Illinois Public Retirement Systems

May 2021

A Report on the Financial Condition of the Illinois Munic Chicago and Cook County Pension Funds of Illinois

> Chicago Transit Authority Retirement Fund Cook County Employees' Pension Fund Cook County Forest Preserve Employees' Pension Fund Firemen's Annuity and Benefit Fund of Chicago Illinois Municipal Retirement Fund Laborers' Annuity and Benefit Fund of Chicago Metropolitan Water Reclamation District Retirement Fund Municipal Employees' Annuity and Benefit Fund of Chicago Park Employees' Annuity and Benefit Fund of Chicago Policemen's Annuity and Benefit Fund of Chicago

Commission on Government Forecasting and Accountability

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Executive Summary

This report examines the financial status of various public employee retirement systems in Chicago and Cook County, along with the Illinois Municipal Retirement Fund, as of Fiscal Year (FY) 2019. The fiscal year ends December 31 for all systems, except for two systems, the Chicago Transit Authority Pension Fund and Public School Teachers' Pension and Retirement Fund of Chicago. The Chicago Transit Authority Pension Fund ends its fiscal year on January 1, and the Public School Teachers' Pension and Retirement Fund of Chicago ends its fiscal year on June 30. The following is a summary of the findings:

- The Chicago Transit Authority Retirement Fund covers all employees of the Chicago Transit Authority. At the end of FY 2019 (January 1, 2020) there were 8,057 active employees and 8,070 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$1.883 billion and Total Actuarial Liabilities were \$3.584 billion.
- The Cook County Employees' Pension Fund covers all persons employed and paid by the County. At the end of 2019 there were 19,551 active employees and 16,305 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$10.983 billion and Total Actuarial Liabilities were \$17.950 billion.
- The Cook County Forest Preserve Employees' Retirement Fund covers all persons employed and paid by the Forest Preserve. At the end of 2019 there were 546 active employees and 390 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$203.5 million and Total Actuarial Liabilities were \$343.4 million.
- The Firemen's Annuity and Benefit Fund of Chicago covers anyone employed by the City of Chicago in its fire services whose duty it is to in any way participate in the work of controlling and extinguishing fires. At the end of 2019 there were 4,630 active employees and 3,537 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$1.137 billion and Total Actuarial Liabilities were \$6.256 billion.
- The Illinois Municipal Retirement Fund covers employees hired by the following units of government: (1) All counties except Cook and (for non-teachers) all school districts except Chicago, (2) Other units of government with general taxing powers, such as cities, villages, townships and special districts, (3) Units of government without general taxing powers, associations or cooperatives authorized to participate by State statute. At the end of 2019 there were 177,809 active employees and 123,673 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$42.936 billion and Total Actuarial Liabilities were \$47.358 billion.

- The Laborers' Annuity and Benefit Fund of Chicago (LABF) covers persons employed by the City of Chicago in a position classified as labor service by the employer, persons employed by the Board of Education under the labor service classification, or anyone employed by a retirement board of any other annuity and benefit fund in the city. At the end of 2019 there were 2,662 active employees and 2,590 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$1.151 billion and Total Actuarial Liabilities were \$2.702 billion.
- The Metropolitan Water Reclamation District Retirement Fund covers any person employed by the District whose duties include service during a calendar year for a minimum of 120 days. At the end of 2019 there were 1,817 active employees and 1,883 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$1.489 billion and Total Actuarial Liabilities were \$2.666 billion.
- The Municipal Employees' Annuity and Benefit Fund of Chicago covers persons appointed under civil service rules who are employed by the City of Chicago and Board of Education of Chicago (except teachers), temporary and non-career service employees, aldermen and other officials of the City and the Board that make written application. At the end of 2019 there were 32,162 active employees and 21,423 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$4.013 billion and Total Actuarial Liabilities were \$17.260 billion.
- The Park Employees' Annuity and Benefit Fund of Chicago covers all persons employed by the Chicago Park District. At the end of 2019 there were 3,132 active employees and 2,144 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$350.0 million and Total Actuarial Liabilities were \$1.171 billion.
- The Policemen's Annuity and Benefit Fund of Chicago covers any employee in the Police Department of the City of Chicago sworn and designated by law as a police officer. At the end of 2019 there were 13,353 active employees and 10,078 employee annuitants. Total Actuarial Assets of the system at the end of that year were \$3.180 billion and Total Actuarial Liabilities were \$14.270 billion.
- The Public School Teachers' Pension and Retirement Fund of Chicago covers certified teachers and employees of the Chicago public schools. At the end of FY 2019 (June 30, 2019) there were 29,295 active employees and 24,631 employee annuitants. Total Actuarial Assets of the system on that date were \$11.022 billion and Total Actuarial Liabilities were \$23.252 billion.
- For most of the retirement systems, this report contains multi-year funding projections performed by the systems' actuaries. Unless otherwise noted, all long-term funding projections are based upon the retirement systems' Fiscal Year or Calendar Year 2019 actuarial valuation. The statutory funding requirements differ for each system and are

outlined at the beginning of each system's chapter under the heading "Required Employer Contributions". In cases where a recent legislative enactment has changed a particular system's funding requirement, the Public Act number is displayed in the tables showing multi-year funding projections.

• The table below shows a summary of the financial condition of the Chicago Retirement Systems. Based upon the actuarial value of assets, the total unfunded liabilities for the city of Chicago's retirement systems are \$46.936 billion. Please note that this amount does not include IMRF, Cook County Employees' Pension Fund, or Cook County Forest Preserve Pension Fund.

Summary of Financial Condition Chicago Retirement Systems Combined (Excludes IMRF and Cook County Funds) FY 2019 (\$ in Millions)								
System	AnnualActuarialPayrollLiabilities		Actuarial Assets	Unfunded Liabilities	Funded Ratio			
Chicago Transit Authority	631.4	3,583.9	1,883.4	1,700.4	52.6%			
Firemen's Annuity & Benefit Fund	457.1	6,256.1	1,137.1	5,119.0	18.2%			
Laborers' Annuity and Benefit Fund	211.6	2,701.9	1,151.5	1,550.4	42.6%			
Metropolitan Water Fund	190.0	2,666.2	1,489.3	1,177.0	55.9%			
Municipal Employees' Annuity and Benefit Fund	1,802.8	17,260.4	4,012.9	13,247.5	23.2%			
Park Employees' Annuity and Benefit Fund	139.2	1,170.6	350.0	820.6	29.9%			
Policemen's Annuity and Benefit Fund	1,229.0	14,269.8	3,179.5	11,090.3	22.3%			
Public School Teachers' Pension Fund	2,179.1	23,252.2	11,021.8	12,230.4	47.4%			
TOTAL	6,840.1	71,160.9	24,225.4	46,935.6	34.0%			

I. Recent Pension Legislation



Public Act 96-0889 (Creation of Tier II) Senate Bill 1946 – Cullerton (Madigan)

I. Overview of Key Provisions of Public Act 96-0889 (SB 1946)

Effective Date

• January 1, 2011

Systems Impacted

• IMRF, Chicago Municipal, Cook County, Cook County Forest Preserve, Chicago Laborers, Chicago Park District, Metropolitan Water, SERS, SURS, TRS, Chicago Teachers (Judges and GA separate; CTA, Police, and Fire excluded)

Retirement Eligibility – Except State Policemen, Firefighters, and Correctional Guards

- Normal Retirement: 67 years old with 10 years of service
- Early Retirement: 62 years old with 10 years of service with a 6% per year reduction in benefits for each year under age 67
- Annuity based on highest 8 years out of last 10 years of service
- Annual Final Average Salary may not exceed \$106,800, as automatically increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year.

Retirement Eligibility – State Policemen, Firefighters, and Correctional Guards

- Normal Retirement: 60 years old with 20 years of service
- State Policemen, Firefighters, DOC Guards are still eligible for Alternative Formula

Annual Increases in Annuity

- Increases begin at the latter of the first anniversary of retirement or at age 67
- Increases equal to the lesser of 3% or one-half the annual increase in the CPI-U during the preceding 12-month calendar year; if increase in CPI is zero or if there is a decrease in CPI, then no COLA is payable
- Increase not compounded

Survivor Benefits

- 66.7% of the earned retirement benefit at death
- Increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year
- Increases not compounded

"Double Dipping" Prohibited

• Prohibition on simultaneously collecting a pension and a salary with public employer

Chicago Teachers' Extension of Funding Plan

- Contributions specified in Fiscal Years 2011 2016
- New Goal: CTPF must reach 90% by 2059

Retirement Eligibility – Judges and General Assembly

- Normal Retirement: 67 years old with 8 years of service
- Early Retirement: 62 years old with 8 years of service

Change in Benefit Formula – Judges and General Assembly

- 3% of Final Average Salary for each year of service
- Maximum annuity 60% of Final Average Salary
- Retirement annuity based on highest 8 out of final 10 years of service

Annual Increase in Annuity – Judges and General Assembly

- Increases begin after attainment of age 67
- Increases equal to the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year
- Increases compounded

Annual Increase in Survivor's Annuity – Judges and General Assembly

- 66.7% of the earned retirement benefit at death
- Increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year
- Increases compounded

Public Act 96-1495 (Creation of Tier II) Senate Bill 3538 – Link (McCarthy)

I. Overview of Key Provisions of Public Act 96-1495 (SB 3538)

Effective Date

• New employees beginning service after January 1, 2011

Systems Impacted

• IMRF (Sheriff's Law Enforcement Personnel), Chicago Police, Chicago Firefighters, Downstate Police, Downstate Firefighters

Retirement Eligibility

- Normal Retirement: 55 years old with 10 years of service
- Early Retirement: 50 years old with 10 years of service with a 0.5% per month reduction in benefits for each month age is under 55
- Annuity based on highest 8 years out of last 10 years of service
- Annual Final Average Salary may not exceed \$106,800, as automatically increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year.

Annual Increases in Annuity

- Increases begin at the later of the first anniversary of retirement or at age 60.
- Increases equal to the lesser of 3% or one-half the annual increase in the CPI-U during the preceding 12-month calendar year; if increase in CPI is zero or if there is a decrease in CPI, then no COLA is payable
- Increase not compounded

Survivor Benefits

- 66.7% of the earned retirement benefit at death
- Increased by the lesser of 3% or one-half of the annual increase in the CPI-U during the preceding 12-month calendar year
- Increases not compounded

Funding Requirements

- Downstate and Chicago municipal contributions must be sufficient to achieve a 90% funded ratio by FY 2040 using a level percentage of payroll contribution rate.
- Whenever city contributions are not sufficient to achieve this funding goal, the retirement system will notify the Illinois State Comptroller.
- Upon receiving this notification, the Comptroller will divert funds owed by the State to the City in a sufficient amount to eliminate the shortfall in contributions.
- The State may divert all of the funds owed to the city beginning in FY2018. The diversion limit in FY 2016 is 33.3% and is 66.7% in FY 2017.

Calculation of the Funded Ratio

- Asset Market Values equal Asset Actuarial Values on March 30, 2011.
- Thereafter, Asset Actuarial Values will be used for all funded ratios.
- Income smoothing will be used after March 30, 2011 to calculate Asset Actuarial Values. A 5-year period (20% per year rate) will be used to recognize all investment revenues and losses.

Pension Calculations

- Retirement annuities are calculated to equal 2.5% of final average salary times the total years of service.
- Total retirement annuities are limited to 75% of final average salary.

Public Act 99-0506 Senate Bill 0777 – Cullerton (Currie)

I. Overview of Key Provisions of Public Act 99-0506 (SB 0777)

Effective Date

• May 30, 2016

Systems Impacted

• Chicago Police and Chicago Fire

Annuity Payment

• Adjusted from \$1,050 to an amount calculated by the poverty guidelines of the United States Department of Health and Human Services

City Contribution

- Fixed contribution schedule for Chicago Police:
 - o 2016: \$420,000,000
 - o 2017: \$464,000,000
 - o 2018: \$500,000,000
 - o 2019: \$557,000,000
 - o 2020: \$579,000,000
- Fixed contribution schedule for Chicago Fire:
 - o 2016: \$199,000,000
 - o 2017: \$208,000,000
 - o 2018: \$227,000,000
 - o 2019: \$235,000,000
 - o 2020: \$245,000,000

Tax Levy

• Beginning in tax levy year 2020, the city shall levy a tax annually in a manner that will increase the funding ratio to 90% by 2055.

Minimum Employer Contribution

• Shall be determined using the entry age normal actuarial cost method

Video Gaming

• Proceeds collected from a Chicago casino shall be contributed to Police and Fire Funds.

Delinquent Payments

• The Funds may take legal action if the city does not make the required contributions by December 31st of that year.

Public Act 99-0905 Senate Bill 0440 – Mulroe (Burke)

I. Overview of Key Provisions of Public Act 99-0905 (SB 0440)

Effective Date

• November 29, 2016

Systems Impacted

• Chicago Police and Chicago Fire

Retirement Eligibility

- Tier 2 retirees are included when determining death benefit eligibility.
- Tier 2 members that withdraw before age 50 (or 57 with less than 10 service years) are eligible for a refund equal to the amount deducted from their salary.

Salary Deductions

• Salary deductions for present employees and future entrants will contribute to the Funds for Tier 2 monthly retirement annuity, in addition to age and service annuity and widow's annuity.

Annual Increases in Annuity

- Increases equal to 1.5% begin at the latter of the first anniversary of retirement or at age 55 for members who retire with at least 20 years of service and born before 1966.
- Subsequent increases will occur on January 1st of each year.
- Maximum total increase of 30%
- For members born between 1955 and 1966, the increase shall be equal to 3% noncompounded with no maximum.
- Starting in 2017, members who would have qualified for these increases prior to the effective date shall receive all increases retroactively.
- Starting in 2017, the minimum widow's annuity shall be no less than 125% of the Federal Poverty Level.

Tier 2 Surviving Spouses

- Qualified to receive a Tier 2 surviving spouse annuity in lieu of the standard widow's annuity
- If the deceased member was receiving a Tier 2 monthly retirement annuity at the date of his/her death, the Tier 2 surviving spouse's annuity shall be in the amount of 66 2/3% of the member's monthly annuity at the date of death.
- If the deceased member was not receiving a Tier 2 monthly retirement annuity at the time of death, the Tier 2 surviving spouse's annuity shall be the greater of:
 - \circ 30% of the annual maximum salary attached to the rank of a first class police officer or firefighter at the time of death.

- 66 2/3% of the Tier 2 monthly retirement annuity that the deceased member would have been eligible to receive
- If the deceased member was in active service with at least 1½ but less than 10 years of service at the time of death, the Tier 2 surviving spouse's annuity shall be 30% of the annual maximum salary attached to the rank of a first class police officer or firefighter at the time of death.
- If a member's death resulted from an act of duty or prevented him/her from resuming active service, then in addition to the Tier 2 surviving spouse's annuity, the spouse shall be qualified to receive compensation annuity or supplemental annuity, in order to bring the total benefit up to the applicable 75% salary limitation, but subject to the existing Tier 2 salary cap.
 - Tier 2 surviving spouse's annuities shall not be less than the amount of the minimum widow's annuity.

Tier 2 Surviving Children and Parents

- Tier 2 surviving children and parents are qualified to receive a Tier 2 annuity. The Tier 2 annuity is in lieu of, but equal to, the standard annuity.
- Any salary used for computing a Tier 2 annuity shall be subject to the existing Tier 2 salary cap.

Public Act 100-0023 Senate Bill 0042 – Trotter (Harris)

* As of writing, the Tier 3 plan is implemented by two pension funds, the Municipal Employees' Annuity and Benefit Fund of Chicago (MEABF) and Laborers' Annuity and Benefit Fund of Chicago (LABF).

I. Overview of Key Provisions of Public Act 100-0023 (SB 0042)

Effective Date

• July 6, 2017

Systems Impacted

• The General Assembly Retirement System (GARS), Firemen's Annuity and Benefit Fund of Chicago, MEABF, Cook County Employees' Pension Fund, Cook County Forest Preserve Employees' Pension Fund, LABF, Park Employees' Annuity and Benefit Fund of Chicago, State Employees' Retirement System (SERS), State Universities Retirement System (SURS), Teachers' Retirement System (TRS), Public School Teachers' Pension and Retirement Fund of Chicago (CTPF), and Judges' Retirement System (JRS)

Optional Tier 3 Hybrid Plan

Tier 3 Availability

- SERS, SURS, and TRS:
 - Tier 3 benefits are available as soon as the board of that respective system authorizes members to begin participation.
 - Each of these systems shall endeavor to make participation available as soon as possible. This requirement is referred to as the "implementation date."
 - Newly hired and existing Tier 2 members must make the election to participate in Tier 3 within 30 days of becoming a member or participant in the pertinent system.
- MEABF, Cook County Employees, Cook County Forest Preserve Employees, LABF, Park Employees, and CTPF:
 - Tier 3 benefits are available beginning 6 months after the governing body of the unit of local government approves participation in the plan via adoption of a resolution or ordinance.
 - No later than 5 months after the resolution or ordinance approving participation in Tier 3, the affected system shall prepare and implement the defined contribution component of the Tier 3 hybrid plan.
 - Newly hired members must make the election to participate in the Tier 3 hybrid system within 30 days of becoming a member or participant in the pertinent system.

Tier 3 Benefits Summary

(*Tier 3 benefits and eligibility may be different for MEABF and LABF, as shown below.*)

- Retirement Annuity: 1.25% for each year of service credit multiplied by final average salary
- Normal Retirement: determined by Social Security Administration, but no earlier than 67 years of age with at least 10 years of service
- COLA: Beginning 1 year after annuity start date and equal to 50% of the CPI-W
- Survivor's/Widow's Annuity: 66 2/3% of participant's retirement annuity
- Employee Contribution for the DB component: 6.2% of salary (cannot exceed normal cost)
- Employee Contribution for the DC component: 4% minimum
- Employer Contributions for the DC component: between 2% and 6% of salary
 - Employer contributions vest when they are paid into a participant's account.
 - Employee and employer contributions are transferrable into other qualified plans.
- For SURS and TRS
 - Employer Contribution is the DB Normal Cost less the Employee Contribution, plus 2%. (expressed as a % of payroll)

MEABF and LABF Retirement Eligibility (New Tier 3 DB Schedule of Benefits)

- Between October 1, 2017 and November 15, 2017, existing Tier 2 members who began service prior to the effective date of this Act (July 6, 2017) shall make an irrevocable decision to be eligible for the new Tier 3 retirement options described below:
 - Those who elect to gain eligibility for the new Tier 3 schedule of benefits will be subject to the Tier 3 employee contribution rates.
- Tier 3 Employee Contribution Rates
 - After the effective date of this Act, but prior to January 1, 2018: 7.5%
 - o January 1, 2018 and prior to January 1, 2019: 8.5%
 - January 1, 2019 and thereafter: the lesser of:
 - Normal Cost using the Entry Age Normal (EAN) actuarial method (no less than 6.5%)
 - **9.5%**
 - This rate (the lesser of the normal cost or 9.5%) shall resume until the systems have reached a 90% funding ratio, at which point the employee contribution shall be reduced to 5.5% of salary.
 - If the funding ratio falls below 75%, then the employee contribution shall revert to the previous amount.
- Tier 3 Benefits
 - New hires that are at least 65 years of age with at least 10 years of service credit are entitled to a retirement annuity upon written application.
 - \circ New hires who retire between the age of 60 and 65, with at least 10 years of service credit, shall have their annuity reduced by 0.5% for each month that he or she is under age 65.

Changes in State Contributions

- For SURS and TRS, in fiscal years 2018 through 2020, the State shall contribute an additional 2% of payroll of each Tier 3 employee.
- For SURS and TRS, if the amount of a participant's salary exceeds the amount of the Governor's salary, the employer shall pay to the System an amount equal to the employer normal cost multiplied by the excess amount of salary.
- State contribution-altering changes in actuarial or investment assumptions shall be implemented and smoothed over a 5-year period beginning in FY 18.
- State contribution-altering changes in actuarial or investment assumptions that first applied in fiscal year 2014, 2015, 2016, or 2017 shall be retroactively smoothed over a 5-year period, beginning with and including the year in which the actuarial change first applied.
 - By November 1, 2017, the amount of the State Contribution shall be recertified to include retroactive smoothing.

Chicago Fire COLA

- Firefighters born after December 31, 1954 but before January 1, 1966 and retired after September 1, 1967 are entitled to a 3% noncompounded annuity increase upon:
 - The 1^{st} of the month following the 1-year anniversary of retirement, and every 1^{st} of January thereafter.
 - Or following the attainment of age 55 if they were not 55 after 1 year of retirement
- Firefighters that meet the aforementioned criteria prior to this Act will receive an increase to their annuity as if they had received a 3% increase each year rather than 1.5%.

Chicago Municipal and Laborers Tax Levy

• Beginning in 2017, the property tax levy cannot exceed the amount of the city's total required contribution for the following year.

II. Chicago Transit Authority Retirement Fund

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of January 1, 2020.

Chicago Transit Authority Pension Fund Plan Summary

Retirement Age

- Normal Retirement Age for CTA employees is 65.
- Employees hired before January 18, 2008 may retire early at age 55 with 3 years of continuous service, or after completion of 25 years of continuous service at any age. (Employees who have at least 25 years of service do not have their annuities reduced by 5% for each year younger than 65, regardless of age). Employees hired after September 5, 2001 may retire with unreduced benefits after attaining age 55 and completing 25 years of service.
- For employees hired 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 reduced benefit upon attainment of age 55 with 10 years of service (reduction of 5% for each year or fraction younger than age 65).

Retirement Formula

 2.15% of final average salary for each year of service for employees retiring on or after January 1, 2001

Maximum Annuity

• 70% of final average salary

Salary Used to Calculate Pension

• Highest average compensation over any four calendar years out of the final 10 years of service prior to normal retirement

Annual COLA

- Made on an ad-hoc basis; recent increase of \$40 per month for members who retired on or after 1/1/1991 but before 1/1/2000
- Another ad-hoc increase (the most recent) was made for members as part of an Arbitration Award ruling of June 26, 2007.

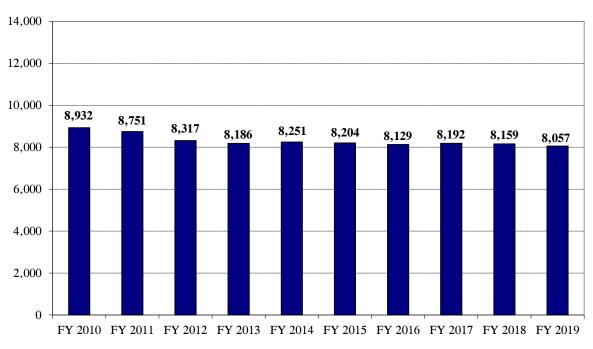
Employee Contributions

■ 13.324% of salary (FY 2021-2040)

Employer Contributions

• 20.647% of salary (FY 2021-2040)

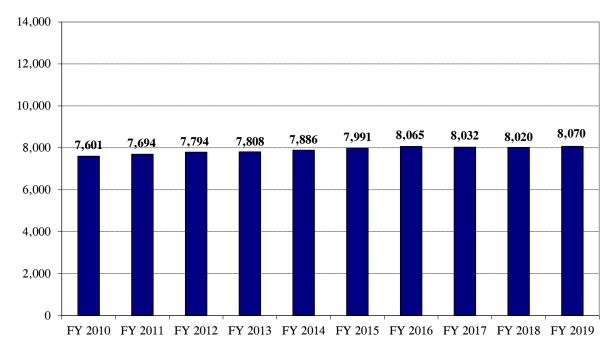
Pursuant to P.A. 95-0708, the CTA shall make contributions so that the funded ratio does not decline below 60% in any year before FY 2040. If the funded ratio drops below 60%, the contributions shall be increased to reach 60% within 10 years. Beginning FY 2040, the CTA Article of the Pension Code provides for a minimum contribution by the CTA, determined either by the CTA Pension Board of Trustees or the Auditor General, to bring the funded ratio of the Plan up to or no less than 90% by Dec. 31, 2059.

