of valuing assets are actuarially accepted and comply with actuarial standards of practice. We do note that the use of the market value of assets introduces potential volatility into the actuarial valuation and to the determination of the statutory minimum required contribution based on how the assets perform on a one year basis. By contrast, the prior smoothed method took the difference between the actual return on assets and the assumed return on assets and phased it in over five years with 20 percent of the difference recognized each year.

Other Actuarial Assumptions

Since the January 1, 2012 Actuarial Valuation did not provide actuarial (gain) or loss information with respect to various assumptions, we requested and the Plan provided the Auditor General's Office with the source of gains and losses. Exhibit 1 provides information regarding the source of gains and losses related to demographic actuarial assumptions in the January 1, 2012 Actuarial Valuation for the preceding year as a percentage of the unfunded accrued liability.

The most significant gain or loss outside of asset returns was due to payroll growth being greater than expected. Average payroll increased by 4.43 percent vs. an assumed 1.50 percent. The Plan noted that this assumption will be revisited along with the others during the 2013 experience study.

Exhibit 1 (Gain) Loss Due to Demographic Actuarial Assumptions Year Ended 12/31/2011	
Actuarial Assumption	**Percentage of Unfunded Accrued Liability**
Payroll	1.9%
Retirement and Other Separation Experience	1.1%
Retiree Mortality Experience	(0.2%)
New Entrants	0.5%
Other Demographic	0.2%
Source: Aon Hewitt from CTA Retirement Plan Information	

The January 1, 2012 Actuarial Valuation shows that the number of terminated participants with vested benefits increased from 60 at January 1, 2011 to 84 at January 1, 2012, which is a 40 percent increase. When we inquired as to whether there was any special event that took place in 2011 to account for this increase, we were told that no specific event caused this increase. Between January 1, 2010 and January 1, 2011, the increase in the number of terminated participants with vested benefits was 17.6 percent (or an increase from 51 to 60). It will be important to have this assumption reviewed during the next experience study to be sure that the Plan's withdrawal assumptions reflect Plan experience.

The Actuarial Valuation as of January 1, 2012 states the mortality assumption as follows:

(a) Active Members: The 1994 Group Annuity Mortality Table for males and females multiplied by 90 percent
(b) Retirees & Survivors: The 1994 Group Annuity Mortality Table for males and females
(c) Disabled Employees: The 1994 Group Annuity Mortality Table for males and females multiplied by 110 percent

Actuarial Standard of Practice No. 35 (ASOP No. 35) was recently amended to provide guidance with respect to mortality improvement before and after the measurement date. The revisions to ASOP No. 35 are effective for any actuarial valuation with a measurement date on or after June 30, 2011 (i.e., the Plan's January 1, 2012 Actuarial Valuation reviewed in this report). As stated by Plan's actuary in the 2012 Actuarial Valuation, "Our initial conclusion is that the mortality tables currently in use and adopted by the Board provides for some future mortality improvements." While we do not have actual plan experience to compare the assumption to, the Plan did experience a small gain with regards to retiree mortality experience during 2012 (as noted in Exhibit 1 above), which is consistent with Plan's assertion that the mortality tables are appropriate.

Funded Ratio

The Illinois Pension Code (40 ILCS 5/22-101(e)(3)) contains specific requirements regarding the funded ratio of the CTA Retirement Plan. The Code states that:

> (3). . . . If the actual funded ratio declines below 60% in any year prior to 2040, the Board of Trustees shall also determine the increased contribution required each year as a level percentage of payroll during the years after the then current year using the projected unit credit actuarial cost method so the funded ratio is projected to reach at least 60% no later than 10 years after the then current year and include that determination in its report. . . .

The Pension Code requires the CTA to contribute 12 percent of pay, less up to a 6 percent credit for debt service paid on the bonds used to fund the Plan; employees are required to pay 6 percent of pay. If the funded ratio is projected to decline below 60 percent prior to 2040, the Pension Code requires the CTA to pay two-thirds and employees one-third of the required contribution.

The January 1, 2012 Actuarial Valuation report concluded that the statutory minimum contribution rates applicable for plan year 2013 would need to be 13.966 percent for the CTA (which is net of the 6% credit given to the CTA for debt service on the pension obligation bonds sold in 2008) and 9.983 percent for employees. The January 1, 2012 Actuarial Valuation noted that contribution rate increases were necessary to have the Plan's funded ratio at the statutorily required 60 percent level within 10 years of 2012 (i.e., by 2022) and all subsequent years through 2039.