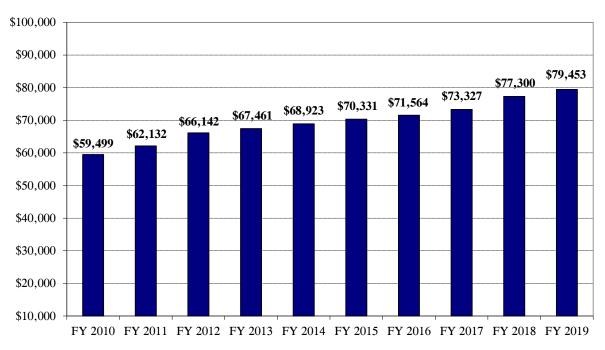


CHICAGO TRANSIT AUTHORITY PENSION FUND Active Employees

CHART 2



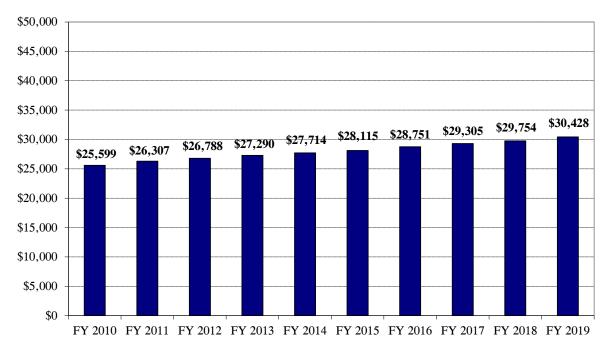


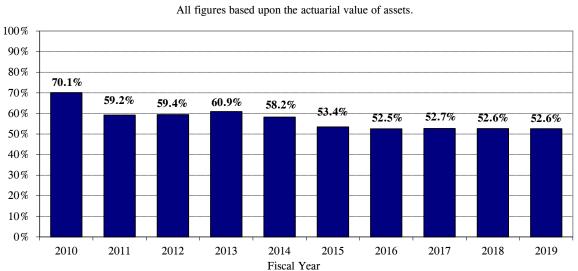


CHICAGO TRANSIT AUTHORITY PENSION FUND Average Employee Salaries

CHART 4





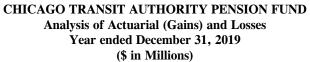


CHICAGO TRANSIT AUTHORITY PENSION FUND Funded Ratio FY 2010 - FY 2019

CHART 6

\$0

SALARY INCREASES





\$0.00

EMPLOYER CONTRIBUTIONS \$0.00

CHANGES IN ASSUMPTIONS

DEMOGRAPHIC AND OTHERS ¹

¹ Includes an actuarial loss from the unfavorable retiree mortality experience and unexpected participant pick up.

INVESTMENT RETURNS

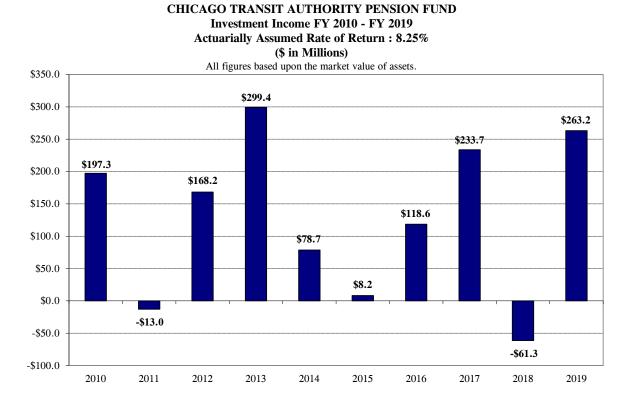
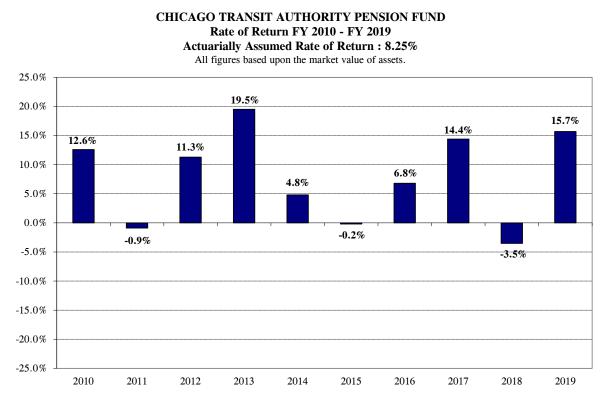


CHART 8



23

TABLE 1

CHICAGO TRANSIT AUTHORITY PENSION FUND

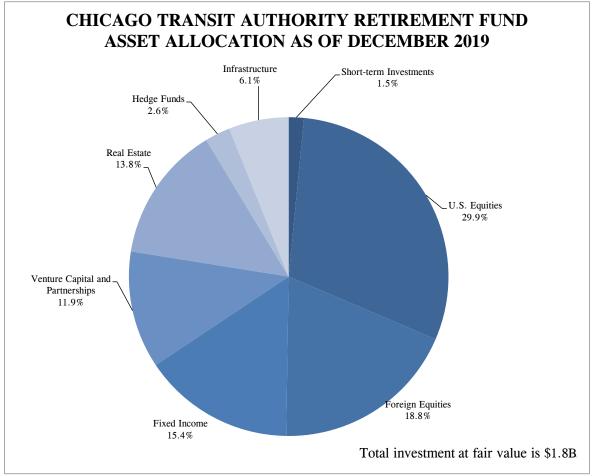
System Experience, FY 2010 - FY 2019

(\$ in Millions)

Fiscal Year	Annual Payroll	Actuarial Liabilities	Actuarial Assets	Unfunded Liabilities	Funded Ratio
2019	631.4	3,583.9	1,883.4	1,700.4	52.6%
2018	623.0	3,489.0	1,835.8	1,653.2	52.6%
2017	595.0	3,423.2	1,802.2	1,621.0	52.6%
2016	575.4	3,338.6	1,752.5	1,586.2	52.5%
2015	573.5	3,267.1	1,743.2	1,523.9	53.4%
2014	564.8	3,186.2	1,855.9	1,330.3	58.2%
2013	550.6	3,105.6	1,892.7	1,212.9	60.9%
2012	548.5	2,867.3	1,702.8	1,164.5	59.4%
2011	541.4	2,808.2	1,662.2	1,146.0	59.2%
2010	528.3	2,724.2	1,910.0	814.2	70.1%

TABLE 2

CHICAGO TRANSIT AUTHORITY PENSION FUND Changes in Net Assets										
(\$ in Millions)										
Fiscal Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Additions to Assets										
Employer	\$121.7	\$117.1	\$104.5	\$83.9	\$82.8	\$82.3	\$79.5	\$62.8	\$60.3	\$56.3
Employees	\$81.3	\$78.3	\$70.3	\$59.6	\$59.0	\$58.6	\$56.8	\$48.4	\$47.2	\$45.3
Net Investment Income	\$263.2	-\$61.3	\$233.7	\$118.6	\$8.2	\$78.7	\$299.4	\$168.2	-\$13.0	\$197.2
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total Asset Additions (A)	\$466.2	\$134.1	\$408.5	\$262.0	\$150.0	\$219.5	\$435.7	\$279.4	\$94.5	\$298.8
Deductions from Assets										
Benefits	\$281.0	\$274.5	\$269.1	\$261.7	\$253.8	\$246.0	\$238.7	\$232.7	\$222.2	\$216.2
Refunds	\$7.1	\$7.4	\$7.3	\$4.8	\$6.4	\$7.1	\$4.9	\$4.0	\$2.9	\$2.2
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Administrative Expenses	\$2.8	\$2.9	\$2.5	\$2.3	\$2.6	\$3.1	\$2.1	\$2.1	\$2.0	\$2.0
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total Asset Deductions (B)	\$290.9	\$284.8	\$279.0	\$268.9	\$262.7	\$256.3	\$245.7	\$238.8	\$227.1	\$220.4
Change in Net Assets (A-B=C)	\$175.2	-\$150.7	\$129.5	-\$6.8	-\$112.7	-\$36.8	\$190.0	\$40.6	-\$132.6	\$78.4



III. Cook County Employees' Pension Fund

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- System Projections
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Cook County Employees' Pension Fund Tier 1 Plan Summary

Retirement Age

• Age 50 with 10 years of service

Retirement Formula

• 2.4% of final average salary for each year of service

Maximum Annuity

• 80% of final average salary

Salary Used to Calculate Pension

Highest average monthly salary for any 48 consecutive months within the final 10 years of service

Annual COLA

• 3% compounded

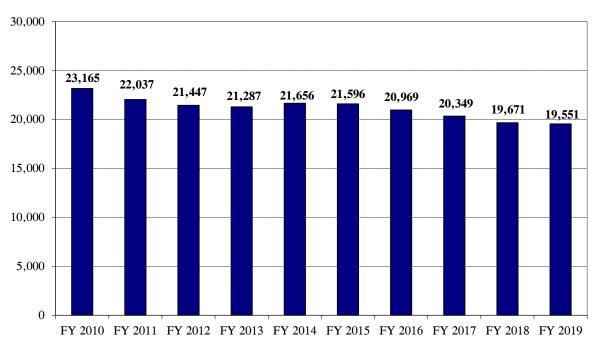
Employee Contributions

• 8.5% of salary

Employer Contributions

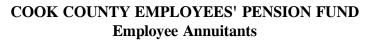
The County levies a tax annually equal to the total amount of contributions made by employees in the calendar year two years prior to the year of the levy, multiplied by 1.54.

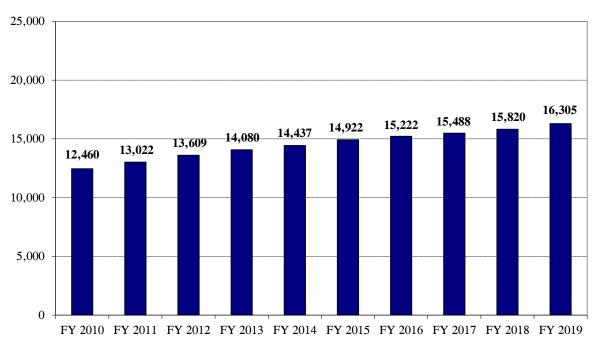
Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date of P.A. 96-0889. See P.A. 96-0889 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).

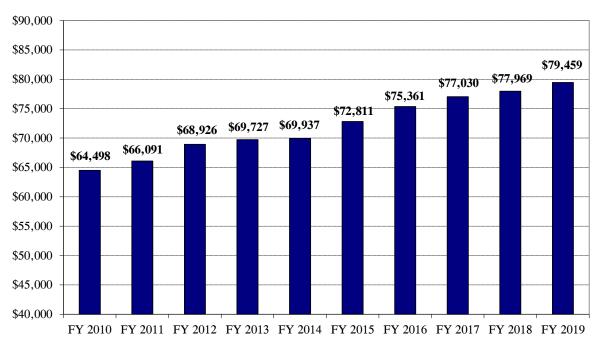


COOK COUNTY EMPLOYEES' PENSION FUND Active Employees

CHART 11

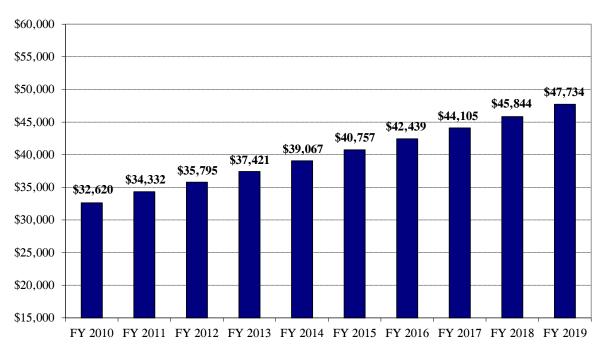


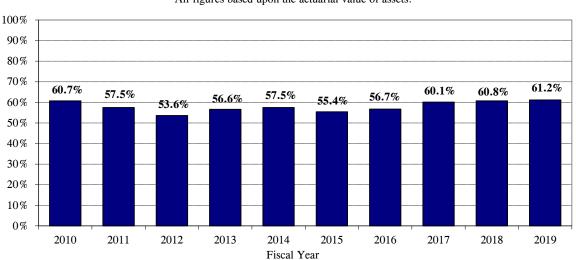




COOK COUNTY EMPLOYEES' PENSION FUND Average Employee Salaries







COOK COUNTY EMPLOYEES' PENSION FUND Funded Ratio FY 2010 - FY 2019

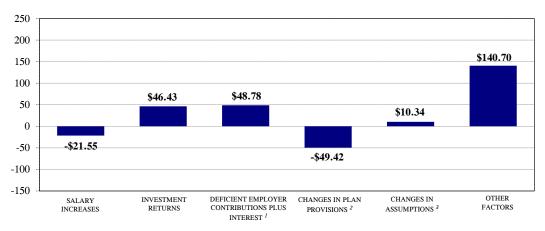
All figures based upon the actuarial value of assets.

CHART 15

COOK COUNTY EMPLOYEES' PENSION FUND Change in Unfunded Liabilities Year ended December 31, 2019 (\$ in Millions)

All figures based upon the actuarial value of assets.

TOTAL INCREASE EQUALS \$175.3 MIL



¹ The unfunded liability increased due to employer contribution plus interest being less than normal cost. A supplemental *employer contribution of \$320.3 million is included in the employer contribution.* ² *The unfunded liability decreased due to provision changes in the Retiree Health Insurance plan, which include changes*

in the 2020 subsidy rates for member and survivor health benefits.

³ The unfunded liability increased due to assumptions used for the retiree health care benefits.

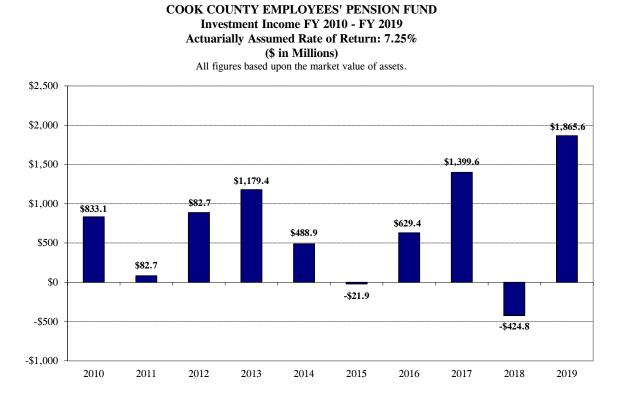
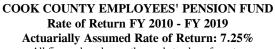
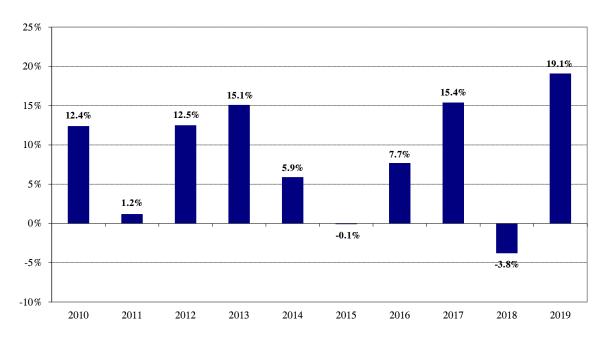


CHART 17



All figures based upon the market value of assets.



	COOK COUNTY EMPLOYEES' PENSION FUND										
	Sys	stem Experien	ce, FY 2010 - F	Y 2019							
(\$ in Millions)											
Fiscal Year	Annual Payroll	Actuarial Liabilities	Actuarial Assets	Unfunded Liabilities	Funded Ratio						
2019	1,553.5	17,949.7	10,983.4	6,966.3	61.2%						
2018	1,533.7	17,303.8	10,512.8	6,791.0	60.8%						
2017	1,567.5	16,889.5	10,148.2	6,741.3	60.1%						
2016	1,580.3	16,726.5	9,488.2	7,238.2	56.7%						
2015	1,572.4	16,232.2	8,991.0	7,241.2	55.4%						
2014	1,514.6	15,318.8	8,810.5	6,508.3	57.5%						
2013	1,484.3	14,812.1	8,381.4	6,430.6	56.6%						
2012	1,478.3	14,630.3	7,833.9	6,796.4	53.6%						
2011	1,456.4	13,724.0	7,897.1	5,826.9	57.5%						
2010	1,494.1	13,142.1	7,982.3	5,159.8	60.7%						

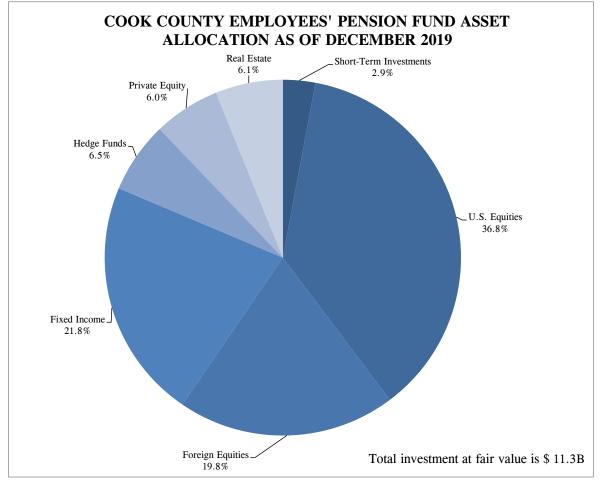
	COOK COUNTY EMPLOYEES' PENSION FUND Changes in Net Assets											
(\$ in Millions)												
Fiscal Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010		
Additions to Assets												
Employer	\$526.2	\$587.7	\$559.21	\$464.3	\$186.8	\$190.0	\$187.8	\$190.7	\$195.3	\$181.5		
Employees	\$134.8	\$134.2	\$138.83	\$139.4	\$137.7	\$129.3	\$127.6	\$130.6	\$127.6	\$129.4		
Net Investment Income	\$1,865.6	-\$424.8	\$1,399.63	\$629.4	-\$21.9	\$488.9	\$1,179.4	\$887.7	\$82.9	\$833.1		
Other	\$35.2	\$27.5	\$23.27	\$13.9	\$11.5	\$9.7	\$8.5	\$10.2	\$17.4	\$12.8		
Total Asset Additions (A)	\$2,561.9	\$324.6	\$2,120.98	\$1,247.0	\$314.1	\$818.0	\$1,503.4	\$1,219.2	\$423.2	\$1,156.8		
Deductions from Assets												
Benefits	\$890.1	\$831.7	\$790.35	\$742.4	\$701.0	\$645.6	\$601.8	\$563.1	\$523.4	\$482.5		
Refunds	\$37.7	\$33.7	\$33.00	\$26.7	\$33.3	\$26.3	\$29.9	\$33.1	\$29.1	\$25.0		
Rebates	\$0.0	\$0.0	\$0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0		
Administrative Expenses	\$5.1	\$5.1	\$5.41	\$5.4	\$5.2	\$5.0	\$4.3	\$4.3	\$4.1	\$4.1		
Other	\$0.0	\$0.0	\$0.00	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0		
Total Asset Deductions (B)	\$932.9	\$870.5	\$828.75	\$774.5	\$739.5	\$677.0	\$636.0	\$600.5	\$556.6	\$511.6		
Change in Net Assets (A-B=C)	\$1,628.9	-\$545.9	\$1,292.23	\$472.6	-\$425.4	\$141.0	\$867.4	\$618.7	-\$133.4	\$645.2		

Table 5 below contains funding projections based on the December 31, 2019 actuarial valuation of the Cook County Employees' Pension Fund. As shown in the table below, under the current funding policy the Cook County Employees' Pension Fund is projected to run out of assets by 2044 if all future assumptions are met and no additional contributions are made.

		Actuarial V	aluation Proje	Employees' Pe ection Results a \$ in Millions)				
Calendar Year	Capped Payroll	Total County Contribution	County Contribution As % of Payroll	Total Employee Contribution	Accrued Liability	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2020	1,605.4	513.6	32.0%	136.7	17,950.0	10,983.0	6,967.0	61.2%
2021	1,641.7	200.4	12.2%	139.5	18,484.0	11,608.0	6,876.0	62.8%
2022	1,678.7	201.4	12.0%	142.7	19,004.0	11,905.0	7,099.0	62.6%
2023	1,717.0	204.2	11.9%	145.9	19,505.0	12,013.0	7,492.0	61.6%
2024	1,755.7	208.5	11.9%	149.2	19,985.0	12,311.0	7,674.0	61.6%
2025	1,795.1	213.1	11.9%	152.6	20,441.0	12,328.0	8,113.0	60.3%
2026	1,835.7	218.0	11.9%	156.0	20,871.0	12,291.0	8,580.0	58.9%
2027	1,878.3	222.9	11.9%	159.7	21,271.0	12,197.0	9,074.0	57.3%
2028	1,922.8	227.9	11.9%	163.4	21,644.0	12,044.0	9,600.0	55.6%
2029	1,968.3	233.1	11.8%	167.3	21,989.0	11,830.0	10,159.0	53.8%
2030	2,015.8	238.5	11.8%	171.3	22,306.0	11,554.0	10,752.0	51.8%
2031	2,064.5	244.1	11.8%	175.5	22,595.0	11,210.0	11,385.0	49.6%
2032	2,115.3	249.9	11.8%	179.8	22,854.0	10,797.0	12,057.0	47.2%
2033	2,167.9	256.0	11.8%	184.3	23,086.0	10,313.0	12,773.0	44.7%
2034	2,222.0	262.1	11.8%	188.9	23,292.0	9,756.0	13,536.0	41.9%
2035	2,277.7	268.6	11.8%	193.6	23,473.0	9,124.0	14,349.0	38.9%
2036	2,335.2	275.3	11.8%	198.5	23,629.0	8,414.0	15,215.0	35.6%
2037	2,394.6	282.1	11.8%	203.5	23,762.0	7,624.0	16,138.0	32.1%
2038	2,455.8	289.2	11.8%	208.7	23,875.0	6,752.0	17,123.0	28.3%
2039	2,518.5	296.5	11.8%	214.1	23,970.0	5,796.0	18,174.0	24.2%
2040	2,582.4	304.0	11.8%	219.5	24,050.0	4,755.0	19,295.0	19.8%
2041	2,646.8	311.8	11.8%	225.0	24,118.0	3,626.0	20,492.0	15.0%
2042	2,712.8	319.8	11.8%	230.6	24,177.0	2,407.0	21,770.0	10.0%
2043	2,779.1	327.9	11.8%	236.2	24,231.0	1,096.0	23,135.0	4.5%
2044	2,845.4	336.1	11.8%	241.9	24,284.0	-308.0	24,592.0	-1.3%
2045	2,911.5	344.5	11.8%	247.5	24,341.0	-1,809.0	26,150.0	-7.4%
2046	2,977.2	352.9	11.9%	253.1	24,406.0	-3,410.0	27,816.0	-14.0%
2010	3,041.8	361.3	11.9%	258.6	24,484.0	-5,114.0	29,598.0	-20.9%
2047	3,105.7	369.7	11.9%	264.0	24,575.0	-6,929.0	31,504.0	-28.2%
2040	3,169.4	378.0	11.9%	269.4	24,683.0	-8,861.0	33,544.0	-35.9%
2049	3,232.7	386.2	11.9%	274.8	24,005.0 24,807.0	-10,921.0	35,728.0	-44.0%
2050	3,295.9	394.3	11.9%	274.8	24,807.0	-13,114.0	38,066.0	-44.0%
2051	3,358.5	402.4	12.0%	285.5	24,932.0 25,119.0	-15,452.0	40,571.0	-52.0%
2052	3,338.3	402.4	12.0%	283.3 290.8	25,306.0	-13,432.0	40,371.0	-01.3%
2053 2054	3,420.7 3483.1	410.5		290.8 296.1	25,306.0 25512	-17,949.0 -20618		
2054 2055	3483.1 3545.7	418.5	12.0% 12.0%	296.1 301.4	25512	-20618 -23474	46,130.0 49,212.0	-80.8% -91.2%

TABLE 5

NOTE: County contribution for 2020 includes a supplemental employer contribution of \$306.2 million, \$25 million of which was paid in 2019.



IV. Cook County Forest Preserve Employees' Pension Fund

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- System Projections
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Cook County Forest Preserve Employees' Pension Fund Tier 1 Plan Summary

Retirement Age

• Age 50 with 10 years of service

Retirement Formula

• 2.4% of final average salary for each year of service

Maximum Annuity

• 80% of final average salary

Salary Used to Calculate Pension

• Highest average monthly salary for any 48 consecutive months within the final 10 years of service

Annual COLA

• 3% compounded

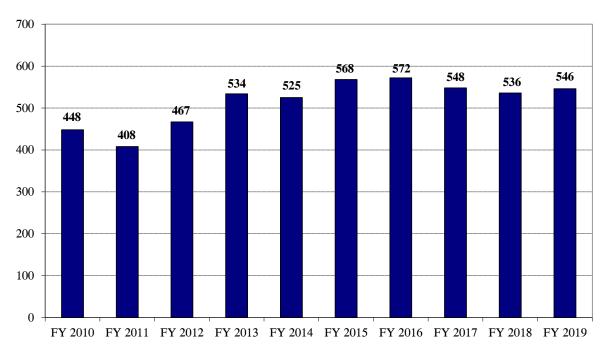
Employee Contributions

• 8.5% of salary

Employer Contributions

The Forest Preserve District levies a tax annually equal to the total amount of contributions made by employees in the calendar year two years prior to the year of the levy, multiplied by 1.30.

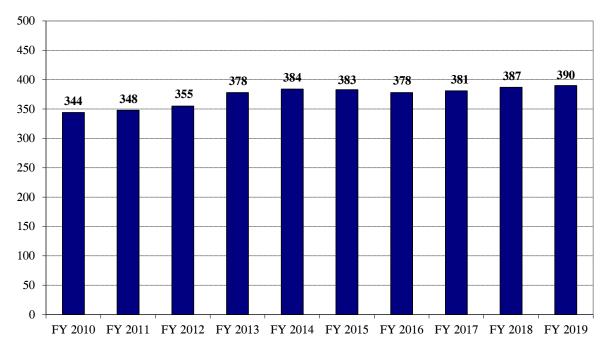
Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date of P.A. 96-0889. See P.A. 96-0889 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).

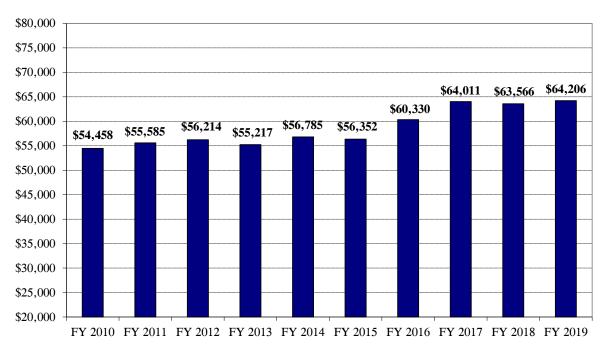


COOK COUNTY FOREST PRESERVE PENSION FUND Active Employees

CHART 20

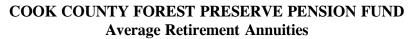


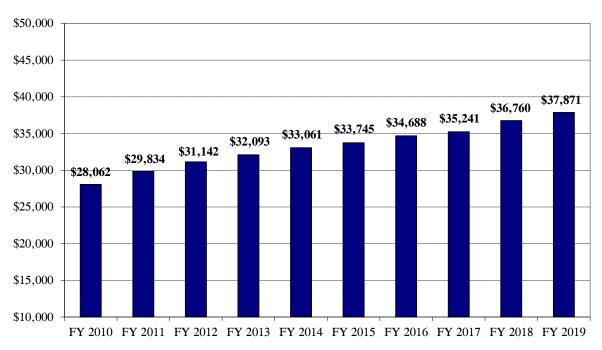


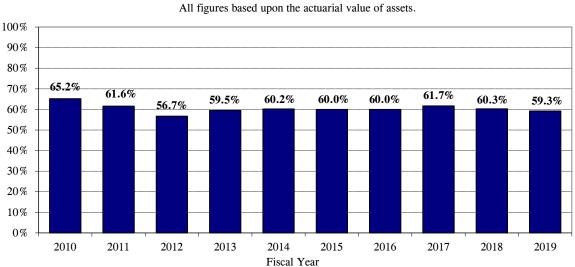


COOK COUNTY FOREST PRESERVE PENSION FUND Average Employee Salaries

CHART 22

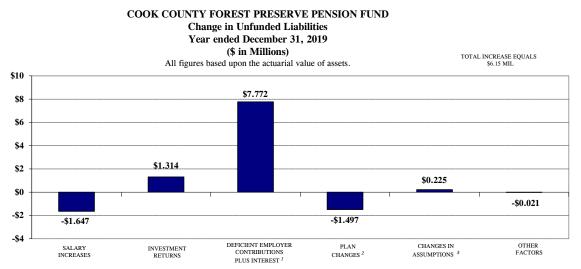




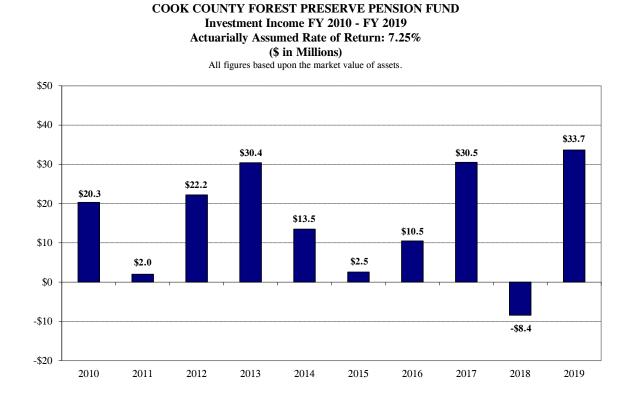


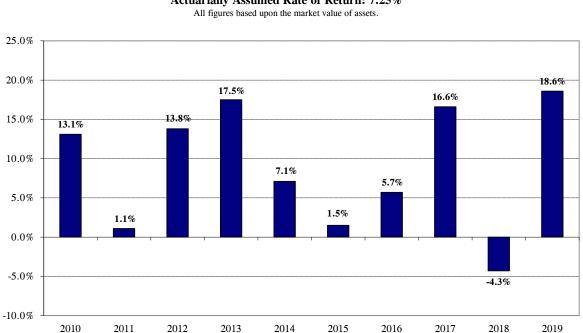
COOK COUNTY FOREST PRESERVE PENSION FUND Funded Ratio FY 2010 - FY 2019

CHART 24



¹ Unfunded liability increased due to employer contributions plus interest being less than normal cost, plus interest. ² The unfunded liability decreased due to provision changes in the Retiree Health Insurance plan, which include changes in the 2020 subsidy rates for member and survivor health benefits. ³ The unfunded liability increased due to assumptions used for the retiree health care benefits.





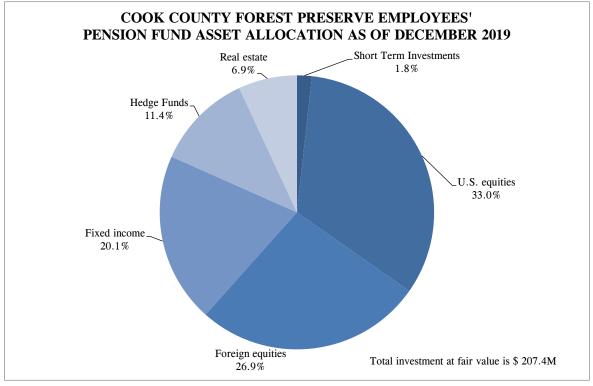
COOK COUNTY FOREST PRESERVE PENSION FUND Rate of Return FY 2010 - FY 2019 Actuarially Assumed Rate of Return: 7.25%

	COOK COUNTY FOREST PRESERVE PENSION FUND										
	Sys	stem Experien	ce, FY 2010 - F	'Y 2019							
(\$ in Millions)											
Fiscal Year	Annual Payroll Funded Ratio										
2019	35.1	343.4	203.5	139.9	59.3%						
2018	34.1	336.7	202.9	133.8	60.3%						
2017	35.1	330.9	204.3	126.6	61.7%						
2016	34.5	330.2	198.2	132.0	60.0%						
2015	32.0	322.8	193.7	129.0	60.0%						
2014	29.7	315.2	189.9	125.3	60.2%						
2013	26.3	306.9	182.6	124.4	59.5%						
2012	26.3	304.5	172.6	131.9	56.7%						
2011	22.7	289.3	178.1	111.2	61.6%						
2010	24.4	282.4	184.1	98.3	65.2%						

	COOK COUNTY FOREST PRESERVE PENSION FUND Changes in Net Assets (\$ in Millions)										
Fiscal Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	
Additions to Assets											
Employer	\$4.3	\$4.1	\$3.5	\$3.4	\$3.5	\$3.1	\$2.9	\$3.1	\$3.3	\$2.7	
Employees	\$3.0	\$3.1	\$3.3	\$3.2	\$2.8	\$2.6	\$2.7	\$2.5	\$2.3	\$2.4	
Net Investment Income	\$33.7	-\$8.4	\$30.5	\$10.5	\$2.5	\$13.5	\$30.4	\$22.2	\$2.0	\$20.3	
Other	\$0.8	\$0.9	\$0.6	\$0.3	\$0.2	\$0.2	\$0.2	\$0.2	\$0.5	\$0.2	
Total Asset Additions (A)	\$41.8	-\$0.3	\$37.9	\$17.4	\$9.0	\$19.5	\$36.1	\$28.0	\$8.1	\$25.6	
Deductions from Assets											
Benefits	\$19.3	\$18.3	\$18.0	\$17.5	\$17.2	\$16.7	\$15.7	\$14.2	\$13.6	\$13.0	
Refunds	\$0.8	\$1.1	\$0.6	\$0.7	\$0.6	\$1.0	\$1.0	\$1.2	\$0.6	\$0.4	
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Administrative Expenses	\$0.2	\$0.2	\$0.2	\$0.2	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	
Other	\$0.3	\$0.2	\$0.1	\$0.1	\$0.0	\$0.2	-\$0.1	\$0.2	-\$0.3	\$0.3	
Total Asset Deductions (B)	\$20.5	\$19.7	\$18.8	\$18.5	\$18.0	\$17.9	\$16.6	\$15.7	\$14.0	\$13.8	
Change in Net Assets (A-B=C)	\$21.3	-\$20.0	\$19.2	-\$1.1	-\$9.0	\$1.6	\$19.5	\$12.3	-\$5.9	\$11.8	

Table 8 below contains funding projections based on the December 31, 2019 actuarial valuation of the Cook County Forest Preserve Pension Fund. As shown in the table below, under the current funding policy the Cook County Forest Preserve Pension Fund is projected to run out of assets by 2043 if all future assumptions are met and no additional contributions are made.

	Cook County Forest Preserve Pension Fund Actuarial Valuation Projection Results as of December 31, 2019 (\$ in Millions)										
Fiscal Year	Capped Payroll	Total County Contribution	County Contribution As % of Payroll	Total Employee Contribution	Accrued Liability	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratic			
2020	36.8	4.2	11.4%	3.1	343.0	203.0	140.0	59.2%			
2021	38.4	3.9	10.2%	3.3	352.0	206.0	146.0	58.5%			
2022	39.9	3.8	9.5%	3.4	360.0	209.0	151.0	58.1%			
2023	41.4	3.9	9.4%	3.5	368.0	207.0	161.0	56.3%			
2024	42.9	4.1	9.6%	3.6	376.0	209.0	167.0	55.6%			
2025	44.3	4.3	9.7%	3.8	384.0	206.0	178.0	53.6%			
2026	45.9	4.4	9.6%	3.9	391.0	202.0	189.0	51.7%			
2027	47.5	4.6	9.7%	4.0	398.0	197.0	201.0	49.5%			
2028	49.1	4.8	9.8%	4.2	404.0	192.0	212.0	47.5%			
2029	50.8	4.9	9.6%	4.3	411.0	185.0	226.0	45.0%			
2030	52.5	5.1	9.7%	4.5	417.0	178.0	239.0	42.7%			
2031	54.2	5.3	9.8%	4.6	423.0	169.0	254.0	40.0%			
2032	56.0	5.4	9.6%	4.8	429.0	160.0	269.0	37.3%			
2033	57.8	5.6	9.7%	4.9	435.0	149.0	286.0	34.3%			
2034	59.6	5.8	9.7%	5.1	441.0	138.0	303.0	31.3%			
2035	61.5	6.0	9.8%	5.2	448.0	126.0	322.0	28.1%			
2036	63.4	6.2	9.8%	5.4	454.0	113.0	341.0	24.9%			
2037	65.3	6.4	9.8%	5.6	461.0	98.0	363.0	21.3%			
2038	67.2	6.6	9.8%	5.7	468.0	83.0	385.0	17.7%			
2039	69.2	6.8	9.8%	5.9	475.0	66.0	409.0	13.9%			
2039	71.1	7.0	9.8%	6.0	482.0	48.0	434.0	10.0%			
2041	73.0	7.2	9.9%	6.2	490.0	28.0	462.0	5.7%			
2041	75.0	7.2	9.9%	6.4	497.0	6.0	491.0	1.2%			
2043	77.0	7.6	9.9%	6.5	505.0	-17.0	522.0	-3.4%			
2043	78.9	7.8	9.9%	6.7	513.0	-42.0	555.0	-8.2%			
2044	80.8	8.0	9.9%	6.9	521.0	-69.0	590.0	-13.2%			
2045	82.7	8.3	10.0%	7.0	530.0	-98.0	628.0	-18.5%			
2040	84.5	8.5	10.0%	7.0	539.0	-129.0	668.0	-23.9%			
2047	84.5 86.4	8.5	10.1%	7.2	549.0	-129.0	711.0	-29.5%			
2048 2049	88.2	8.7	10.1%	7.5	559.0	-102.0	757.0	-35.4%			
2049 2050	90.0	8.9 9.1	10.1%	7.5	570.0	-198.0	807.0	-33.4%			
2050 2051	90.0 91.8	9.1	10.1%	7.8	582.0	-237.0	860.0	-41.0%			
2051 2052	91.8 93.5	9.3 9.4	10.1%	7.8	594.0	-278.0	917.0	-47.8% -54.4%			
2052 2053	95.3 95.3		10.1%	8.1	607.0	-323.0	917.0 978.0	-34.4%			
2053 2054	95.3 97.1	9.6 9.8	10.1%	8.1	620.0	-371.0	978.0 1,043.0	-61.1% -68.2%			



V. Firemen's Annuity and Benefit Fund of Chicago

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- System Projections
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Firemen's Annuity and Benefit Fund of Chicago Tier 1 Plan Summary

Retirement Age

- Age 50 with 20 years of service
- Age 50 with 10 years of service (accumulated annuity)
- Mandatory retirement at age 63, except for emergency medical technicians

Retirement Formula

• For employees with 20 or more years of service, 50% of final average salary plus 2.5% of final average salary for each year in excess of 20

Maximum Annuity

• 75% of final average salary

Salary Used to Calculate Pension

• Average of 4 highest consecutive years within final 10 years of service

Annual COLA

- 3% non-compounded with no limit at age 55, or the first anniversary of retirement if born before 1/1/66
- 1.5% non-compounded at age 60 or the first anniversary of retirement if born after 1/1/66 with 30% maximum

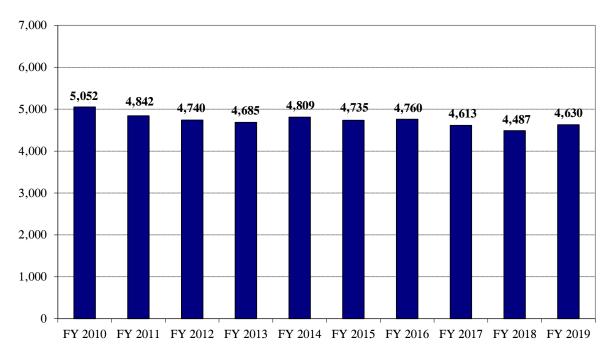
Employee Contributions

• 9.125% of salary

Required Employer Contributions

Pursuant to P.A. 99-0506, the employer contributions for payment year 2016 through 2020 are specified as follows: \$199 million in 2016, \$208 million in 2017, \$227 million in 2018, \$235 million in 2019, and \$245 million in 2020. After payment year 2020, the city (employer) is required to make an annual actuarially determined contribution as a level percentage of pay, with a funding goal of 90% by the end of 2055, based upon the actuarial value of fund assets and application of required actuarial assumptions and methodologies.

Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date for P.A. 96-1495. See P.A. 96-1495 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).



FIREMEN'S ANNUITY & BENEFIT FUND OF CHICAGO Active Employees

FIREMEN'S ANNUITY & BENEFIT FUND OF CHICAGO Employee Annuitants

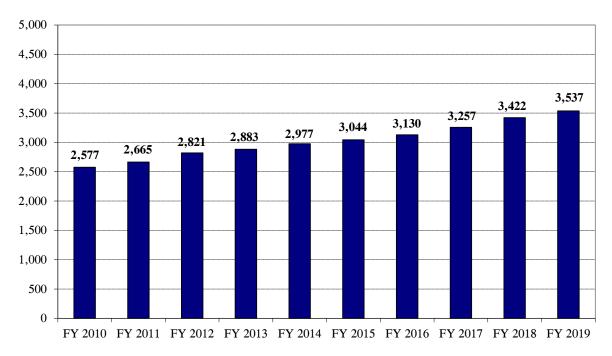
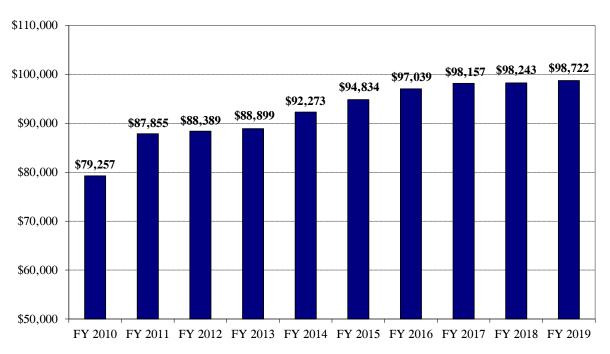
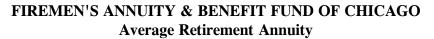
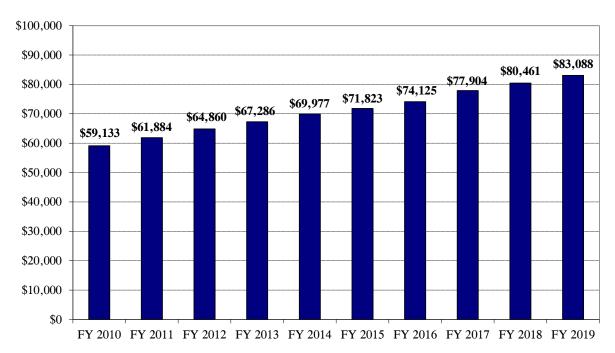


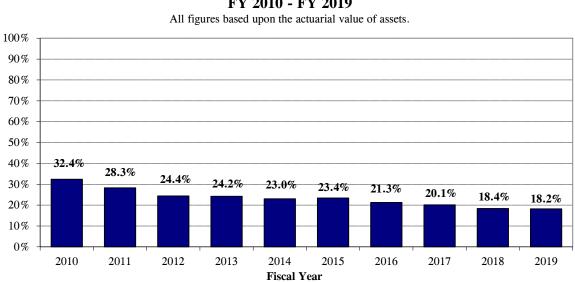
CHART 29



FIREMEN'S ANNUITY & BENEFIT FUND OF CHICAGO Average Employee Salaries

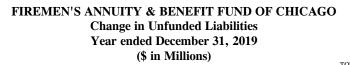


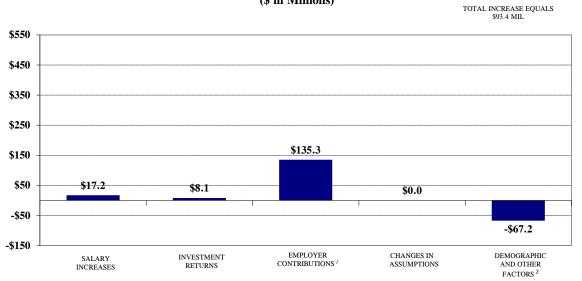




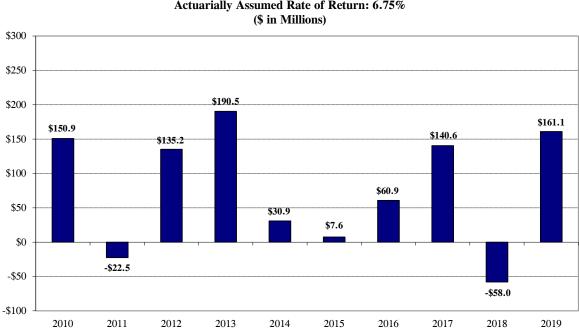
FIREMEN'S ANNUITY & BENEFIT FUND OF CHICAGO Funded Ratio FY 2010 - FY 2019

CHART 33

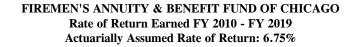


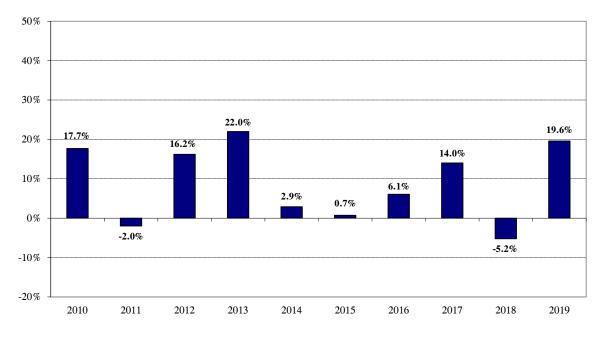


¹ Unfunded liability increases due to employer contributions plus interest being less than normal cost, plus interest. ² Unfunded liability decreases due to actuarial gains from demographic and other factors, which includes earlier-thanassumed deaths.



FIREMEN'S ANNUITY & BENEFIT FUND OF CHICAGO Investment Income FY 2010 - FY 2019 Actuarially Assumed Rate of Return: 6.75%





F	FIREMEN'S ANNUITY & BENEFIT FUND OF CHICAGO										
	Sys	stem Experien	ce, FY 2010 - F	'Y 2019							
(\$ in Millions)											
Fiscal Year	Annual Pavroll Funded Ratio										
2019	457.1	6,256.1	1,137.1	5,119.0	18.2%						
2018	457.0	6,155.9	1,130.4	5,025.5	18.4%						
2017	469.4	5,582.4	1,123.4	4,459.0	20.1%						
2016	478.5	5,045.9	1,074.9	3,971.0	21.3%						
2015	465.2	4,666.8	1,081.0	3,585.8	23.2%						
2014	460.2	4,343.6	988.1	3,355.5	22.7%						
2013	416.5	4,136.4	991.2	3,145.2	24.0%						
2012	419.0	4,066.3	993.3	3,073.0	24.4%						
2011	425.4	3,898.9	1,101.7	2,797.2	28.3%						
2010	400.4	3,703.2	1,198.1	2,505.1	32.4%						

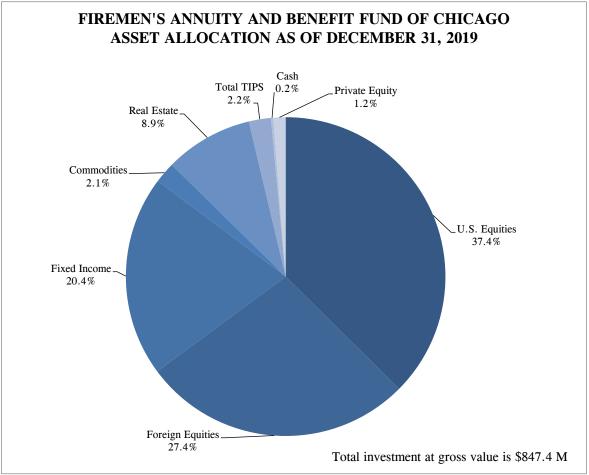
F	FIREMEN'S ANNUITY & BENEFIT FUND OF CHICAGO Changes in Net Assets (\$ in Millions)										
Fiscal Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	
Additions to Assets											
Employer	\$255.9	\$249.7	\$228.5	\$156.2	\$238.5	\$109.8	\$106.2	\$84.1	\$85.5	\$83.6	
Employees	\$46.6	\$45.9	\$47.4	\$49.0	\$46.6	\$48.1	\$42.5	\$53.3	\$51.9	\$41.7	
Net Investment Income	\$161.0	-\$58.0	\$140.6	\$60.9	\$7.6	\$30.9	\$190.5	\$135.2	-\$22.4	\$150.9	
Other	\$0.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-\$0.1	\$3.5	\$0.0	\$0.0	
Total Asset Additions (A)	\$464.2	\$237.6	\$416.4	\$266.0	\$292.6	\$188.7	\$339.2	\$276.1	\$115.0	\$276.2	
Deductions from Assets											
Benefits	\$342.9	\$320.6	\$302.5	\$285.2	\$276.8	\$264.0	\$249.6	\$231.2	\$221.5	\$215.8	
Refunds	\$3.5	\$4.1	\$3.6	\$3.7	\$3.6	\$2.3	\$2.2	\$2.6	\$2.1	\$1.8	
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Administrative Expenses	\$3.2	\$3.3	\$3.2	\$3.2	\$3.1	\$3.1	\$3.1	\$2.5	\$2.5	\$3.1	
Other	\$0.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1.1	\$1.2	\$1.1	
Total Asset Deductions (B)	\$350.1	\$327.9	\$309.3	\$292.1	\$283.5	\$269.4	\$254.9	\$237.4	\$227.3	\$221.8	
Change in Net Assets (A-B=C)	\$114.0	-\$90.4	\$107.1	-\$26.1	\$9.1	-\$80.7	\$84.3	\$38.7	-\$112.3	\$54.4	

Table 11 below contains funding projections based on the December 31, 2019 actuarial valuation of the Firemen's Annuity and Benefit Fund of Chicago.