The Board of Trustees approved slightly higher contribution rates – 14.250 percent for the CTA (which is net of the 6% credit given to the CTA for debt service on the pension obligation bonds sold in 2008) and 10.125 percent for employees. We inquired of the Retirement Plan as to why slightly higher rates were adopted. The Executive Director responded that the Board's actuarial consultants advised that, in the absence of a "cushion" above the minimum contribution rates, the 60 percent minimum funded ratio in the Illinois Pension Code will have a tendency to cause contribution volatility. The Plan's actuary suggested movement towards a higher level of contributions, designed to achieve higher than 60 percent funding over the next 10 years, to avoid such volatility and the Board voted to adopt the level of contributions indicated by the actuaries.

The funded ratio of the Retirement Plan declined from 70.1 percent as of January 1, 2011 to 59.2 percent as of January 1, 2012. The actuarial value of assets was $1.910 billion at January 1, 2011. At January 1, 2012, the actuarial value of assets was $1.662 billion and the actuarial accrued liability was $2.808 billion. According to the Retirement Plan's January 1, 2012 Actuarial Valuation, there were two major reasons for the decline in the actuarial value of assets and the funded ratio.

- First, the Plan revised its asset valuation method from a five year smoothed method to the actual market value of the assets as of January 1, 2012. According to the January 1, 2012 Actuarial Valuation, this resulted in a $183.3 million reduction in the actuarial value of assets and decreased the Plan's funded ratio by 6.5 percent.

- Second, the Plan's experience differed from the assumptions that were used in the prior Valuation. The largest contributing factor was that the assumed 8.50 percent rate of return was not met -- the actual rate of return on the actuarial value of assets before the asset valuation method change for the year ending December 31, 2011 was 2.87 percent, resulting in an asset loss of $104.3 million. This loss increased the unfunded actuarial accrued liability by $104.3 million and decreased the funded ratio by 3.7 percent. Also, demographic experience (such as mortality, turnover, retirement, pay increases, etc.) that differed from actuarial projections increased the Plan's unfunded accrued actuarial liability by $34.5 million.

SCOPE OF ANNUAL REVIEW

The Office of the Auditor General conducted an annual review of information submitted by the Retirement Plan pursuant to the Illinois State Auditing Act and the Illinois Pension Code. This report does not constitute an audit as that term is defined in generally accepted government auditing standards. Consequently, while we reviewed the information provided by the CTA Retirement Plan for reasonableness and consistency, we did not conduct an audit of the accuracy of the information provided as that is the responsibility of the Plan.

The scope of our work included reviewing the information submitted by the Retirement Board on September 28, 2012. This information included: the Audited Financial Statements for the Plan for the year ended December 31, 2011; the Investment Performance Report for the period ending December 31, 2011; and the January 1, 2012 Actuarial Valuation for the Retirement Plan. We conducted follow-up with the Retirement Plan on various questions we had based upon our review of these documents. Our consultants, Aon Hewitt, reviewed the reasonableness of the actuarial assumptions used by the CTA Retirement Plan in their January 1, 2012 Actuarial Valuation.

We received minutes of the Retirement Board meetings for the period October 2011 through September 2012. In our 2011 Review, we noted that the Retirement Board approved a payroll audit in 2011. The Board's Executive Director expected the audit to be completed by the end of 2012. The purpose of the audit is to ensure that the employers (CTA, ATU Local 241 and ATU 308) are accurately withholding and remitting employee and employer contributions to the Retirement Plan and Retiree Health Care Trust. The Executive Director stated that based on preliminary work done by the auditor, it was unlikely that the audit will have any significant impact on the Retirement Plan or the Retiree Health Care Trust.

We also inquired of the Plan's Executive Director as to whether the CTA and employees were current in making required contributions into the Retirement Plan as of December 2011. The Executive Director responded that both parties were current with their required contributions.

The OAG performed the review with assistance from our consultants, Aon Hewitt. Aon Hewitt's review concluded that:

(A) The required documents submitted by the Board of Trustees of the Retirement Plan have been made, and meet the statutory requirements of Section 5/3-2.3(e)(1), (2), and (3) of the Auditing Act.

(B) The assumptions stated in the actuarial report submitted pursuant to 40 ILCS 5/22-101(e)(3) are not unreasonable in the aggregate.

(C) The investment return assumption of 8.50 percent, net of expenses, was selected by the Plan's actuary based on an independent review and analysis. The actuary indicated that the current assumption of 8.50 percent complies with Actuarial Standards of Practice: Specifically, the Plan indicated "For an open plan like the CTA Retirement Plan, a return that falls within the 25th to 75th percentiles over a period of at least 30 years satisfies ASOP 27." From our perspective, the investment return assumption is not unreasonable in the aggregate but is an optimistic assumption and should be viewed as such.