TABLE 1	1
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				-	it Fund of Chic s as of Decemb s)	-		
Fiscal Year	Capped Payroll	Total City Contribution	Total City Contribution As % of Payroll	Total Employee Contribution	Accrued Liability	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio
2019	478.5	255.9	53.5%	46.6	6,256.1	1,137.1	5,119.0	18.2%
2020	469.4	371.3	79.1%	43.3	6,407.0	1,246.2	5,160.8	19.5%
2021	493.8	367.1	74.3%	45.2	6,549.6	1,342.4	5,207.2	20.5%
2022	506.1	376.2	74.3%	46.3	6,685.0	1,424.5	5,260.5	21.3%
2023	519.8	386.4	74.3%	47.6	6,813.5	1,535.4	5,278.0	22.5%
2024	535.2	397.8	74.3%	49.0	6,934.9	1,629.9	5,305.0	23.5%
2025	549.1	408.2	74.3%	50.2	7,049.4	1,725.4	5,324.0	24.5%
2026	562.3	418.0	74.3%	51.5	7,156.3	1,821.8	5,334.5	25.5%
2020	574.2	426.9	74.3%	52.5	7,255.1	1,918.3	5,336.8	25.5 % 26.4 %
2027	587.5	436.7	74.3%	53.7	7,235.1	2,016.6	5,329.1	20.4 <i>%</i> 27.5 <i>%</i>
2028		430.7	74.3%	55.1	7,343.7	2,010.0	5,309.6	27.5% 28.5%
	602.7		74.3%		,	<i>,</i>	,	
2030	613.7	456.2		56.1	7,506.4	2,224.8	5,281.6	29.6%
2031	622.5	462.7	74.3%	56.9	7,576.7	2,330.9	5,245.8	30.8%
2032	630.4	468.6	74.3%	57.7	7,640.2	2,438.0	5,202.2	31.9%
2033	638.2	474.4	74.3%	58.4	7,697.4	2,546.8	5,150.7	33.1%
2034	645.8	480.1	74.3%	59.1	7,748.7	2,658.0	5,090.7	34.3%
2035	652.2	484.8	74.3%	59.6	7,795.3	2,771.8	5,023.5	35.6%
2036	658.0	489.2	74.3%	60.2	7,837.7	2,889.3	4,948.4	36.9%
2037	663.7	493.4	74.3%	60.7	7,876.7	3,011.4	4,865.3	38.2%
2038	669.6	497.7	74.3%	61.2	7,912.8	3,139.3	4,773.5	39.7%
2039	676.6	503.0	74.3%	61.9	7,946.8	3,275.4	4,671.3	41.2%
2040	683.0	507.7	74.3%	62.5	7,979.8	3,420.7	4,559.0	42.9%
2041	689.1	512.2	74.3%	63.0	8,011.9	3,575.9	4,436.0	44.6%
2042	695.5	517.0	74.3%	63.6	8,043.5	3,742.4	4,301.1	46.5%
2043	702.1	521.9	74.3%	64.2	8,074.8	3,921.5	4,153.3	48.6%
2044	709.4	527.3	74.3%	64.9	8,105.9	4,114.7	3,991.2	50.8%
2045	716.7	532.7	74.3%	65.5	8,136.9	4,323.3	3,813.6	53.1%
2046	724.5	538.6	74.3%	66.3	8,168.6	4,549.6	3,619.0	55.7%
2047	732.8	544.7	74.3%	67.0	8,202.2	4,796.2	3,406.0	58.5%
2048	741.2	550.9	74.3% 74.3%	67.8	8,238.6	5,065.0	3,173.6	61.5%
2049 2050	749.7 758.7	557.3 564.0	74.3% 74.3%	68.6 69.4	8,278.4 8,322.5	5,358.3 5,678.6	2,920.1 2,643.9	64.7% 68.2%
2050	767.9	570.8	74.3%	70.2	8,322.5 8,371.6	6,028.2	2,043.9	08.2 <i>%</i> 72.0 <i>%</i>
2051	707.1	577.6	74.3%	71.0	8,426.2	6,409.4	2,016.7	76.1%
2053	786.3	584.5	74.3%	71.9	8,487.5	6,825.1	1,662.4	80.4%
2054	795.5	591.3	74.3%	72.7	8,556.2	7,277.7	1,278.5	85.1%
2055	804.7	598.2	74.3%	73.6	8,632.3	7,769.0	863.2	90.0%
2056	814.0	147.8	18.2%	74.4	8,716.0	7,844.4	871.6	90.0%

			ity and Bene al Cost as of (\$ in Millio	December 3	0	
Fiscal Year	Employer's Normal Cost	Employer's Normal Cost as a % of Payroll	Employee Contributions	Employee Contributions as a % of Payroll	Total Normal Cost	Total Normal Cost as a % of Payroll
2019	59.1	12.4%	46.6	9.7%	105.7	22.1%
2020	59.0	12.6%	43.3	9.2%	102.2	21.8%
2021	57.5	11.6%	45.2	9.2%	102.7	20.8%
2022	57.1	11.3%	46.3	9.2%	103.4	20.4%
2023	56.6	10.9%	47.6	9.2%	104.2	20.0%
2024	56.3	10.5%	49.0	9.2%	105.3	19.7%
2025	56.6	10.3%	50.2	9.2%	106.8	19.5%
2026	56.4	10.0%	51.5	9.1%	107.9	19.2%
2027	56.2	9.8%	52.5	9.1%	108.7	18.9%
2028	55.7	9.5%	53.7	9.1%	109.5	18.6%
2029	55.5	9.2%	55.1	9.1%	110.7	18.4%
2030	56.2	9.2%	56.1	9.1%	112.4	18.3%
2030	56.7	9.1%	56.9	9.1%	113.6	18.3%
2032	57.1	9.1%	57.7	9.1%	113.0	18.2%
2032	57.6	9.0%	58.4	9.1%	114.7	18.2%
2033	58.2	9.0 <i>%</i>	59.1	9.1%	115.9	18.2%
	59.4		59.1 59.6			
2035 2036	60.4	9.1%	60.2	9.1%	119.1 120.6	18.3%
		9.2%		9.1%		18.3%
2037	61.5	9.3%	60.7	9.1%	122.2	18.4%
2038	62.5	9.3%	61.2	9.1%	123.8	18.5%
2039	63.5	9.4%	61.9	9.1%	125.4	18.5%
2040	64.8	9.5%	62.5	9.1%	127.2	18.6%
2041	65.9	9.6%	63.0	9.1%	128.9	18.7%
2042	67.0	9.6%	63.6	9.1%	130.6	18.8%
2043	68.0	9.7%	64.2	9.1%	132.2	18.8%
2044	68.8	9.7%	64.9	9.1%	133.7	18.8%
2045	69.6	9.7%	65.5	9.1%	135.1	18.9%
2046	70.2	9.7%	66.3	9.1%	136.5	18.8%
2047	71.0	9.7%	67.0	9.1%	138.0	18.8%
2048	71.9	9.7%	67.8	9.1%	139.6	18.8%
2049	72.7	9.7%	68.6	9.1%	141.3	18.8%
2050	73.6	9.7%	69.4	9.1%	143.0	18.8%
2051	74.5	9.7%	70.2	9.1%	144.7	18.8%
2052	75.3	9.7%	71.0	9.1%	146.4	18.8%
2053	76.3	9.7%	71.9	9.1%	148.2	18.8%
2054	77.4	9.7%	72.7	9.1%	150.1	18.9%
2055	78.5	9.8%	73.6	9.1%	152.1	18.9%
2056	79.6	9.8%	74.4	9.1%	154.0	18.9%



VI. Illinois Municipal Retirement Fund

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Illinois Municipal Retirement Fund – Regular Formula Tier 1 Plan Summary

Retirement Age

- Age 60 with 8 or more years of service
- Age 55 with 35 or more years of service

Retirement Formula

- 1.67% of final average salary for each of the first 15 years of service, plus
- 2.0% of final average salary for each year of service in excess of 15

Maximum Annuity

• 75% of final average salary

Salary Used to Calculate Pension

• Average of the 4 highest consecutive years within the final 10 years

Annual COLA

• 3% non-compounded

Employee Contributions

• 4.5% of salary. In addition, IMRF members contribute to Social Security.

Employer Contributions

Each IMRF employer makes contributions to individual accounts which, when combined with member contributions and investment income, will be sufficient to provide future benefits for its own employees.

Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date of P.A. 96-0889. See P.A. 96-0889 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).

Illinois Municipal Retirement Fund Sheriff's Law Enforcement Personnel Plan (SLEP) Plan Summary

Retirement Age

• Age 50 with 20 or more years of service

Retirement Formula

• 2.5% of final rate of earnings for each year of service

Maximum Annuity

• 80% of final average salary

Salary Used to Calculate Pension

• Average of the 4 highest consecutive years within the final 10 years

Annual COLA

• 3% non-compounded

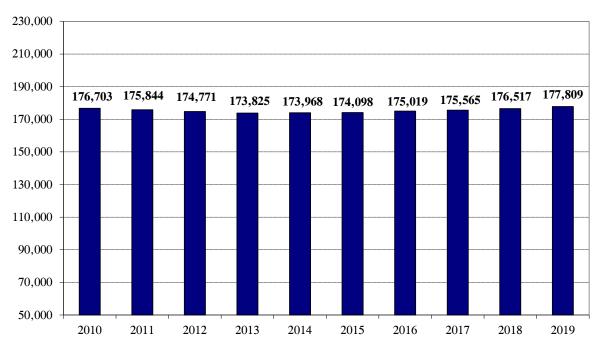
Employee Contributions

• 7.5% of salary

Employer Contributions

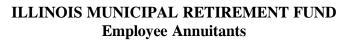
Each IMRF employer makes contributions to individual accounts which, when combined with member contributions and investment income, will be sufficient to provide future benefits for its own employees.

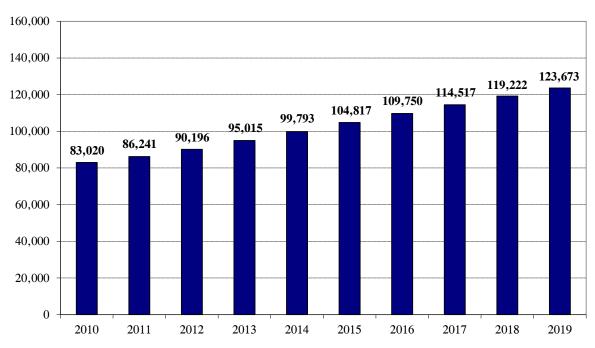
Note: Benefits shown are for employees hired prior to January 1, 2011, the effective date of P.A. 96-0889 and P.A. 96-1495. See P.A. 96-0889 & P.A. 96-1495 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).

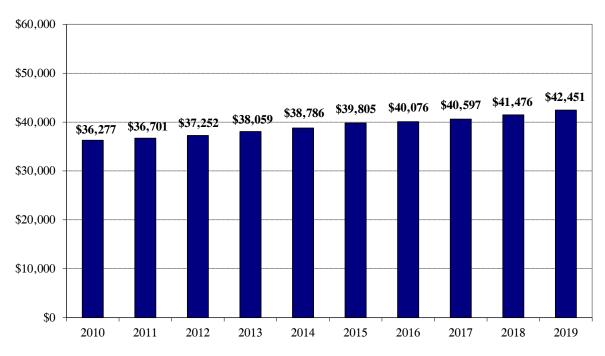


ILLINOIS MUNICIPAL RETIREMENT FUND Active Employees

CHART 38





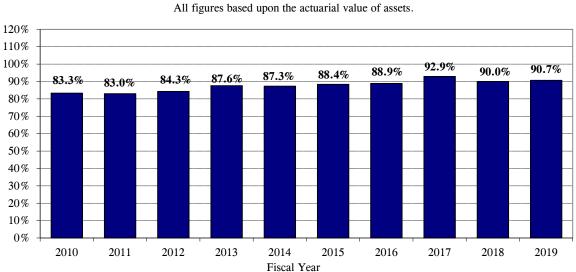


ILLINOIS MUNICIPAL RETIREMENT FUND Average Employee Salaries

CHART 40

ILLINOIS MUNICIPAL RETIREMENT FUND Average Retirement Annuity

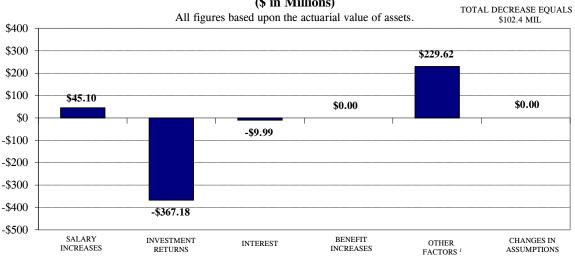




ILLINOIS MUNICIPAL RETIREMENT FUND Funded Ratio FY 2010 - FY 2019

CHART 42

ILLINOIS MUNICIPAL RETIREMENT FUND Change in Unfunded Liabilities Year ended December 31, 2019 (\$ in Millions)



¹ An actuarial loss of \$229.6 million occurred primarily due to rehires of formal employees.

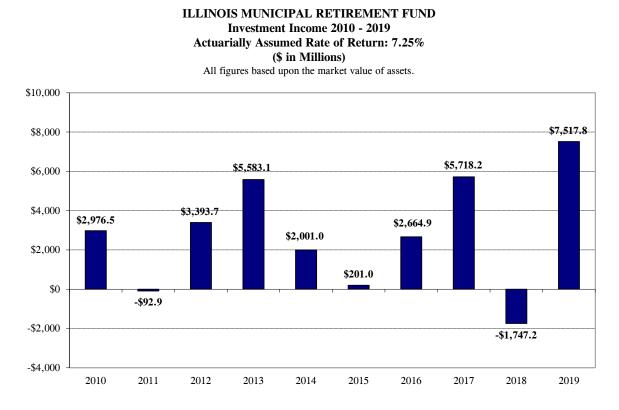
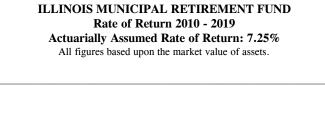
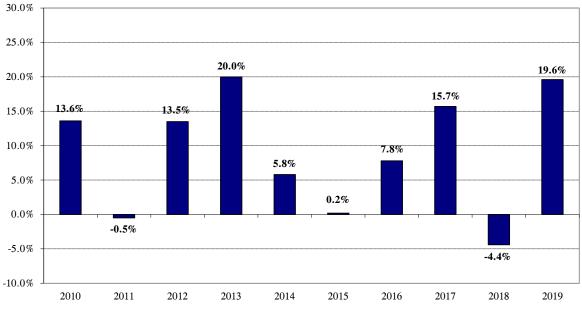


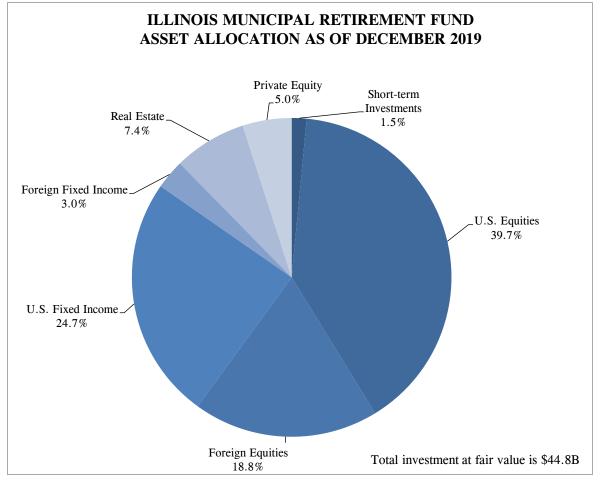
CHART 44





ILLINOIS MUNICIPAL RETIREMENT FUND												
	System Experience, FY 2010 - FY 2019											
(\$ in Millions)												
Fiscal	Annual Payroll Actuarial Actuarial Unfunded											
Year	Alliuar Fayton	Liabilities	Assets	Liabilities	Funded Ratio							
2019	7,547.5	47,357.9	42,936.2	4,421.7	90.7%							
2018	7,321.5	45,354.1	40,830.0	4,524.1	90.0%							
2017	7,127.5	42,179.5	39,187.8	2,991.7	92.9%							
2016	7,006.7	41,358.7	36,773.4	4,585.3	88.9%							
2015	6,919.3	39,486.6	34,913.1	4,573.4	88.4%							
2014	6,732.5	37,465.1	32,700.2	4,764.9	87.3%							
2013	6,602.5	34,356.6	30,083.0	4,273.5	87.6%							
2012	6,496.1	32,603.2	27,491.8	5,111.4	84.3%							
2011	6,431.3	30,962.8	25,711.3	5,251.5	83.0%							
2010	6,391.2	29,129.2	24,251.1	4,878.1	83.3%							

ILLINOIS MUNICIPAL RETIREMENT FUND Changes in Net Assets (\$ in Millions)										
Fiscal Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Additions to Assets										
Employer	780.1	947.6	\$903.5	\$933.9	\$900.5	\$923.4	\$931.0	\$883.2	\$800.8	\$770.2
Employees	437.9	413.9	\$393.7	\$380.4	\$368.0	\$351.1	\$338.9	\$330.8	\$327.7	\$324.9
Total Investment Income	\$7,517.8	-\$1,747.2	\$5,718.2	\$2,664.9	\$200.7	\$2,001.4	\$5,583.1	\$3,393.7	-\$92.9	\$2,976.5
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total Asset Additions (A)	\$8,735.9	-\$385.7	\$7,015.5	\$3,979.2	\$1,469.7	\$3,275.9	\$6,853.0	\$4,607.7	\$1,035.6	\$4,071.6
Deductions from Assets										
Benefits	\$2,347.2	\$2,195.0	\$2,043.6	\$1,902.1	\$1,758.2	\$1,626.8	\$1,503.4	\$1,389.8	\$1,284.4	\$1,178.0
Refunds	\$51.4	\$48.0	\$42.6	\$37.7	\$36.7	\$39.2	\$36.9	\$34.1	\$32.9	\$32.2
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Administrative Expenses	\$38.4	\$32.2	\$31.0	\$37.6	\$28.7	\$26.4	\$25.5	\$24.5	\$23.1	\$22.3
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total Asset Deductions (B)	\$2,437.0	\$2,275.2	\$2,117.2	\$1,977.4	\$1,823.6	\$1,692.4	\$1,565.8	\$1,448.4	\$1,340.4	\$1,232.5
Change in Net Assets (A-B=C)	\$6,298.9	-\$2,660.9	\$4,898.3	\$2,001.8	-\$354.0	\$1,583.5	\$5,287.2	\$3,159.3	-\$304.8	\$2,839.1



VII. Laborers' Annuity and Benefit Fund of Chicago

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- System Projections
- Normal Cost Projections
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Laborers' Annuity and Benefit Fund of Chicago Tier 1 Plan Summary

*Pursuant to P.A. 100-0023 that created a third tier of benefits for new members, LABF implemented the Tier 3 plan. Please see P.A. 100-0023 in Section I for more information.

Retirement Age

- Age 60 with 10 years of service
- Age 55 with 20 years of service
- Age 50 with at least 30 years of service
- Age 55 with 10 years of service (money purchase)

Retirement Formula

• 2.4% of final average salary for each year of service

Maximum Annuity

• 80% of final average salary

Salary Used to Calculate Pension

• Average of 4 highest consecutive years within final 10 years of service

Annual COLA

• 3% compounded

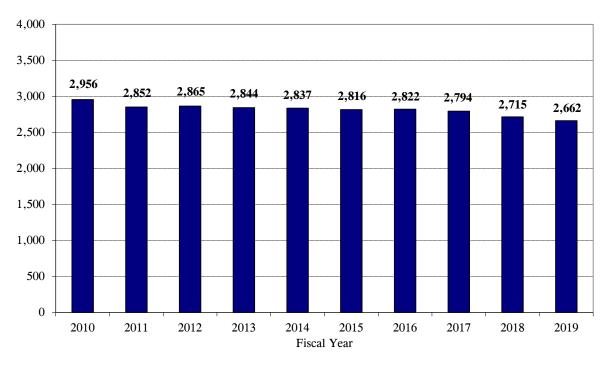
Employee Contributions

• Currently 8.5% of salary

Required Employer Contributions

Pursuant to P.A. 100-0023, the required employer contributions for payment year 2018 through 2022 are specified as follows: \$36 million in 2018, \$48 million in 2019, \$60 million in 2020, \$72 million in 2021, and \$84 million in 2022. After the payment year 2022, the City of Chicago is required to contribute an amount equal to the sum of the net employer normal cost and an amortization of the unfunded liability as a level percent of payroll so that the funded ratio reaches 90% by 2058.

Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date of P.A. 96-0889. See P.A. 96-0899 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).



LABORERS' ANNUITY AND BENEFIT FUND OF CHICAGO Active Employees

LABORERS' ANNUITY AND BENEFIT FUND OF CHICAGO Employee Annuitants

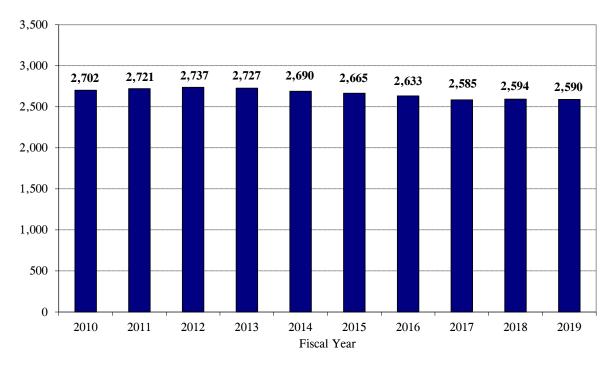
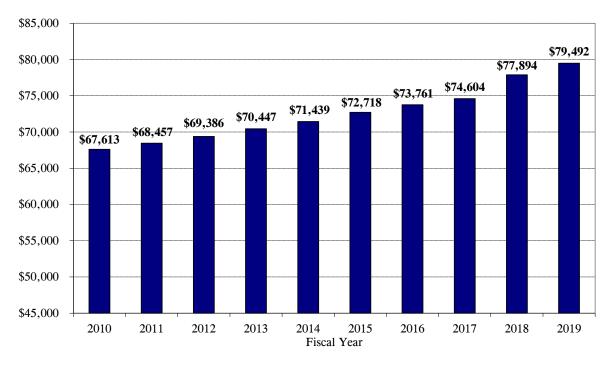
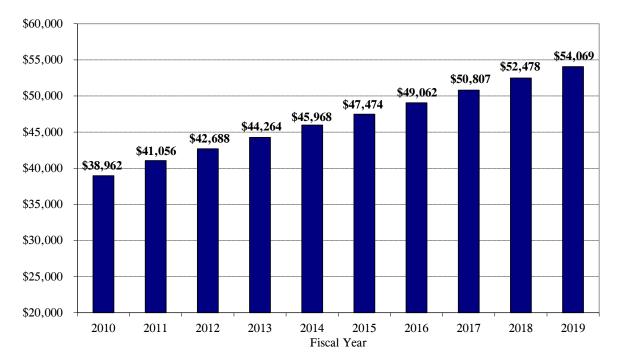


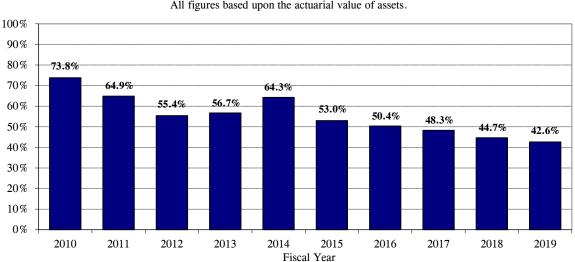
CHART 47



LABORERS' ANNUITY AND BENEFIT FUND OF CHICAGO Average Employee Salaries

LABORERS' ANNUITY AND BENEFIT FUND OF CHICAGO Average Retirement Annuities



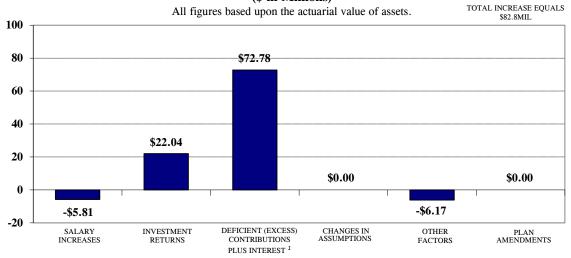


FY 2010 - FY 2019 All figures based upon the actuarial value of assets.

LABORERS' ANNUITY AND BENEFIT FUND OF CHICAGO Funded Ratio

CHART 51

LABORERS' ANNUITY AND BENEFIT FUND OF CHICAGO Change in Unfunded Liabilities Year ended December 31, 2019 (\$ in Millions)



¹ Unfunded liability increased due to employer contributions plus interest being less than normal cost plus interest.