(D) The method for determining the actuarial value of assets was changed from a five-year smoothed method to market value of assets. The Certification of Actuarial Valuation found in the Actuarial Report states "After consultation with Plan Counsel, the Board of Trustees directed an instruction to [the actuary] that "total assets" should be understood as a reference to the market value of assets."

(E) The Pension Code (40 ILCS 5/22-101(e)(3)) indicates that the Statutory Minimum Contribution Rates are to be determined so as to keep the projected funded ratio above 60 percent in all years through 2039, based on assumptions which are not unreasonable in the aggregate. The Pension Code also requires that if the actual funded ratio declines below 60 percent in any year prior to 2040, the Statutory Minimum Contribution shall be increased (each year) as a level percentage of payroll during the years after the current year such that the funded ratio is projected to reach at least 60 percent no later than 10 years after the then current year. The actuarial report submitted by the Plan to the Office of the Auditor General indicates that the funded ratio is below 60 percent for the 2012 plan year and has established the Statutory Minimum Contribution rates necessary to bring the funded status to 60 percent (or higher) by 2022. The adopted contribution rates for 2012 are higher than the Statutory Minimum Contribution Rates.

(F) The requirement to keep the projected funded ratio above 60 percent is not a Governmental Accounting Standards Board ("GASB") approved funding method. GASB Statement No. 25 defines the Annual Required Contribution (ARC) to be the normal cost plus an amortization payment of the unfunded actuarial accrued liability. Normal cost is the cost of the benefits accruing during the current year. The unfunded actuarial accrued liability is the difference between the actuarial accrued liability and the actuarial value of assets. The maximum amortization period for the unfunded actuarial accrued liability is 30 years under GASB 25. Under GASB 25, the Annual Required Contribution funds to 100 percent. The Actuarial Report (page 24) provides a comparison of the actual contributions made for the past 10 years to the Annual Required Contribution as determined under GASB 25. In all years, other than 2009 when the pension obligation bond was purchased, the actual contributions received were less than the Annual Required Contribution under GASB 25.

The Retirement Plan was provided a draft of this report for their review.

APPENDIX A

Statutory Authority

ILLINOIS STATE AUDITING ACT

30 ILCS 5/3-2.3(e) and (f)

(e) Annual Retirement Plan Submission to Auditor General. The Board of Trustees of the Retirement Plan for Chicago Transit Authority Employees established by Section 22-101 of the Illinois Pension Code shall provide the following documents to the Auditor General annually no later than September 30:

(1) the most recent audit or examination of the Retirement Plan;

(2) an annual statement containing the information specified in Section 1A-109 of the Illinois Pension Code; and

(3) a complete actuarial statement applicable to the prior plan year, which may be the annual report of an enrolled actuary retained by the Retirement Plan specified in Section 22-101(e) of the Illinois Pension Code.

The Auditor General shall annually examine the information provided pursuant to this subsection and shall submit a report of the analysis thereof to the General Assembly, including the report specified in Section 22-101(e) of the Illinois Pension Code.

(f) The Auditor General shall annually examine the information submitted pursuant to Section 22-101B(b)(3)(iii) of the Illinois Pension Code and shall prepare the determination specified in Section 22-101B(b)(3)(iv) of the Illinois Pension Code.

(Source: P.A. 95-708, eff. 1-18-08.)

ILLINOIS PENSION CODE

40 ILCS 5/1A-109

Annual statements by pension funds. Each pension fund shall furnish to the Division an annual statement in a format prepared by the Division. The Division shall design the form and prescribe the content of the annual statement and, at least 60 days prior to the filing date, shall furnish the form to each pension fund for completion. The annual statement shall be prepared by each fund, properly certified by its officers, and submitted to the Division within 6 months following the close of the fiscal year of the pension fund.

The annual statement shall include, but need not be limited to, the following:

(1) a financial balance sheet as of the close of the fiscal year;

(2) a statement of income and expenditures;

(3) an actuarial balance sheet;

(4) statistical data reflecting age, service, and salary characteristics concerning all participants;

(5) special facts concerning disability or other claims;

(6) details on investment transactions that occurred during the fiscal year covered by the report;

(7) details on administrative expenses; and

(8) such other supporting data and schedules as in the judgement of the Division may be necessary for a proper appraisal of the financial condition of the pension fund and the results of its operations. The annual statement shall also specify the actuarial and interest tables used in the operation of the pension fund.

(Source: P.A. 90-507, eff. 8-22-97.)

40 ILCS 5/22-101

Sec. 22-101(e). Retirement Plan for Chicago Transit Authority Employees.

(1) Beginning January 1, 2009 the Authority shall make contributions to the Retirement Plan in an amount equal to twelve percent (12%) of compensation and participating employees shall make contributions to the Retirement Plan in an amount equal to six percent (6%) of compensation. These contributions may be paid by the Authority and participating employees on a payroll or other periodic basis, but shall in any case be paid to the Retirement Plan at least monthly.