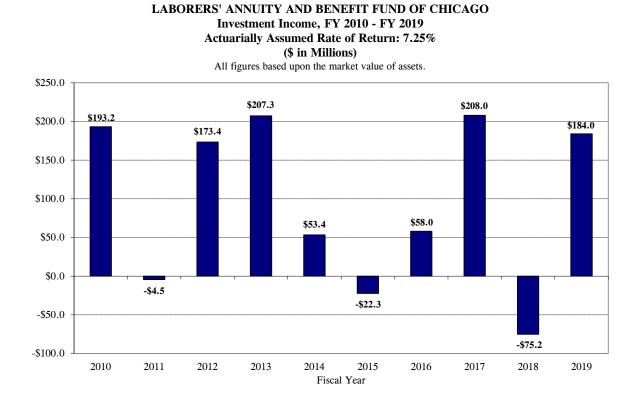
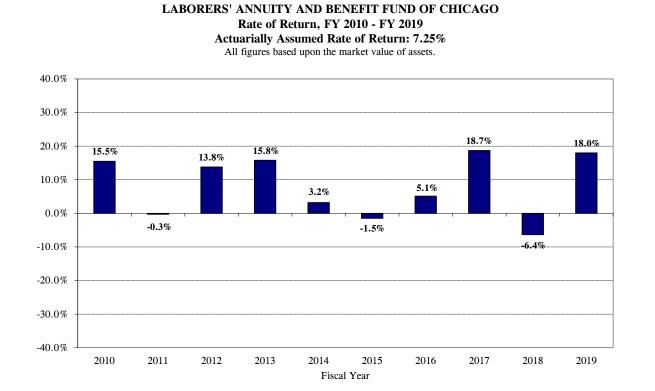


CHART 53



LABORERS' ANNUITY AND BENEFIT FUND OF CHICAGO System Experience, 2010 - 2019 (\$ in Millions) Actuarial Actuarial Unfunded Fiscal Annual Payroll Funded Ratio Liabilities Liabilities Year Assets 2019 211.6 2,701.9 1,151.5 1,550.4 42.6% 2018 211.5 2,652.9 1,185.3 1,467.6 44.7% 2017 208.4 2,578.7 1,245.1 1,333.6 48.3% 2016 208.2 2,509.3 1,263.7 50.4% 1,245.6 2015 204.8 2,469.9 1,308.7 1,161.2 53.0% 2014 202.7 2,111.7 1,357.5 754.3 64.3% 2013 200.4 2,390.6 1,354.3 1,036.3 56.7% 2012 198.8 2,374.8 1,315.9 55.4% 1,058.9 2011 195.2 768.8 64.9% 2,191.2 1,422.4 2010 199.9 73.8% 2,071.4 1,529.4 542.0

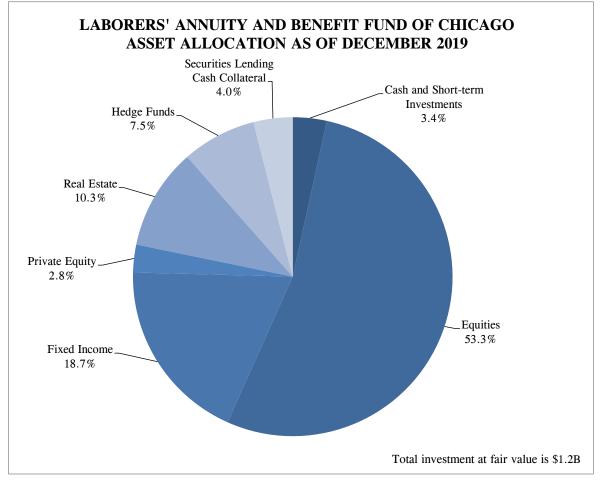
LABORERS' ANNUITY AND BENEFIT FUND OF CHICAGO Changes in Net Assets (\$ in Millions)											
Fiscal Year	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	
Additions to Assets											
Employer	\$59.3	\$48.5	\$35.5	\$14.4	\$14.6	\$14.5	\$14.1	\$14.4	\$15.3	\$18.0	
Employees	\$18.1	\$17.8	\$17.4	\$17.2	\$16.8	\$16.4	\$16.4	\$16.6	\$16.1	\$16.3	
Net Investment Income	\$183.7	-\$75.4	\$207.7	\$57.7	-\$22.8	\$52.9	\$206.7	\$172.6	-\$5.1	\$193.2	
Other	\$0.3	\$0.2	\$0.2	\$0.3	\$0.4	\$0.5	\$0.6	\$0.8	\$0.6	\$0.0	
Total Asset Additions (A)	\$261.5	-\$8.9	\$260.8	\$89.7	\$9.1	\$84.3	\$237.8	\$204.4	\$26.9	\$227.5	
Deductions from Assets											
Benefits	\$162.1	\$157.3	\$154.8	\$153.8	\$152.2	\$147.9	\$144.3	\$139.7	\$133.5	\$127.0	
Refunds	\$2.8	\$2.7	\$2.3	\$2.8	\$2.5	\$2.1	\$2.9	\$2.6	\$3.0	\$2.3	
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Administrative Expenses	\$3.7	\$3.9	\$4.0	\$4.1	\$3.8	\$3.8	\$4.1	\$4.7	\$4.0	\$3.9	
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Total Asset Deductions (B)	\$168.7	\$163.9	\$161.0	\$160.6	\$158.5	\$153.9	\$151.3	\$147.0	\$140.5	\$133.2	
Change in Net Assets (A-B=C)	\$92.9	-\$172.9	\$99.8	-\$70.9	-\$149.4	-\$69.6	\$86.5	\$57.4	-\$113.6	\$94.3	

Table 17 below contains funding projections based on the December 31, 2019 actuarial valuation of the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago.

TABLE 17

Fiscal Year 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029	211.6 213.5 217.1 221.2 225.8 230.5 235.7	Total Employer Contribution 40.9 40.4 40.5 40.9 41.2	Employer Contribution As % of Payroll 19.3% 18.9% 18.7%	Employee Contribution 18.1	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial	Funded Ratio
2020 2021 2022 2023 2024 2025 2026 2027 2028	213.5 217.1 221.2 225.8 230.5 235.7	40.4 40.5 40.9	18.9%	18.1			Liability	
2020 2021 2022 2023 2024 2025 2026 2027 2028	213.5 217.1 221.2 225.8 230.5 235.7	40.4 40.5 40.9	18.9%		2,701.9	1,151.5	1,550.4	42.6%
2021 2022 2023 2024 2025 2026 2027 2028	217.1 221.2 225.8 230.5 235.7	40.5 40.9		17.1	2,756.6	1,151.7	1,604.9	41.8%
2022 2023 2024 2025 2026 2027 2028	221.2 225.8 230.5 235.7	40.9	10./ 70	17.6	2,807.9	1,162.0	1,645.9	41.4%
2023 2024 2025 2026 2027 2028	225.8 230.5 235.7		18.5%	18.2	2,857.0	1,181.1	1,675.8	41.3%
2024 2025 2026 2027 2028	230.5 235.7	71.4	18.3%	18.8	2,903.6	1,229.6	1,673.9	42.3%
2025 2026 2027 2028	235.7	41.6	18.1%	19.5	2,947.1	1,253.5	1,693.6	42.5%
2026 2027 2028		42.1	17.8%	20.3	2,987.1	1,274.7	1,712.4	42.7%
2027 2028	240.8	42.5	17.6%	21.1	3,023.2	1,293.0	1,730.2	42.8%
2028	246.4	42.9	17.4%	21.9	3,054.9	1,308.1	1,746.8	42.8%
	252.4	43.4	17.2%	22.7	3,081.9	1,319.9	1,761.9	42.8%
	258.6	43.9	17.0%	23.7	3,103.8	1,328.5	1,775.4	42.8%
2029	264.9	44.5	16.8%	23.7	3,121.5	1,334.6	1,786.9	42.8%
2030	204.9	44.5	16.6%	24.0 25.6	3,134.4	1,338.2	1,780.9	42.8%
2031	271.0	45.7		23.0 26.5		1,339.6		42.7%
			16.4%		3,142.9	,	1,803.4	
2033	284.2	46.3	16.3%	27.4	3,146.8	1,338.5	1,808.2	42.5%
2034	290.6	46.9	16.1%	28.3	3,146.5	1,335.9	1,810.6	42.5%
2035	297.1	47.5	16.0%	29.2	3,142.8	1,332.5	1,810.2	42.4%
2036	303.5	48.2	15.9%	30.1	3,136.1	1,329.2	1,806.9	42.4%
2037	309.9	48.8	15.8%	31.0	3,127.2	1,326.7	1,800.5	42.4%
2038	316.1	49.5	15.6%	31.8	3,116.3	1,325.4	1,790.9	42.5%
2039	322.3	50.1	15.5%	32.6	3,103.5	1,325.7	1,777.8	42.7%
2040	328.8	50.7	15.4%	33.5	3,089.8	1,329.0	1,760.8	43.0%
2041	335.4	51.5	15.4%	34.3	3,076.3	1,336.7	1,739.6	43.5%
2042	341.9	52.2	15.3%	35.1	3,063.7	1,349.7	1,714.0	44.1%
2043	348.5	53.0	15.2%	35.9	3,052.6	1,369.0	1,683.6	44.8%
2044	355.1	53.8	15.1%	36.6	3,043.5	1,395.5	1,648.0	45.9%
2045	361.7	54.5	15.1%	37.4	3,036.6	1,429.7	1,606.9	47.1%
2046	368.5	55.4	15.0%	38.2	3,032.4	1,472.6	1,559.8	48.6%
2047	375.3	56.2	15.0%	39.0	3,031.3	1,525.1	1,506.2	50.3%
2048	382.1	57.0	14.9%	39.8	3,033.6	1,587.9	1,445.7	52.3%
2049	389.0	57.9	14.9%	40.5	3,039.6	1,661.9	1,377.7	54.7%
2050	395.9	58.8	14.8%	41.3	3,049.3	1,747.5	1,301.7	57.3%
2051	402.6	59.6	14.8%	42.0	3,062.2	1,844.9	1,217.3	60.2%
2052	409.5	60.6	14.8%	42.8	3,077.9	1,954.3	1,123.6	63.5%
2053	416.5	61.6	14.8%	43.7	3,096.6	2,076.5	1,020.0	67.1%
2054	423.7	62.6	14.8%	44.5	3,118.1	2,212.3	905.8	71.0%
2055	431.1	63.6	14.8%	45.3	3,142.4	2,362.5	779.9	75.2%
2056	438.6	64.7	14.8%	46.2	3,169.6	2,528.0	641.6	79.8%
2057	446.3	65.8	14.7%	47.1	3,200.1	2,710.3	489.8	84.7%
2058	454.1	66.9	14.7%	47.9	3,233.8	2,910.3	323.5	90.0%
2059	462.1	68.0	14.7%	48.7	3,270.8	2,943.7	327.1	90.0%
2060	469.7	69.1	14.7%	49.5	3,310.8	2,979.7	331.1	90.0%
2061	477.0	70.1	14.7%	32.8	3,353.0	3,017.7	335.3	90.0%
2062	483.7	71.2	14.7%	33.3	3,397.3	3,057.5	339.7	90.0%
2063	490.3	72.1	14.7%	33.7	3,443.4	3,099.0	344.3	90.0%
2064	496.9	73.1	14.7%	34.2	3,491.2	3,142.0	349.1	90.0%
2065	503.3	74.1	14.7%	34.6	3,540.5	3,186.4	354.0	90.0%
2005	509.8	74.1	14.7%	34.0	3,591.1	3,232.0	359.1	90.0 <i>%</i>
2000	516.2	75.0	14.7%	35.5	3,643.0	3,278.7	364.3	90.0% 90.0%
2067	522.6	70.0	14.7%	35.9	3,696.0	3,326.4	369.6	90.0% 90.0%

Laborers' Annuity and Benefit Fund of Chicago Projected Normal Cost as of December 31, 2019 (\$ in Millions)											
Fiscal Year	Employer's Normal Cost	Employer's Normal Cost as a % of Payroll	Employee Contributions	Employee Contributions as a % of Payroll	Total Normal Cost	Total Norma Cost as a % o Payroll					
2019	22.7	10.7%	18.1	8.6%	40.9	19.3%					
2020	23.3	10.9%	17.1	8.0%	40.4	18.9%					
2021	22.9	10.6%	17.6	8.1%	40.5	18.7%					
2022	22.6	10.2%	18.2	8.2%	40.9	18.5%					
2023	22.4	9.9%	18.8	8.3%	41.2	18.3%					
2024	22.1	9.6%	19.5	8.5%	41.6	18.1%					
2025	21.8	9.2%	20.3	8.6%	42.1	17.8%					
2026	21.4	8.9%	21.1	8.7%	42.5	17.6%					
2027	21.0	8.5%	21.9	8.9%	42.9	17.4%					
2028	20.6	8.2%	22.7	9.0%	43.4	17.1%					
2020	20.0	0.2 <i>%</i> 7.8%	23.7	9.1%	43.9	17.0%					
202)	19.9	7.5%	23.7	9.3%	44.5	16.8%					
2030	19.5	7.2%	25.6	9.4%	45.1	16.6%					
2031	19.2	6.9%	26.5	9.5%	45.7	16.4%					
2032	19.2	6.6%	20.3	9.6%	46.3	16.3%					
2033	18.5	6.4%	28.3	9.8%	46.9	16.1%					
2035	18.3	6.2%	20.3	9.8%	40.5	16.0%					
2035	18.0	5.9%	30.1	9.8 <i>%</i> 9.9%	47.5	15.9%					
2030	17.8	5.8%	31.0	9.9 <i>%</i> 10.0%	48.8	15.8%					
2037	17.6	5.6%	31.0	10.0%	40.0 49.5	15.6%					
2038	17.0		32.6	10.1%	49.5 50.1	15.5%					
2039	17.4	5.4% 5.3%	32.0	10.1%	50.1 50.7						
						15.4%					
2041	17.2	5.1%	34.3	10.2%	51.5	15.4%					
2042	17.2	5.0%	35.1	10.3%	52.2	15.3%					
2043	17.1	4.9%	35.9	10.3%	53.0	15.2%					
2044	17.2	4.8%	36.6	10.3%	53.8	15.1%					
2045	17.1	4.7%	37.4	10.3%	54.5	15.19					
2046	17.1	4.7%	38.2	10.4%	55.4	15.0%					
2047	17.2	4.6%	39.0	10.4%	56.2	15.09					
2048	17.3	4.5%	39.8	10.4%	57.0	14.99					
2049	17.4	4.5%	40.5	10.4%	57.9	14.99					
2050	17.5	4.4%	41.3	10.4%	58.8	14.89					
2051	17.6	4.4%	42.0	10.4%	59.6	14.89					
2052	17.7	4.3%	42.8	10.5%	60.6	14.89					
2053	17.9	4.3%	43.7	10.5%	61.6	14.8%					
2054	18.1	4.3%	44.5	10.5%	62.6	14.8%					
2055	18.3	4.2%	45.3	10.5%	63.6	14.8%					
2056	18.5	4.2%	46.2	10.5%	64.7	14.89					
2057	18.7	4.2%	47.1	10.5%	65.8	14.7%					
2058	19.0	4.2%	47.9	10.6%	66.9	14.7%					
2059	19.3	4.2%	48.7	10.5%	68.0	14.7%					
2060	19.6	4.2%	49.5	10.5%	69.1	14.7%					
2061	37.4	7.8%	32.8	6.9%	70.1	14.7%					
2062	37.9	7.8%	33.3	6.9%	71.2	14.7%					
2063	38.4	7.8%	33.7	6.9%	72.1	14.7%					
2064	38.9	7.8%	34.2	6.9%	73.1	14.7%					
2065	39.5	7.8%	34.6	6.9%	74.1	14.7%					
2066	40.0	7.8%	35.1	6.9%	75.0	14.7%					
2067	40.5	7.8%	35.5	6.9%	76.0	14.7%					
2068	41.0	7.8%	35.9	6.9%	77.0	14.7%					



VIII. Metropolitan Water Reclamation District Retirement Fund

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Metropolitan Water Reclamation District Retirement Fund -Tier 1 Plan Summary

Retirement Age

- Age 60 with 5 years of service
- Age 50 with 10 years of service (Age 55 if hired after 6/13/97)

Retirement Formula

- 2.2% of final average salary for the first 20 years of service, plus
- 2.4% of final average salary for each year in excess of 20

Maximum Annuity

• 80% of final average salary

Salary Used to Calculate Pension

• Any 52 consecutive pay periods within the final 10 years of service

Annual COLA

■ 3% compounded

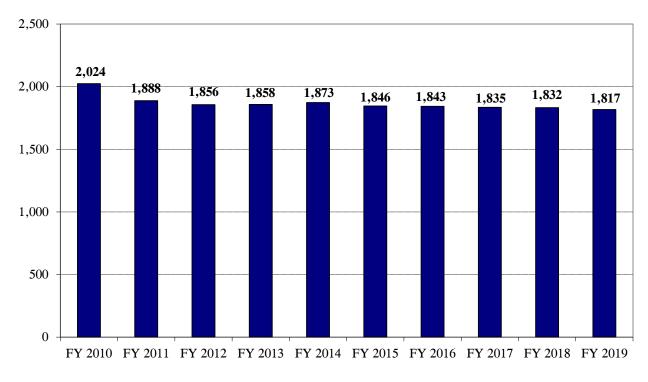
Employee Contributions (as modified by P.A. 97-0894)

Beginning on January 1, 2015, the Tier 1 employee contribution rate has increased to 12% of salary, where it will remain until the MWRD pension fund reaches a 90% funded ratio. Upon attainment of a 90% funding ratio, the member contribution rate will revert back to 9%. These changes to the Tier 1 employee contribution rate were made by HB 4513 (P.A. 97-0894), which became effective on August 3rd, 2012. Tier 2 employees contribute 9.0% of salary (unchanged by P.A. 97-0894).

Employer Contributions (as modified by P.A. 97-0894)

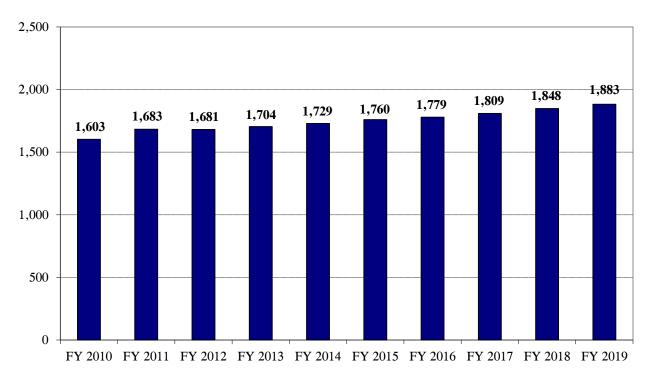
The District levies a tax annually that is the level percentage of payroll necessary to reach a 90% funding level by FY 2050. However, no annual levy shall exceed the total amount of contributions made by employees in the calendar year 2 years prior to the year of the levy, multiplied by 4.19.

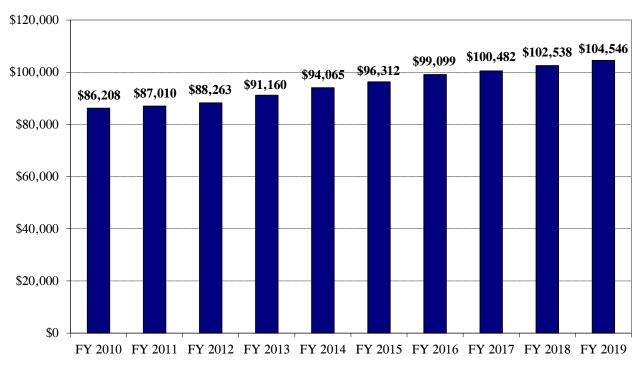
Note: Benefits shown on this page are for employees hired prior to January 1, 2011 (Tier 1 employees). Tier 1 and Tier 2 employee contribution rates are shown here so as to distinguish the changes made to Tier 1 contribution rates as a result of P.A. 97-0894. For a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees), see P.A. 96-0889 in Section I.



METROPOLITAN WATER PENSION FUND Active Employees



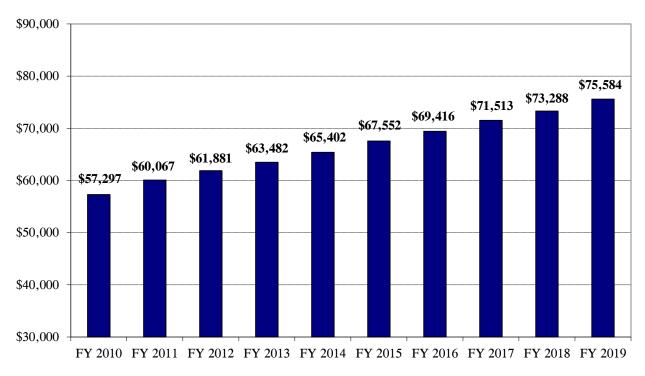


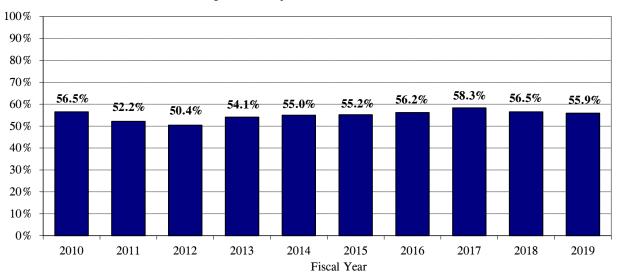


METROPOLITAN WATER PENSION FUND Average Employee Salaries

CHART 58

METROPOLITAN WATER PENSION FUND Average Retirement Annuity



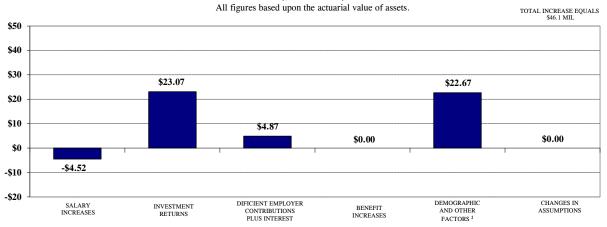


METROPOLITAN WATER PENSION FUND Funded Ratio FY 2010 - FY 2019

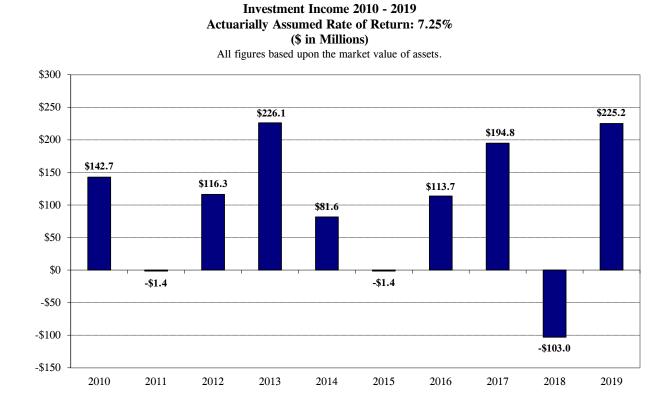
All figures based upon the actuarial value of assets.

CHART 60

METROPOLITAN WATER PENSION FUND Change in Unfunded Liabilities Year ended December 31, 2019 (\$ in Millions)



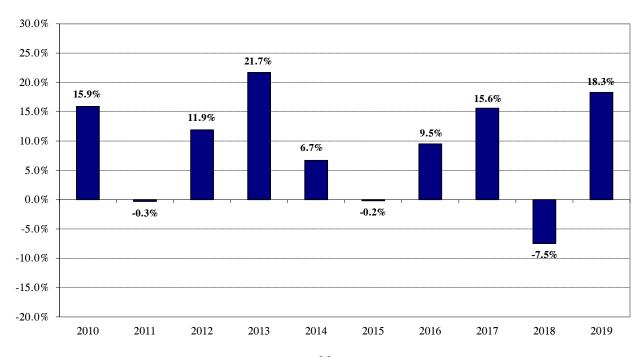
1 Unfunded liability increased, mostly due to unfavorable decrement experiences. Some examples of decrement assumptions can be employee turnover, mortality and retirement rates assumptions.



METROPOLITAN WATER PENSION FUND

CHART 62

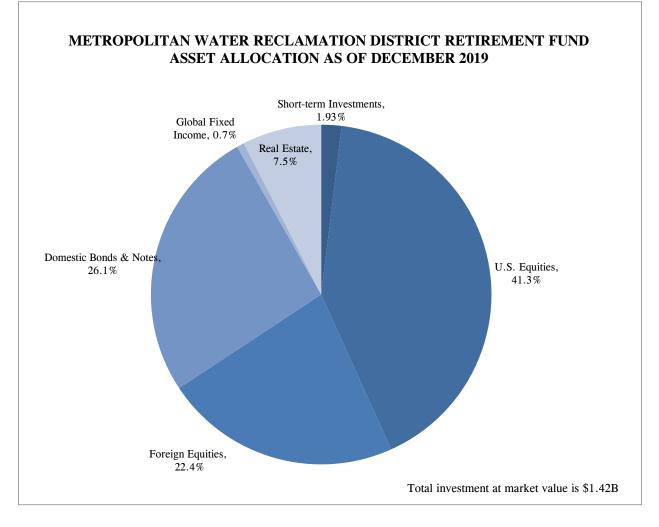
METROPOLITAN WATER PENSION FUND Rate of Return FY 2010 - FY 2019 Actuarially Assumed Rate of Return: 7.25% All figures based upon the market value of assets.



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	METROPOLITAN WATER PENSION FUND System Experience, 2010 - 2019 (\$ in Millions)										
Fiscal Year	Annual Payroll	Actuarial Liabilities	Actuarial Assets	Unfunded Liabilities	Funded Ratio						
2019	190.0	2,666.2	1,489.3	1,177.0	55.9%						
2018	187.8	2,601.2	1,470.3	1,130.9	56.5%						
2017	184.4	2,497.9	1,456.2	1,041.7	58.3%						
2016	182.6	2,443.3	1,372.4	1,070.9	56.2%						
2015	177.8	2,371.0	1,308.0	1,063.0	55.2%						
2014	176.2	2,296.4	1,263.3	1,033.1	55.0%						
2013	169.4	2,194.9	1,188.5	1,006.4	54.1%						
2012	163.8	2,136.5	1,076.7	1,059.8	50.4%						
2011	164.3	2,101.3	1,097.4	1,003.9	52.2%						
2010	174.5	2,036.7	1,151.6	885.1	56.5%						

	METROPOLITAN WATER PENSION FUND Changes in Net Assets (\$ in Millions)										
Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	
Additions to Assets											
Employer	\$87.4	\$87.2	\$89.9	\$80.3	\$71.0	\$73.9	\$92.9	\$65.1	\$37.4	\$29.9	
Employees	\$21.2	\$21.0	\$20.8	\$20.8	\$21.4	\$19.0	\$16.9	\$14.7	\$15.0	\$15.9	
Net Investment Income	\$225.2	-\$103.0	\$194.8	\$113.6	-\$1.4	\$81.6	\$226.1	\$116.3	-\$1.4	\$142.7	
Other	\$0.0	\$0.0	\$0.0	\$0.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.2	
Total Asset Additions (A)	\$333.8	\$5.2	\$305.5	\$214.8	\$91.0	\$174.5	\$335.9	\$196.1	\$51.0	\$188.7	
Deductions from Assets											
Benefits	\$167.5	\$159.6	\$152.2	\$145.3	\$139.2	\$132.9	\$127.2	\$122.7	\$118.1	\$108.2	
Refunds	\$1.8	\$1.8	\$2.6	\$2.0	\$1.3	\$1.0	\$1.1	\$1.2	\$2.7	\$1.4	
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Administrative Expenses	\$1.6	\$1.7	\$1.6	\$1.5	\$1.7	\$1.4	\$1.4	\$1.3	\$1.4	\$1.3	
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Total Asset Deductions (B)	\$171.0	\$163.0	\$156.3	\$148.8	\$142.2	\$135.3	\$129.7	\$125.2	\$122.2	\$110.9	
Change in Net Assets (A-B=C)	\$162.8	-\$157.8	\$149.2	\$65.9	-\$51.1	\$39.2	\$206.2	\$70.9	-\$71.2	\$77.8	



IX. Municipal Employees' Annuity and Benefit Fund of Chicago

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- Systems Projections
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Municipal Employees' Annuity and Benefit Fund of Chicago – Tier 1 Plan Summary

*Pursuant to P.A. 100-0023 that created a third tier of benefits for new members, MEABF implemented the Tier 3 plan. Please see P.A. 100-0023 in Section I for more information.

Retirement Age

- Age 60 with 10 years of service
- Age 55 with 20 years of service
- Age 50 with at least 30 years of service
- Age 55 with 10 years of service (money purchase)

Retirement Formula

• 2.4% of final average salary for each year of service

Maximum Annuity

• 80% of final average salary

Salary Used to Calculate Pension

• Average of 4 highest consecutive years within final 10 years of service

Annual COLA

• 3% compounded

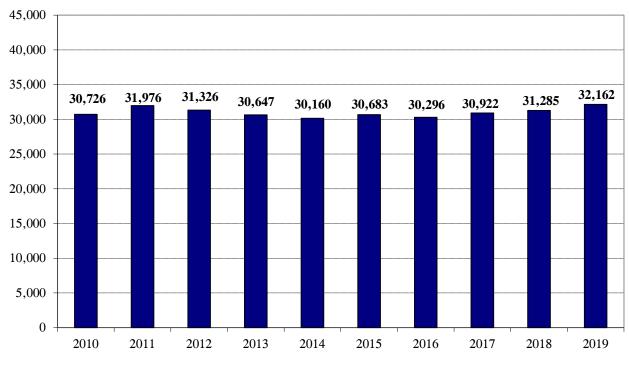
Employee Contributions

• 8.5% of salary

Required Employer Contributions

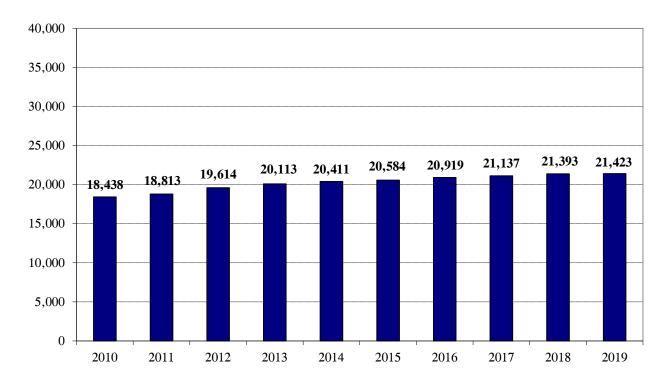
Pursuant to P.A. 100-0023, the required employer contributions for payment year 2018 through 2022 are specified as follows: \$266 million in 2018, \$344 million in 2019, \$421 million in 2020, \$499 million in 2021, and \$576 million in 2022. After the payment year 2022, the required employer contributions are calculated as a level percent of payroll sufficient to bring the funded ratio up to 90% by 2058.

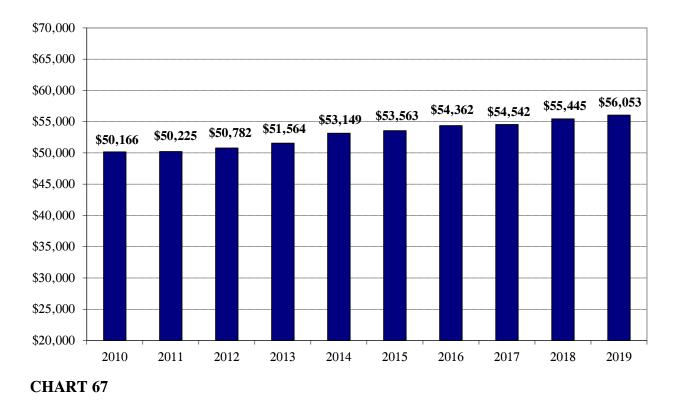
Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date of P.A. 96-0889. See P.A. 96-0889 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).



MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Active Employees

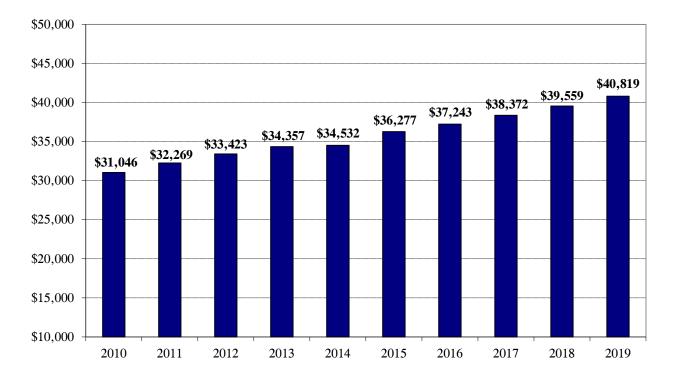
MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Employee Annuitants





MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Average Employee Salaries

MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Average Retirement Annuities



FY 2010 - FY 2019 All figures based upon the actuarial value of assets. 100%90% 80% 70% 60% 49.8% 50% 44.6% 37.2% 36.9% 35.2% 40% 32.9% 30.5% 27.4% 25.0% 30% 23.2% 20% 10% 0% 2010 2011 2012 2013 2014* 2015 2016 2017 2018 2019 Fiscal Year

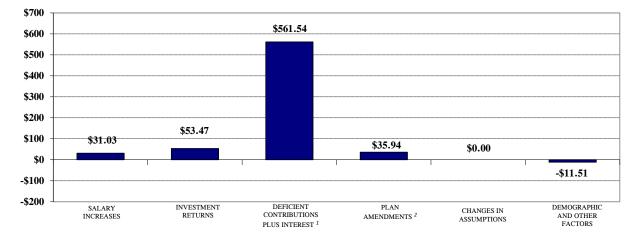
MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Funded Ratio FV 2010 - FV 2019

* As P.A. 98-0641 was ruled unconstitutional, the funded ratio as of December 31, 2014, that does not reflect the provisions of the Act is 35.2%. The funded ratio that reflected the provisions of P.A. 98-0641 was 40.9%.

CHART 69

MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Change in Unfunded Liabilities Year ended December 31, 2019

(\$ in Millions) All figures based upon the actuarial value of assets. TOTAL INCREASE EQUALS \$670.47 MIL



¹ The unfunded liability increases due to contributions being less than normal cost plus interest cost. ² The increase in the unfunded liability reflects a recent court ruling that all eligible City of Chicago annuitants are entitled to receive a subsidy for health care insurance premium.

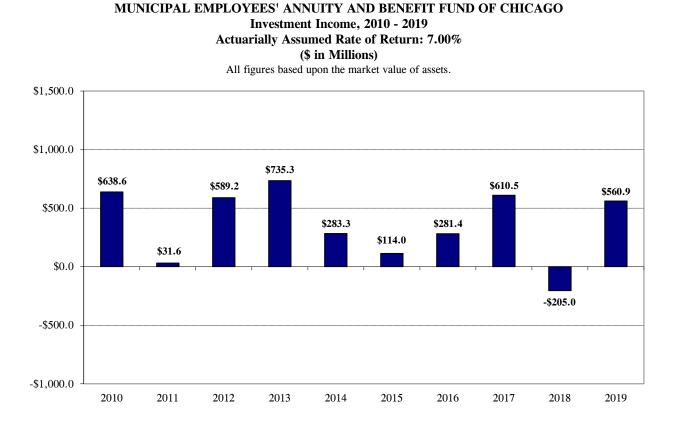
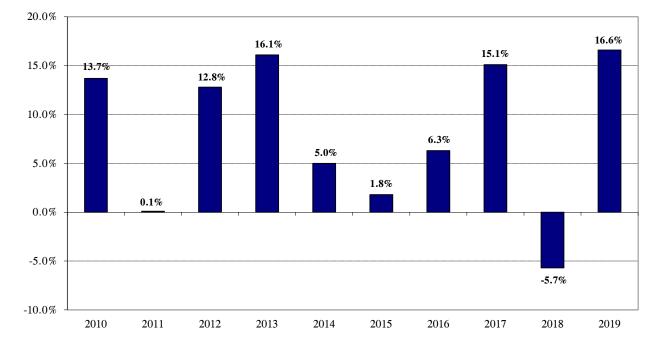


CHART 71

MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Rate of Return, 2010 - 2019 Actuarially Assumed Rate of Return: 7.00%

All figures based upon the market value of assets.



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MUN	MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO System Experience, FY 2010 - FY 2019 (\$ in Millions)										
End of Year	Annual Payroll	Actuarial Liabilities	Actuarial Assets	Unfunded Liabilities	Funded Ratio						
2019	1,802.8	17,260.4	4,012.9	13,247.5	23.2%						
2018	1,734.6	16,808.6	4,195.6	12,613.0	25.0%						
2017	1,686.5	16,282.4	4,456.8	11,825.6	27.4%						
2016	1,646.9	15,055.3	4,590.4	10,465.0	30.5%						
2015	1,643.5	14,655.3	4,815.1	9,840.1	32.9%						
2014	1,603.0	14,315.3	5,039.3	7,285.3	35.2% *						
2013	1,580.3	13,856.5	5,114.2	8,742.3	36.9%						
2012	1,590.8	13,637.5	5,073.3	8,564.2	37.2%						
2011	1,606.0	12,456.2	5,552.3	6,903.9	44.6%						
2010	1,541.4	12,052.2	6,003.4	6,048.8	49.8%						

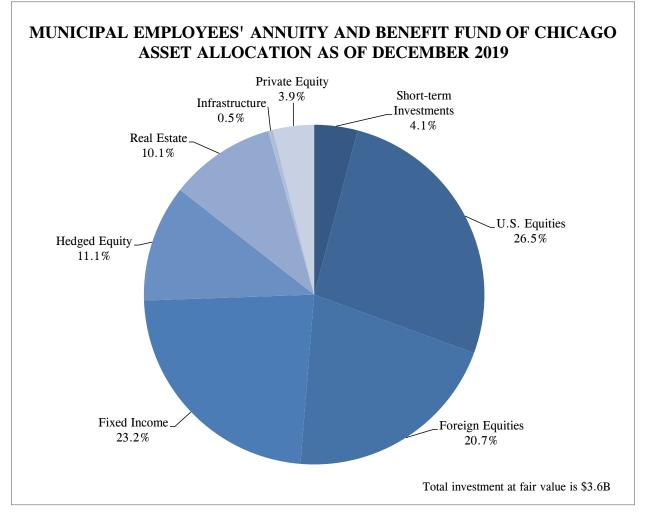
* As P.A. 98-0641 was ruled unconstitutional, the funded ratio as of December 31, 2014, that does not reflect the provisions of the Act is 35.2%. The funded ratio that reflected the provisions of P.A. 98-0641 was 40.9%.

MUNICI	MUNICIPAL EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Changes in Net Assets (\$ in Millions)											
Fiscal Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010		
Additions to Assets												
Employer	\$421.0	\$349.6	\$261.8	\$157.4	\$157.7	\$158.8	\$157.7	\$158.4	\$156.5	\$164.3		
Employees	\$146.6	\$138.4	\$134.8	\$130.4	\$131.4	\$130.0	\$131.5	\$130.2	\$132.6	\$133.3		
Net Investment Income	\$560.9	-\$205.0	\$610.5	\$281.4	\$114.0	\$283.3	\$735.3	\$589.2	\$31.6	\$638.6		
Other	\$0.0	\$0.0	\$5.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0		
Total Asset Additions (A)	\$1,128.6	\$283.0	\$1,012.4	\$569.3	\$403.2	\$572.1	\$1,024.5	\$877.8	\$320.7	\$936.2		
Deductions from Assets												
Benefits	\$925.0	\$889.2	\$854.3	\$832.8	\$802.8	\$775.4	\$745.5	\$704.7	\$663.5	\$630.1		
Refunds	\$27.7	27.0	\$33.8	\$34.6	\$31.7	\$32.3	\$33.5	\$36.9	\$32.1	\$29.9		
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0		
Administrative Expenses	\$6.7	\$6.6	\$6.5	\$7.1	\$6.7	\$6.6	\$6.5	\$6.8	\$7.4	\$6.8		
Other	\$2.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0		
Total Asset Deductions (B)	\$962.1	\$922.8	\$894.6	\$874.5	\$841.2	\$814.3	\$785.5	\$748.4	\$703.0	\$666.8		
Change in Net Assets (A-B=C)	\$166.5	-\$639.8	\$117.8	-\$305.2	-\$438.1	-\$242.2	\$239.0	\$129.4	-\$382.3	\$269.4		

Table 23 below contains funding projections based on the FY 2019 actuarial valuation of the Municipal Employees' Annuity and Benefit Fund of Chicago.

TABLE 23

	Municipal Employees' Annuity and Benefit Fund of Chicago Actuarial Valuation Projection Results as of December 31, 2019 (\$ in Millions)												
Fiscal Year	r Capped Payroll		Capped Payroll		tal Employer Contribution	Employer Contribution As % of Payroll	Employee Contribution	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio		
2019	1,785.9	\$	344.0	19.3%	146.6	17,296.3	4,012.9	13,283.4	23.2%				
2020	1,857.3	\$	421.0	22.7%	154.9	17,693.2	3,912.2	13,781.0	22.1%				
2021	1,867.5	\$	499.0	26.7%	154.5	18,086.7	3,845.7	14,241.0	21.3%				
2022	1,879.8	\$ ¢	576.0	30.6%	158.8	18,461.6	4,023.7	14,438.0	21.8%				
2023 2024	1,917.1 1,956.2	\$ \$	930.2 944.4	48.5% 48.3%	164.9 171.0	18,821.0 19,163.8	4,290.6 4,484.3	14,530.4 14,679.5	22.8% 23.4%				
2024	1,993.5	\$	959.5	48.1%	176.7	19,105.8	4,665.1	14,079.5	23.4%				
2026	2,031.3	\$	973.9	47.9%	182.3	19,790.9	4,832.3	14,958.6	24.4%				
2027	2,070.0	\$	988.7	47.8%	188.0	20,072.0	4,984.8	15,087.1	24.8%				
2028	2,109.6	\$	1,003.9	47.6%	193.8	20,331.3	5,124.1	15,207.1	25.2%				
2029	2,150.4	\$	1,019.4	47.4%	199.7	20,568.4	5,251.0	15,317.4	25.5%				
2030	2,192.4	\$	1,035.6	47.2%	205.7	20,779.8	5,363.1	15,416.8	25.8%				
2031	2,235.6	\$	1,052.3	47.1%	211.8	20,965.3	5,461.4	15,503.9	26.0%				
2032	2,279.6	\$	1,069.5	46.9%	217.9	21,125.1	5,547.4	15,577.6	26.3%				
2032	2,326.6	\$	1,087.1	46.7%	224.2	21,260.1	5,624.5	15,635.6	26.5%				
2033	2,376.1	\$	1,106.2	46.6%	230.8	21,200.1	5,695.3	15,675.7	26.6%				
2035	2,427.4	\$	1,126.6	46.4%	237.4	21,458.6	5,762.7	15,695.9	26.9%				
2036	2,480.9	\$	1,147.8	46.3%	244.3	21,523.9	5,830.2	15,693.7	27.1%				
2037	2,536.0	\$	1,170.1	46.1%	251.2	21,567.4	5,900.5	15,666.9	27.4%				
2038	2,593.4	\$	1,193.2	46.0%	258.4	21,591.7	5,978.9	15,612.8	27.7%				
2039	2,654.0	\$	1,217.4	45.9%	265.8	21,599.6	6,071.7	15,528.0	28.1%				
2040	2,717.2	\$	1,243.2	45.8%	273.4	21,607.6	6,198.5	15,409.2	28.7%				
2041	2,783.1	\$	1,270.3	45.6%	281.2	21,603.4	6,350.6	15,252.8	29.4%				
2042	2,850.7	\$	1,298.8	45.6%	289.2	21,589.6	6,534.0	15,055.5	30.3%				
2043	2,921.1	\$	1,328.2	45.5%	297.4	21,569.3	6,756.1	14,813.2	31.3%				
2044	2,994.7	\$	1,358.9	45.4%	305.8	21,545.8	7,024.6	14,521.2	32.6%				
2045	3,070.9	\$	1,391.3	45.3%	314.5	21,545.8	7,347.1	14,175.0	34.1%				
2046	3,149.8	\$	1,425.0	45.2%	323.4	21,497.1	7,727.5	13,769.6	35.9%				
2047	3,228.7	\$	1,460.1	45.2%	331.8	21,472.6	8,171.8	13,300.7	38.1%				
2048	3,309.8	\$	1,495.7	45.2%	340.3	21,449.7	8,686.6	12,763.0	40.5%				
2049	3,393.1	\$	1,532.5	45.2%	349.0	21,430.5	9,279.7	12,150.8	43.3%				
2050	3,479.0	\$	1,570.3	45.1%	357.9	21,416.4	9,958.8	11,457.5	46.5%				
2051	3,566.9	\$	1,609.5	45.1%	367.0	21,403.7	10,726.9	10,676.7	50.1%				
2052	3,654.2	\$	1,649.7	45.1%	375.9	21,394.1	11,591.6	9,802.6	54.2%				
2053	3,743.7	\$	1,689.8	45.1%	385.0	21,388.1	12,560.6	8,827.5	58.7%				
2054	3,835.1	\$	1,730.9	45.1%	394.1	21,385.9	13,642.3	7,743.6	63.8%				
2055	3,928.7	\$	1,773.0	45.1%	403.4	21,385.9	14,846.8	6,542.3	69.4 <i>%</i>				
2056	4,024.8	\$	1,816.1	45.1%	412.9	21,392.9	16,178.6	5,214.3	75.6%				
2057	4,121.0	\$	1,860.4	45.1%	422.3	21,399.0	17,648.4	3,750.6	82.5%				
2058	4,219.6	\$	1,904.9	45.1%	431.9	21,407.5	19,266.7	2,140.7	90.0%				
2059	4,320.4	\$	1,950.4	45.1%	441.6	21,417.7	19,275.9	2,141.8	90.0%				
2060	4,423.4	\$	228.5	5.2%	302.1	21,429.6	19,286.7	2,143.0	90.0%				
2061	4,528.4	\$	384.8	8.5%	309.2	21,440.9	19,296.8	2,144.1	90.0%				
2062	4,635.0	\$	389.7	8.4%	316.4	21,450.5	19,305.5	2,145.1	90.0%				
2063	4,743.3	\$	394.7	8.3%	323.8	21,457.1	19,311.4	2,145.7	90.0%				
2064	4,853.5	\$	399.8	8.2%	331.3	21,459.0	19,313.1	2,145.9	90.0%				
2065	4,965.6	\$	405.0	8.2%	338.9	21,454.5	19,309.0	2,145.4	90.0%				
2066	5,079.4	\$ ¢	410.4	8.1%	346.7	21,441.4	19,297.3	2,144.1	90.0%				
2067	5,194.9	\$	416.0	8.0%	354.6	21,417.4	19,275.6	2,141.7	90.0%				
2068	5,312.1	\$	421.7	7.9%	362.6	21,379.7	19,235.9	2,143.9	90.0%				



X. Park Employees' Annuity and Benefit Fund of Chicago

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- System Projections
- Normal Cost Projections
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Park Employees' Annuity and Benefit Fund of Chicago Tier 1 Plan Summary

Retirement Age

- Age 60 with 4 years of service
- Age 50 with at least 10 years of service (reduced annuity)

Retirement Formula

• 2.4% of final average salary

Maximum Annuity

• 80% of final average salary

Salary Used to Calculate Pension

• Average of 4 highest consecutive years within final 10 years of service

Annual COLA

• 3% non-compounded

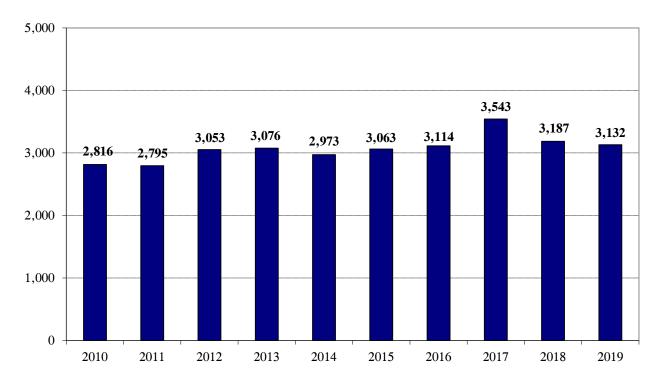
Employee Contributions

• 9.0% of salary

Employer Contributions

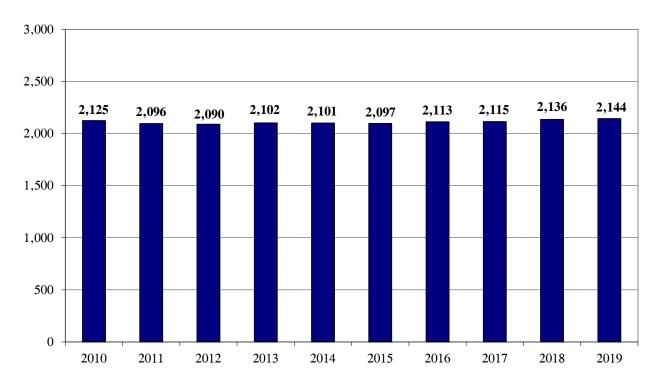
The Board of Park Commissioners is required to contribute an amount equal to the employee contributions during the fiscal year two years prior to the year the tax is levied, multiplied by 1.10.