(2) For the period ending December 31, 2040, the amount paid by the Authority in any year with respect to debt service on bonds issued for the purposes of funding a contribution to the Retirement Plan under Section 12c of the Metropolitan Transit Authority Act, other than debt service paid with the proceeds of bonds or notes issued by the Authority for any year after calendar year 2008, shall be treated as a credit against the amount of required contribution to the Retirement Plan by the Authority under subsection (e)(1) for the following year up to an amount not to exceed 6% of compensation paid by the Authority in that following year.

(3) By September 15 of each year beginning in 2009 and ending on December 31, 2039, on the basis of a report prepared by an enrolled actuary retained by the Plan, the Board of Trustees of the Retirement Plan shall determine the estimated funded ratio of the total assets of the Retirement Plan to its total actuarially determined liabilities. A report containing that determination and the actuarial assumptions on which it is based shall be filed with the Authority, the representatives of its participating employees, the Auditor General of the State of Illinois, and the Regional Transportation Authority. If the funded ratio is projected to decline below 60% in any year before 2040, the Board of Trustees shall also determine the increased contribution required

each year as a level percentage of payroll over the years remaining until 2040 using the projected unit credit actuarial cost method so the funded ratio does not decline below 60% and include that determination in its report. If the actual funded ratio declines below 60% in any year prior to 2040, the Board of Trustees shall also determine the increased contribution required each year as a level percentage of payroll during the years after the then current year using the projected unit credit actuarial cost method so the funded ratio is projected to reach at least 60% no later than 10 years after the then current year and include that determination in its report. Within 60 days after receiving the report, the Auditor General shall review the determination and the assumptions on which it is based, and if he finds that the determination and the assumptions on which it is based are unreasonable in the aggregate, he shall issue a new determination of the funded ratio, the assumptions on which it is based and the increased contribution required each year as a level percentage of payroll over the years remaining until 2040 using the projected unit credit actuarial cost method so the funded ratio does not decline below 60%, or, in the event of an actual decline below 60%, so the funded ratio is projected to reach 60% by no later than 10 years after the then current year. If the Board of Trustees or the Auditor General determine that an increased contribution is required to meet the funded ratio required by the subsection, effective January 1 following the determination or 30 days after such determination, whichever is later, one-third of the increased contribution shall be paid by participating employees and two-thirds by the Authority, in addition to the contributions required by this subsection (1).

(4) For the period beginning 2040, the minimum contribution to the Retirement Plan for each fiscal year shall be an amount determined by the Board of Trustees of the Retirement Plan to be sufficient to bring the total assets of the Retirement Plan up to 90% of its total actuarial liabilities by the end of 2059. 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. In making these determinations, the Board of Trustees shall calculate the required contribution each year as a level percentage of payroll over the years remaining to and including fiscal year 2059 using the projected unit credit actuarial cost method. A report containing that determination and the actuarial assumptions on which it is based shall be filed by September 15 of each year with the Authority, the representatives of its participating employees, the Auditor General of the State of Illinois and the Regional Transportation Authority. If the funded ratio is projected to fail to reach 90% by December 31, 2059, the Board of Trustees shall also determine the increased contribution required each year as a level percentage of payroll over the years remaining until December 31, 2059 using the projected unit credit actuarial cost method so the funded ratio will meet 90% by December 31, 2059 and include that determination in its report. Within 60 days after receiving the report, the Auditor General shall review the determination and the assumptions on which it is based and if he finds that the determination and the assumptions on which it is based are unreasonable in the aggregate, he shall issue a new determination of the funded ratio, the assumptions on which it is based and the increased contribution required each year as a level percentage of payroll over the years remaining until December 31, 2059 using the projected unit credit actuarial cost method so the funded ratio reaches no less than 90% by December 31, 2059. If the Board of Trustees or the Auditor General determine that an increased contribution is required to meet the funded ratio required by this subsection, effective January 1 following the determination or 30 days after such determination, whichever is later, one-third of the increased contribution shall be paid by participating employees and two-thirds by the Authority, in addition to the contributions required by subsection (e)(1).

(5) Beginning in 2060, the minimum contribution for each year shall be the amount needed to maintain the total assets of the Retirement Plan at 90% of the total actuarial liabilities of the Plan, and the contribution shall be funded two-thirds by the Authority and one-third by the participating employees in accordance with this subsection.

(Source: P.A. 95-708, eff. 1-18-08,; P.A. 97-442, eff. 8-19-11; 97-609, eff. 1-1-12; 97-813, eff. 7-13-12.)