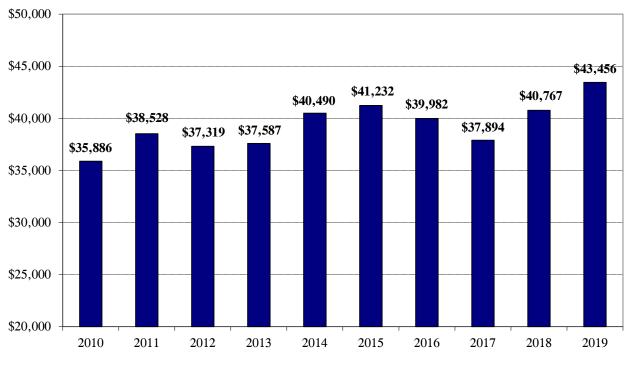
Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date of P.A. 96-0889. See P.A. 96-0889 in Section I for a summary of benefits for employees hired after January 1, 2011.



PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Active Employees

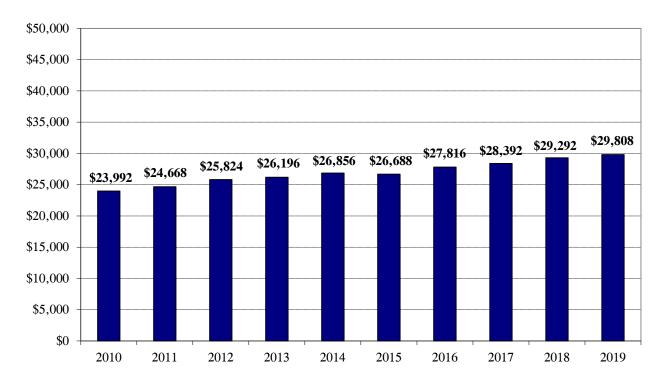
PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Employee Annuitants

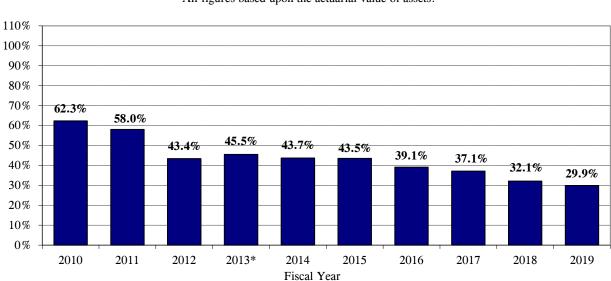




PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Average Employee Salaries

PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Average Retirement Annuities



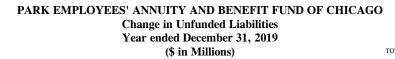


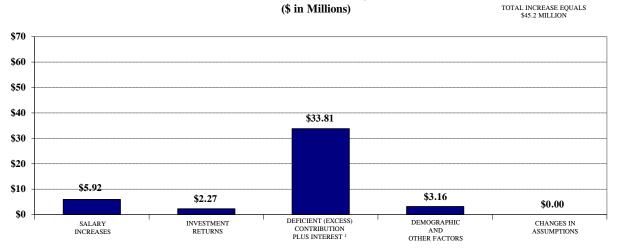
PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Funded Ratio FY 2010 - FY 2019

All figures based upon the actuarial value of assets.

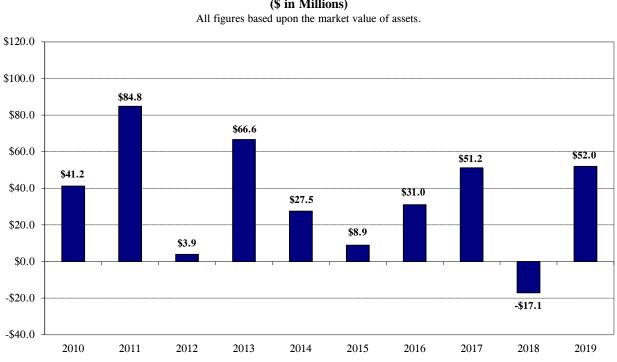
* Public Act 97-0973, effective August 16, 2012, changed the Fund's year end to December 31 from June 30. As a result, from January 1, 2013, the Fund's fiscal year commences January 1 and ends December 31.

CHART 78

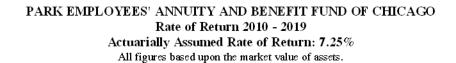


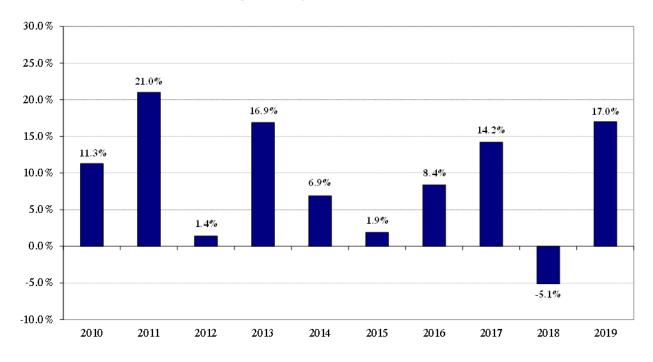


¹ Unfunded liability increased due to total contributions being less than normal cost, plus interest cost.



PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Investment Income, FY 2010 - FY 2019 Actuarially Assumed Rate of Return: 7.25% (\$ in Millions)





PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO System Experience, FY 2010 - FY 2019

(\$ in Millions)

Fiscal Year	Annual Payroll	Actuarial Liabilities	Actuarial Assets	Unfunded Liabilities	Funded Ratio
2019	139.2	1,170.6	350.0	820.6	29.9%
2018	133.1	1,142.3	366.8	775.5	32.1%
2017	135.3	1,039.3	385.4	653.9	37.1%
2016	121.1	1,005.5	393.6	611.9	39.1%
2015	122.4	910.3	395.7	514.6	43.5%
2014	119.0	900.8	393.8	507.0	43.7%
2013*	117.8	888.0	404.3	483.7	45.5%
2012	114.2	866.4	440.7	425.7	50.9%
2011	107.7	843.9	489.4	354.5	58.0%
2010	107.4	833.0	518.6	314.4	62.3%

* Public Act 97-0973, effective August 16, 2012, changed the Fund's year end to December 31 from June 30. As a result, from January 1, 2013, the Fund's fiscal year commences January 1 and ends December 31.

PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO Changes in Net Assets (\$ in Millions)											
Fiscal Years	2019	2018	2017	2016	2015	2014	2013*	2012	2011	2010	
Additions to Assets											
Employer	\$27.7	\$27.6	\$20.9	\$30.9	\$30.6	\$11.2	\$15.8	\$10.8	\$11.0	\$10.8	
Employees	\$12.7	\$12.1	\$13.7	\$12.2	\$12.4	\$10.8	\$10.7	\$10.4	\$9.8	\$9.8	
Net Investment Income	\$52.0	-\$17.1	\$51.2	\$31.0	\$8.9	\$27.6	\$66.6	\$3.8	\$84.8	\$41.5	
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	\$0.0	\$0.0	
Total Asset Additions (A)	\$92.4	\$22.6	\$85.8	\$74.2	\$51.9	\$49.6	\$93.2	\$25.1	\$105.6	\$62.1	
Deductions from Assets											
Benefits	\$76.5	\$73.8	\$72.3	\$71.6	\$68.6	\$67.8	\$66.2	\$63.5	\$62.0	\$61.2	
Refunds	\$2.1	\$2.7	\$5.9	\$2.5	\$2.0	\$2.7	\$2.1	\$2.0	\$1.7	\$1.4	
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Administrative Expenses	\$1.5	\$1.5	\$1.7	\$1.5	\$1.5	\$1.5	\$1.5	\$1.6	\$1.5	\$1.4	
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Total Asset Deductions (B)	\$80.1	\$78.0	\$79.8	\$75.6	\$72.1	\$72.0	\$69.8	\$67.1	\$65.2	\$64.0	
Change in Net Assets (A-B=C)	\$12.3	-\$55.4	\$5.9	-\$1.5	-\$20.3	-\$22.3	\$23.4	-\$42.0	\$40.4	-\$1.9	

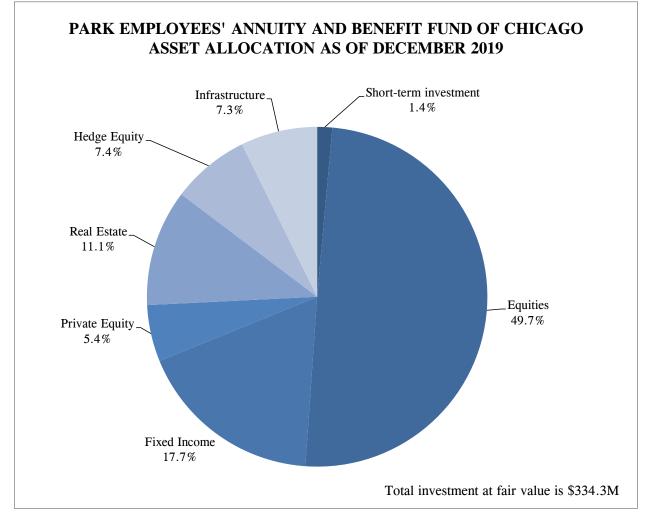
* Public Act 97-0973, effective August 16, 2012, changed the Fund's year end to December 31 from June 30. As a result, from January 1, 2013, the Fund's fiscal year commences January 1 and ends December 31.

Table 26 below contains funding projections based on the December 31, 2019 actuarial valuation of the Park Employees' Annuity and Benefit Fund of Chicago. As shown in the table below, under the current funding policy the Park Employees' Annuity and Benefit Fund of Chicago is projected to run out of assets by 2027 if all future assumptions are met and no additional contributions are made.

	Park Employees' Annuity and Benefit Fund of Chicago Funding Policy under P.A. 98-0622 Actuarial Valuation Projection Results as of December 31, 2019 (\$ in Millions)											
Fiscal Year	Capped Payroll	Total City Contribution	Total City Contribution As % of Payroll	Total Employee Contribution	Accrued Liability	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio				
2020	142.1	12.8	9.0%	12.9	1,189.8	317.5	872.3671	26.7%				
2021	139.9	13.5	9.7%	12.7	1,209.0	281.5	927.5216	23.3%				
2022	138.9	13.8	9.9%	12.6	1,228.2	237.2	991.0468	19.3%				
2023	138.1	13.6	9.8%	12.6	1,247.3	196.9	1,050.3868	15.8%				
2024	137.6	13.5	9.8%	12.5	1,266.0	146.6	1,119.4200	11.6%				
2025	137.3	13.4	9.8%	12.5	1,284.3	90.8	1,193.5113	7.1%				
2026	137.1	13.4	9.7%	12.5	1,302.2	29.2	1,272.9687	2.2%				
2027	136.8	51.9	37.9%	12.4	1,319.3	0.0	1,319.3068	0.0%				
2028	136.6	83.1	60.8%	12.4	1,335.5	0.0	1,335.5480	0.0%				
2029	136.4	85.0	62.3%	12.4	1,350.8	0.0	1,350.7505	0.0%				
2030	136.3	87.0	63.8%	12.4	1,364.9	0.0	1,364.8632	0.0%				
2031	136.2	89.0	65.3%	12.4	1,377.8	0.0	1,377.7673	0.0%				
2032	136.3	90.9	66.7%	12.4	1,389.5	0.0	1,389.4805	0.0%				
2033	136.4	92.8	68.0%	12.4	1,400.0	0.0	1,399.9991	0.0%				
2034	136.8	94.6	69.2%	12.4	1,409.2	0.0	1,409.2155	0.0%				
2035	137.1	96.1	70.1%	12.5	1,417.4	0.0	1,417.3850	0.0%				
2036	137.7	97.8	71.0%	12.5	1,424.3	0.0	1,424.2725	0.0%				
2037	138.2	96.9	70.1%	12.6	1,432.4	0.0	1,432.4228	0.0%				
2038	138.8	98.2	70.7%	12.6	1,439.7	0.0	1,439.7089	0.0%				
2030	139.6	99.0	71.0%	12.0	1,446.5	0.0	1,446.4708	0.0%				
2039	140.6	99.7	70.9%	12.7	1,440.5	0.0	1,452.9223	0.0%				
2040	140.0	100.1	70.6%	12.0	1,459.3	0.0	1,459.3161	0.0%				
2041	141.8	100.1	69.9%	13.0	1,466.0	0.0	1,466.0369	0.0%				
2042	143.2	99.8	68.9%	13.0	1,400.0	0.0	1,400.0309	0.0%				
2043 2044	144.9	99.8 99.2	67.6%	13.2	1,473.5	0.0	1,473.4977	0.0%				
2044 2045	140.8	99.2 98.2	65.9%	13.5	1,482.1	0.0	1,482.0311	0.0%				
2043 2046		98.2 97.1		13.5		0.0	1,492.1833					
	151.4		64.2%		1,504.1		,	0.0%				
2047 2048	153.9 156.6	96.0 04.8	62.4%	14.0 14.2	1,518.1	0.0	1,518.1223	0.0%				
	156.6	94.8 03.5	60.5%	14.2	1,534.4	0.0	1,534.3950	0.0%				
2049	159.4	93.5	58.7%	14.5	1,553.2	0.0	1,553.2142	0.0%				
2050	162.3	91.9 00.5	56.6%	14.7	1,575.1	0.0	1,575.1215	0.0%				
2051	165.6	90.5	54.7%	15.0	1,600.1	0.0	1,600.1113	0.0%				
2052	168.9	89.3	52.9%	15.3	1,628.3	0.0	1,628.2762	0.0%				
2053	172.1	88.1	51.2%	15.6	1,659.9	0.0	1,659.8564	0.0%				
2054	175.6	86.8	49.4%	15.9	1,695.2	0.0	1,695.1844	0.0%				
2055	179.3	85.4	47.6%	16.3	1,734.6	0.0	1,734.6394	0.0%				
2056	183.2	84.3	46.0%	16.6	1,778.2	0.0	1,778.2308	0.0%				
2057	187.2	83.1	44.4%	17.0	1,826.4	0.0	1,826.4489	0.0%				
2058	191.4	82.0	42.8%	17.4	1,879.4	0.0	1,879.4378	0.0%				

			•	Benefit Fund ' December 3 ns)	-	
Fiscal Year	Employer Normal Cost ¹	Employer's Normal Cost as a % of Payroll	Employee Contributions	Employee Contributions as a % of Payroll	Total Normal Cost ¹	Total Normal Cost as a % of Payroll
2020	6.3	4.4%	12.9	9.1%	19.2	13.5%
2021	6.3	4.5%	12.7	9.1%	19.0	13.6%
2022	6.3	4.5%	12.6	9.1%	19.0	13.6%
2023	6.3	4.6%	12.6	9.1%	18.9	13.7%
2024	6.2	4.5%	12.5	9.1%	18.8	13.6%
2025	6.2	4.5%	12.5	9.1%	18.7	13.6%
2026	6.1	4.4%	12.5	9.1%	18.6	13.5%
2027	6.0	4.4%	12.4	9.1%	18.4	13.5%
2028	5.9	4.3%	12.4	9.1%	18.3	13.4%
2029	5.6	4.1%	12.4	9.1%	18.0	13.2%
2030	5.5	4.1%	12.4	9.1%	17.9	13.2%
2031	5.4	4.0%	12.4	9.1%	17.8	13.1%
2032	5.3	3.9%	12.4	9.1%	17.7	13.0%
2033	5.2	3.8%	12.4	9.1%	17.6	12.9%
2034	5.0	3.7%	12.4	9.1%	17.5	12.8%
2035	4.9	3.6%	12.5	9.1%	17.4	12.7%
2036	4.8	3.5%	12.5	9.1%	17.3	12.6%
2037	4.6	3.3%	12.6	9.1%	17.2	12.4%
2038	4.5	3.2%	12.6	9.1%	17.1	12.3%
2039	4.4	3.1%	12.7	9.1%	17.0	12.2%
2040	4.2	3.0%	12.8	9.1%	17.0	12.1%
2041	4.1	2.9%	12.9	9.1%	17.0	12.0%
2042	4.0	2.8%	13.0	9.1%	17.0	11.9%
2043	3.9	2.7%	13.2	9.1%	17.1	11.8%
2044	3.9	2.6%	13.3	9.1%	17.2	11.7%
2045	3.8	2.6%	13.5	9.1%	17.4	11.7%
2046	3.8	2.5%	13.8	9.1%	17.6	11.6%
2047	3.8	2.5%	14.0	9.1%	17.8	11.6%
2048	3.8	2.4%	14.2	9.1%	18.1	11.5%
2049	3.9	2.4%	14.5	9.1%	18.3	11.5%
2050	3.9	2.4%	14.7	9.1%	18.6	11.5%
2051	4.0	2.4%	15.0	9.1%	19.0	11.5%
2052	4.0	2.4%	15.3	9.1%	19.4	11.5%
2053	4.1	2.4%	15.6	9.1%	19.8	11.5%
2054	4.2	2.4%	15.9	9.1%	20.2	11.5%
2055	4.3	2.4%	16.3	9.1%	20.6	11.5%
2056	4.5	2.4%	16.6	9.1%	21.1	11.5%
2057	4.6	2.5%	17.0	9.1%	21.6	11.5%
2058	4.8	2.5%	17.4	9.1%	22.2	11.6%

¹Includes estimated expenses.



XI. Policemen's Annuity and Benefit Fund of Chicago

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- System Projections
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of December 31, 2019.

Policemen's Annuity and Benefit Fund of Chicago Tier 1 Plan Summary

Retirement Age

- Age 50 with 20 years of service
- Age 50 with 10 years of service (accumulated annuity)
- Mandatory retirement at age 63

Retirement Formula

• For employees with 20 or more years of service, 50% of final average salary plus 2.5% of final average salary for each year in excess of 20

Maximum Annuity

• 75% of final average salary

Salary Used to Calculate Pension

• Average of 4 highest consecutive years within final 10 years of service

Annual COLA

- 3% non-compounded with no limit if born before 1/1/66
- 1.5% non-compounded if born after 1/1/66, subject to 30% maximum

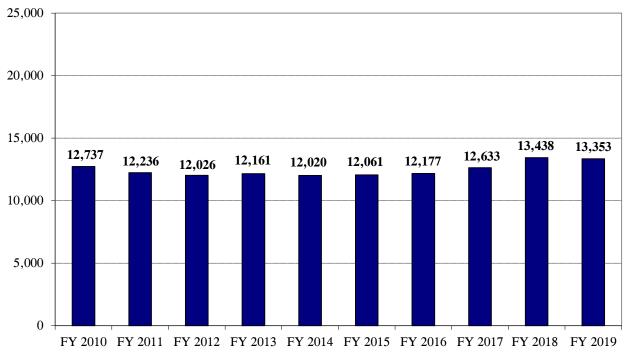
Employee Contributions

• 9.0% of salary

Employer Contributions

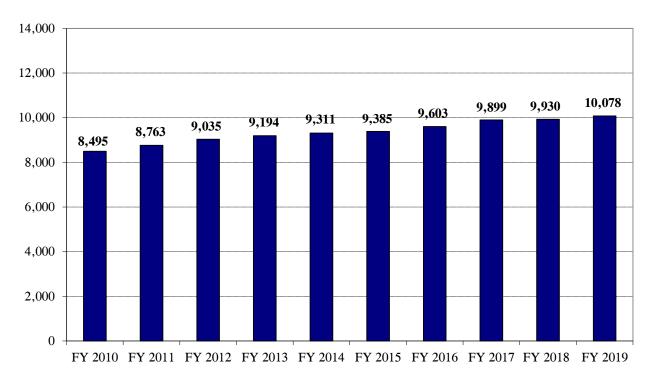
Pursuant to P.A. 99-0506, the employer contributions for payment years 2016 through 2020 are specified as follows: \$420 million in 2016, \$464 million in 2017, \$500 million in 2018, \$557 million in 2019, and \$579 million in 2020. After payment year 2020, the city (employer) is required to make an annual actuarially determined contribution as a level percentage of pay, with a funding goal of 90% by the end of 2055, based upon the actuarial value of fund assets and application of required actuarial assumptions and methodologies.

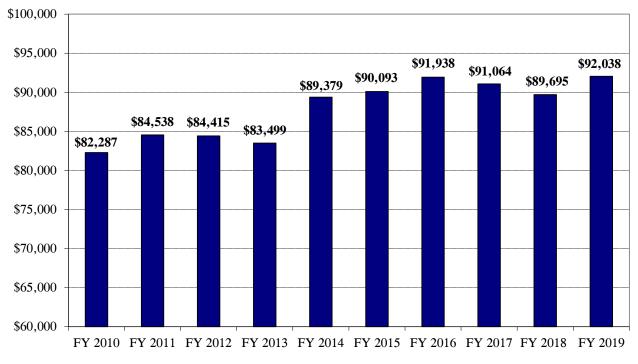
Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date of P.A. 96-1495. See P.A. 96-1495 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).



POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO Active Employees

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO Employee Annuitants

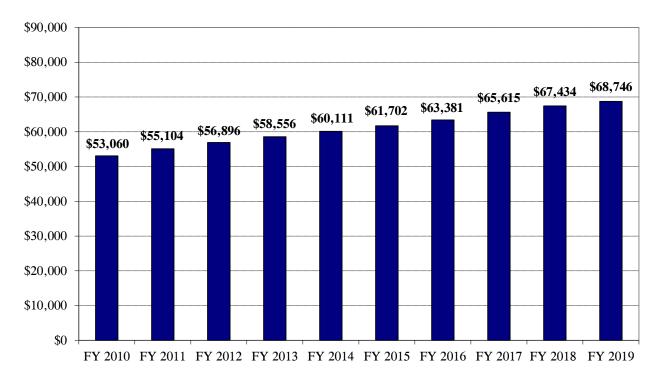


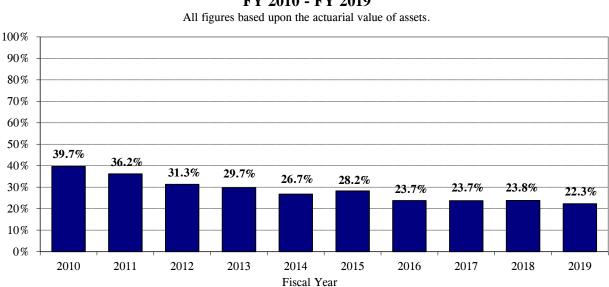


POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO Average Employee Salaries

CHART 85

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO Average Retirement Annuity

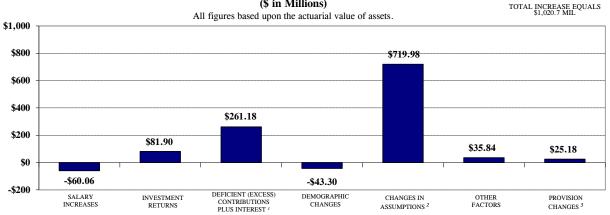




POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO Funded Ratio FY 2010 - FY 2019

CHART 87

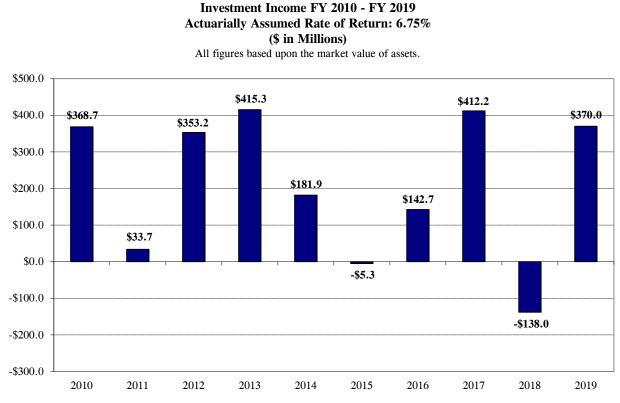
POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO Change in Unfunded Liabilities Year ended December 31, 2019 (\$ in Millions)



¹ Unfunded liability increases due to total contributions being less than normal cost, plus interest cost.

² Unfunded liability increases due to a net effect of changes in assumptions, including a decrease in the investment rate assumption from 7.25% to 6.75%.

³ The increase of \$25.2 million reflects a result of the Underwood v. City of Chicago court order that certain retirees are entitled to receive a subsidy for healthcare insurance premium.

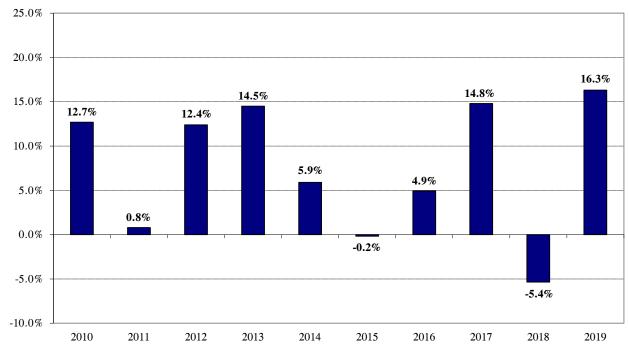


POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO

CHART 89

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO Rate of Return FY 2010 - FY 2019





All figures based upon the market value of assets.

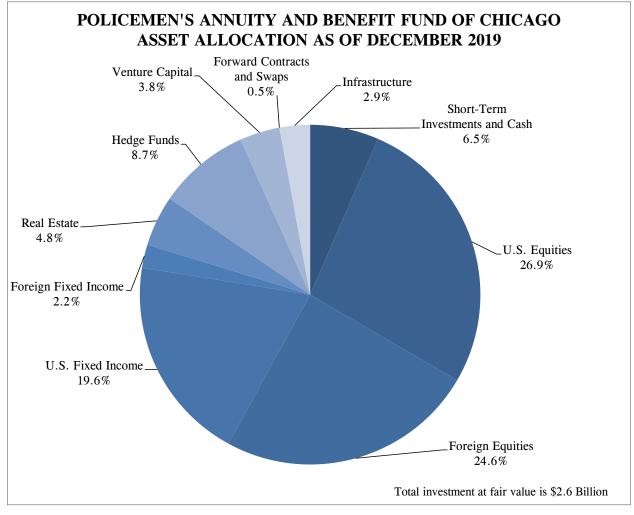
POLICI	POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO										
	Sys	stem Experience,	FY 2010 - FY	2019							
(\$ in Millions)											
Fiscal Year	Annual Payroll	Actuarial Liabilities	Actuarial Assets	Unfunded Liabilities	Funded Ratio						
2019	1,229.0	14,269.8	3,179.5	11,090.3	22.3%						
2018	1,205.3	13,214.7	3,145.1	10,069.5	23.8%						
2017	1,150.4	13,093.9	3,104.0	9,989.9	23.7%						
2016	1,119.5	12,856.6	3,052.1	9,804.5	23.7%						
2015	1,086.6	11,288.2	3,186.4	8,101.8	28.2%						
2014	1,074.3	11,048.2	2,954.3	8,093.9	26.7%						
2013	1,015.4	10,282.3	3,053.9	7,228.5	29.7%						
2012	1,015.2	10,051.8	3,148.9	6,902.9	31.3%						
2011	1,034.4	9,522.4	3,444.7	6,077.7	36.2%						
2010	1,048.1	9,374.9	3,719.0	5,655.9	39.7%						

РО	POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO Changes in Net Assets (\$ in Millions)										
Fiscal Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	
Additions to Assets											
Employer	\$582.0	\$588.0	\$494.5	\$281.6	\$582.3	\$187.1	\$188.9	\$207.2	\$183.5	\$183.8	
Employees	\$110.8	\$107.2	\$103.0	\$101.5	\$107.6	\$95.7	\$93.3	\$95.9	\$98.2	\$108.4	
Net Investment Income	\$369.9	-\$138.0	\$412.2	\$142.7	-\$5.3	\$181.9	\$415.3	\$353.2	\$33.7	\$368.7	
Other	\$0.0	\$1.6	\$0.1	\$1.4	\$3.1	\$0.7	\$0.5	\$0.4	\$0.1	\$0.9	
Total Asset Additions (A)	\$1,062.7	\$558.8	\$1,009.8	\$527.2	\$687.7	\$465.4	\$698.0	\$656.7	\$315.5	\$661.8	
Deductions from Assets											
Benefits	\$791.9	\$764.4	\$737.9	\$705.6	\$678.4	\$655.3	\$633.8	\$602.7	\$568.0	\$536.3	
Refunds	\$8.8	\$6.7	\$10.0	\$10.7	\$7.8	\$9.0	\$8.1	\$11.2	\$7.3	\$8.0	
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Administrative Expenses	\$4.7	\$4.1	\$4.8	\$4.7	\$4.5	\$4.2	\$4.3	\$4.9	\$4.4	\$3.9	
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Total Asset Deductions (B)	\$805.4	\$775.2	\$752.7	\$721.1	\$690.7	\$668.5	\$646.2	\$618.8	\$579.7	\$548.2	
Change in Net Assets (A-B=C)	\$257.3	-\$216.3	\$257.0	-\$193.9	-\$3.1	-\$203.1	\$51.8	\$37.9	-\$264.2	\$113.6	

Table 30 below contains funding projections based on the December 31, 2019 actuarial valuation of the Policemen's Annuity and Benefit Fund of Chicago.

	Policemen's Annuity and Benefit Fund of Chicago Actuarial Valuation Projection Results as of December 31, 2019 (\$ in Millions)											
Fiscal Year	Capped Payroll	Total City Contribution	Total City Contribution As % of Payroll	Total Employee Contribution	Accrued Liability	Actuarial Value of Assets	Unfunded Liabilities	Funded Ratio				
2019	1,229.0	582.0	47.4%	110.8	14,269.8	3,179.5	11,090.3	22.3%				
2020	1,270.1	737.5	58.1%	111.0	14,656.9	3,363.5	11,293.4	22.9%				
2021	1,309.5	786.8	60.1%	118.6	15,046.1	3,602.5	11,443.6	23.9%				
2022	1,357.1	815.4	60.1%	122.9	15,435.6	3,816.3	11,619.3	24.7%				
2023	1,393.5	837.3	60.1%	126.2	15,821.7	4,111.2	11,710.5	26.0%				
2024	1,426.2	856.9	60.1%	129.1	16,201.9	4,378.7	11,823.2	27.0%				
2025	1,460.5	877.5	60.1%	132.3	16,573.9	4,651.1	11,922.8	28.1%				
2026	1,495.0	898.2	60.1%	135.4	16,936.4	4,928.2	12,008.2	29.1%				
2027	1,531.4	920.1	60.1%	138.6	17,288.2	5,211.2	12,077.0	30.1%				
2028	1,570.5	943.6	60.1%	142.1	17,629.8	5,503.0	12,126.8	31.2%				
2029	1,604.2	963.9	60.1%	145.1	17,960.2	5,801.3	12,159.0	32.3%				
2030	1,639.1	984.8	60.1%	148.3	18,280.3	6,108.5	12,171.8	33.4%				
2031	1,673.3	1,005.4	60.1%	151.3	18,590.5	6,426.2	12,164.3	34.6%				
2032	1,707.1	1,025.7	60.1%	154.3	18,890.8	6,755.6	12,135.2	35.8%				
2033	1,741.2	1,046.2	60.1%	157.4	19,181.1	7,098.3	12,082.8	37.0%				
2034	1,776.7	1,067.5	60.1%	160.5	19,462.4	7,457.8	12,004.6	38.3%				
2035	1,815.5	1,090.8	60.1%	163.9	19,737.7	7,840.3	11,897.3	39.7%				
2036	1,845.4	1,108.8	60.1%	166.5	20,007.3	8,243.5	11,763.8	41.2%				
2037	1,870.5	1,123.9	60.1%	168.7	20,272.7	8,667.9	11,604.8	42.8%				
2038	1,890.0	1,135.6	60.1%	170.3	20,534.2	9,112.8	11,421.4	44.4%				
2039	1,908.7	1,146.8	60.1%	171.9	20,793.1	9,580.4	11,212.6	46.1%				
2040	1,926.6	1,157.6	60.1%	173.3	21,050.0	10,072.8	10,977.2	47.9%				
2041	1,946.2	1,169.4	60.1%	174.9	21,306.8	10,594.0	10,712.8	49.7%				
2041	1,966.4	1,181.5	60.1 <i>%</i>	176.5	21,564.4	11,147.1	10,417.3	49.7 <i>%</i>				
2042	1,987.6	1,194.3	60.1%	178.2	21,823.5	11,735.3	10,088.2	53.8%				
2043	2,008.9	1,194.5	60.1%	178.2	22,084.6	12,361.1	9,723.6	56.0%				
2044 2045	2,008.9	1,207.0	60.1%	181.6	22,084.0	13,026.6	9,723.0 9,321.1	58.3%				
2046 2047	2,052.3 2,075.4	1,233.1 1,247.0	60.1% 60.1%	183.4 185.2	22,612.8 22,880.3	13,734.8 14,489.0	8,878.0 8,391.3	60.7% 63.3%				
2047 2048	2,073.4	1,247.0				,						
		,	60.1%	187.1	23,150.1	15,292.4	7,857.7	66.1%				
2049 2050	2,124.1	1,276.3	60.1%	189.1	23,421.2	16,147.3	7,274.0	68.9%				
2050	2,149.4	1,291.4	60.1%	191.1	23,692.8	17,056.2	6,636.7	72.0%				
2051	2,175.2	1,307.0	60.1%	193.1	23,964.8	18,022.8	5,942.0	75.2%				
2052	2,201.6	1,322.8	60.1%	195.3	24,237.4	19,051.5	5,186.0	78.6%				
2053	2,228.5	1,339.0	60.1%	197.5	24,511.9	20,147.6	4,364.3	82.2%				
2054 2055	2,255.7 2,283.3	1,355.3 1,371.9	60.1% 60.1%	199.7 202.0	24,788.8 25,068.8	21,316.2 22,562.9	3,472.6 2,505.9	86.0% 90.0%				

Policemen's Annuity and Benefit Fund of Chicago Projected Normal Cost as of December 31, 2019 (\$ in Millions)								
Fiscal Year	Employer's Normal Cost	Employer's Normal Cost as a % of Payroll	Employee Contributions	Employee Contributions as a % of Payroll	Total Normal Cost	Total Normal Cost as a % of Payroll		
2019	121.0	9.8%	110.8	9.0%	231.8	18.9%		
2020	157.8	12.4%	111.0	8.7%	268.8	21.2%		
2021	153.8	11.7%	118.6	9.1%	272.4	20.8%		
2022	154.6	11.4%	122.9	9.1%	277.5	20.4%		
2023	154.5	11.1%	126.2	9.1%	280.7	20.1%		
2024	154.1	10.8%	129.1	9.1%	283.2	19.9%		
2025	153.6	10.5%	132.3	9.1%	285.9	19.6%		
2026	152.8	10.2%	135.4	9.1%	288.2	19.3%		
2027	152.0	9.9%	138.6	9.1%	290.6	19.0%		
2028	151.3	9.6%	142.1	9.1%	293.4	18.7%		
2029	150.1	9.4%	145.1	9.0%	295.2	18.4%		
2030	149.1	9.1%	148.3	9.0%	297.3	18.1%		
2031	147.9	8.8%	151.3	9.0%	299.2	17.9%		
2032	146.7	8.6%	154.3	9.0%	301.1	17.6%		
2033	145.4	8.4%	157.4	9.0%	302.8	17.4%		
2034	144.1	8.1%	160.5	9.0%	304.6	17.1%		
2035	143.1	7.9%	163.9	9.0%	307.0	16.9%		
2036	141.5	7.7%	166.5	9.0%	308.0	16.7%		
2037	139.6	7.5%	168.7	9.0%	308.3	16.5%		
2038	137.4	7.3%	170.3	9.0%	307.8	16.3%		
2039	135.3	7.1%	171.9	9.0%	307.2	16.1%		
2040	133.3	6.9%	173.3	9.0%	306.6	15.9%		
2041	131.6	6.8%	174.9	9.0%	306.5	15.7%		
2042	130.2	6.6%	176.5	9.0%	306.7	15.6%		
2043	129.0	6.5%	178.2	9.0%	307.2	15.5%		
2044	128.0	6.4%	179.9	9.0%	307.9	15.3%		
2045	127.2	6.3%	181.6	8.9%	308.8	15.2%		
2046	126.6	6.2%	183.4	8.9%	310.0	15.1%		
2047	126.4	6.1%	185.2	8.9%	311.6	15.0%		
2048	126.4	6.0%	187.1	8.9%	313.5	14.9%		
2049	126.6	6.0%	189.1	8.9%	315.7	14.9%		
2050	127.1	5.9%	191.1	8.9%	318.2	14.8%		
2051	127.8	5.9%	193.1	8.9%	320.9	14.8%		
2052	128.6	5.8%	195.3	8.9%	323.9	14.7%		
2053	129.7	5.8%	197.5	8.9%	327.2	14.7%		
2054	130.8	5.8%	199.7	8.9%	330.5	14.7%		
2055	132.1	5.8%	202.0	8.8%	334.1	14.6%		



XII. Public School Teachers' Pension and Retirement Fund of Chicago

- Plan Summary
- Active Employees
- Employee Annuitants
- Average Salaries
- Average Retirement Annuity
- Funded Ratios
- Change in Unfunded Liabilities
- Investment Income
- Investment Rates of Return
- Systems Experience
- Changes in Net Assets
- System Projections
- Asset Allocation



Note: All data shown in this section is based upon the system's Actuarial Valuation and CAFR as of June 30, 2019.

Public School Teachers' Pension and Retirement Fund of Chicago - Tier 1 Plan Summary

Retirement Age

- Age 60 with 20 years of service
- Age 55 with 20 years of service (reduced annuity)
- Age 62 with 5 years of service

Retirement Formula

• 2.2% of final average salary for each year of service

Maximum Annuity

• 75% of final average salary or \$1,500 per month, whichever is greater

Salary Used to Calculate Pension

• Average of 4 highest consecutive years within final 10 years of service

Annual COLA

■ 3% compounded

Employee Contributions

• 9.0% of salary

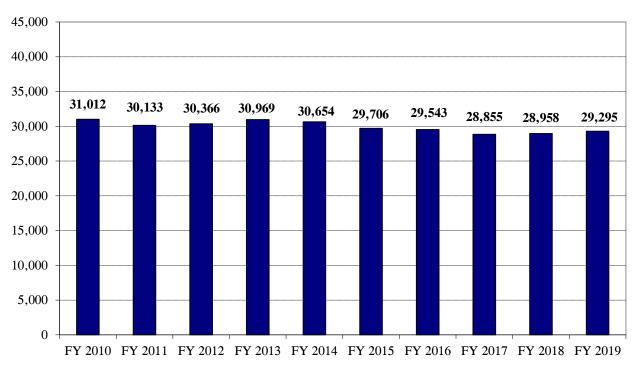
Employer Contributions

Pursuant to P.A. 96-0889, for fiscal years 2014 through 2059 the employer (the Board of Education) is required to make contributions calculated as a level percentage of payroll sufficient to bring the fund's total assets up to 90% of the fund's total liabilities by the end of FY 2059. In years where the funded ratio is above 90%, the employer is not required to make contributions.

P.A. 99-0521, effective June 1, 2017, allows the Board of Education to levy annually a property tax capped at 0.383% for purposes of making employer contributions.

P.A. 100-0465, effective August 31, 2017, increases the property tax cap from 0.383% to 0.567% beginning FY 2018. Also, the Act requires the State to pay \$221.3 million for FY 2018 and an amount equal to the employer normal cost portion of the required Board of Education contributions beginning FY 2019.

Note: Benefits shown are for employees hired prior to January 1, 2011 (Tier 1 employees), the effective date of P.A. 96-0889. See P.A. 96-0889 in Section I for a summary of benefits for employees hired after January 1, 2011 (Tier 2 employees).



CHICAGO TEACHERS' PENSION FUND Active Employees



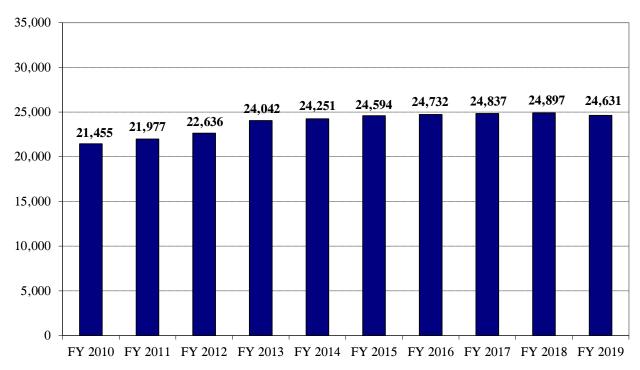
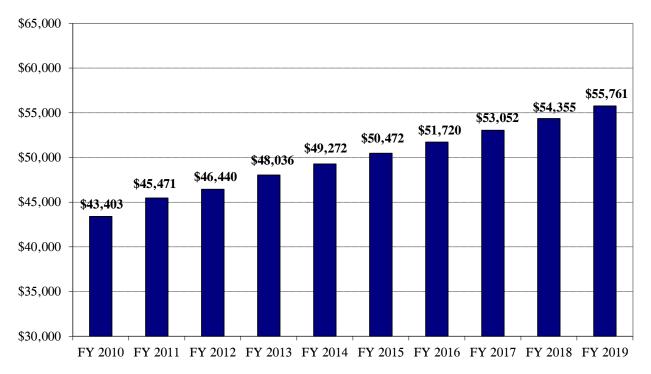
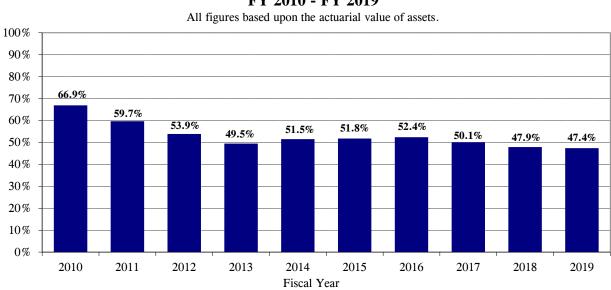




CHART 94



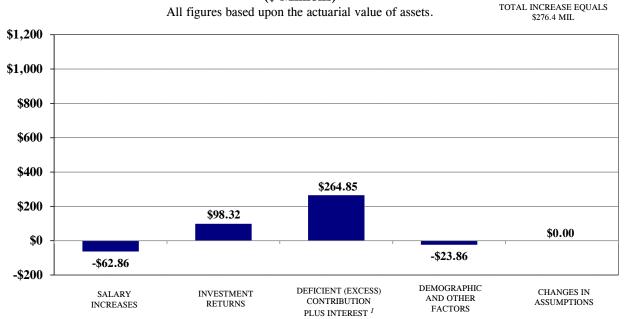




CHICAGO TEACHERS' PENSION FUND Funded Ratio FY 2010 - FY 2019

CHART 96

CHICAGO TEACHERS PENSION FUND Change in Unfunded Liabilities Year ended June 30, 2019 (\$ Millions)



¹ Unfunded liability increased due to contributions being less than normal cost, plus interest cost.

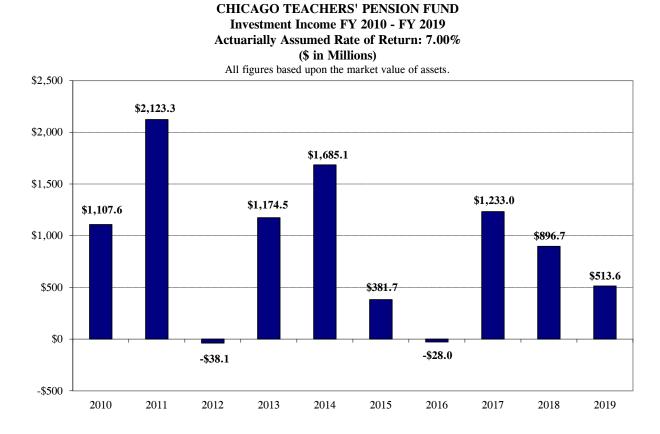
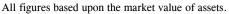
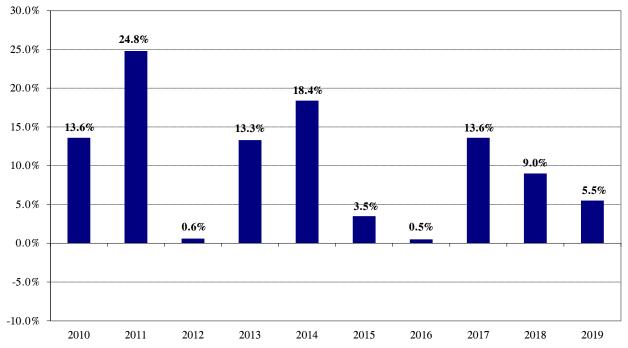


CHART 98

CHICAGO TEACHERS' PENSION FUND Rate of Return FY 2010 - FY 2019 Actuarially Assumed Rate of Return: 7.00%





2014

2013

2012

2011

2010

2,233.3

2,239.3

2,224.9

2,090.1

2,107.9

CHICAGO TEACHERS PENSION FUND System Experience, FY 2010 - FY 2019 (\$ in Millions)										
Fiscal Year	Annual Payroll	Actuarial Liabilities	Actuarial Assets	Unfunded Liabilities	Funded Ratio					
2019	2,179.1	23,252.2	11,021.8	12,230.4	47.4%					
2018	2,094.8	22,922.9	10,969.1	11,953.8	47.9%					
2017	2,030.2	21,822.0	10,933.0	10,889.0	50.1%					
2016	2,281.3	20,246.1	10,610.7	9,635.4	52.4%					
2015	2,273.6	19,951.3	10,344.4	9,606.9	51.8%					

19,503.9

19,044.5

17,375.7

16,940.3

16,319.7

10,045.5

9,422.5

9,364.1

10,109.3

10,917.4

9,458.4

9,622.0

8,011.6

6,831.0

5,402.3

51.5%

49.5%

53.9%

59.7%

66.9%

CHICAGO TEACHERS PENSION FUND Changes in Net Assets (\$ in Millions)										
Fiscal Years	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Additions to Assets										
Employer	\$749.5	\$717.5	\$697.8	\$635.1	\$643.7	\$585.4	\$142.6	\$138.8	\$208.6 *	\$355.8 *
Employees	\$190.6	\$183.7	\$187.5	\$191.9	\$191.2	\$187.8	\$188.4	\$187.1	\$185.9	\$194.6
Net Investment Income	\$513.6	\$896.7	\$1,233.0	-\$28.2	\$381.7	\$1,685.1	\$1,174.5	-\$38.1	\$2,123.3	\$1,107.6
Other	\$1.7	\$1.5	\$0.2	\$1.5	\$0.9	\$0.0	\$0.0	\$0.4	\$10.4	\$0.0
Total Asset Additions (A)	\$1,455.3	\$1,799.4	\$2,118.5	\$800.2	\$1,217.5	\$2,458.3	\$1,505.5	\$288.2	\$2,528.2	\$1,658.0
Deductions from Assets										
Benefits	\$1,471.1	\$1,441.2	\$1,392.7	\$1,351.3	\$1,307.7	\$1,273.5	\$1,232.3	\$1,117.2	\$1,050.9	\$991.4
Refunds	\$24.5	\$25.1	\$32.2	\$33.6	\$23.9	\$32.8	\$24.8	\$36.3	\$27.1	\$21.1
Rebates	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Administrative Expenses	\$25.6	\$21.5	\$13.8	\$12.3	\$11.7	\$10.5	\$11.5	\$10.1	\$9.5	\$8.8
Other	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$78.9	\$80.0
Total Asset Deductions (B)	\$1,521.2	\$1,487.8	\$1,438.7	\$1,397.1	\$1,343.3	\$1,316.8	\$1,268.6	\$1,163.6	\$1,166.4	\$1,101.3
Change in Net Assets (A-B=C)	-\$65.9	\$311.6	\$679.8	-\$596.9	-\$125.7	\$1,141.5	\$236.9	-\$875.4	\$1,361.8	\$556.7

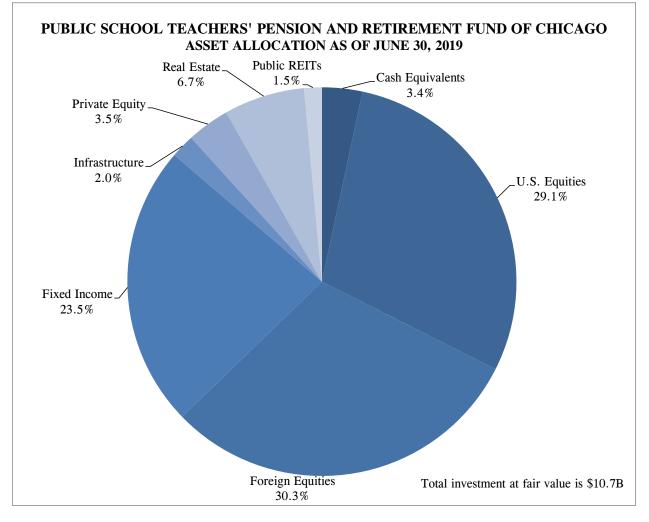
* In fiscal years 2010 and 2011, employer contributions for the Health Insurance Fund were included.

Table 34 below contains funding projections based on the June 30, 2019 actuarial valuation of the Chicago Teachers' Pension Fund.

TABLE 34

Chicago Teachers' Pension Fund Actuarial Valuation Projection Results as of June 30, 2019 Projections Based on P.A. 90-0655, P.A. 91-0357, P.A. 96-0889, P.A. 100-0465 (\$ in Millions)																		
										Fiscal Year	Capped Payroll	Total Employer Contributions ¹	Employer Contribution As % of Payroll	Total Employee Contribution	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio
										2020	2,203.1	854.5	38.8%	198.3	23,661.7	11,275.4	12,386.3	47.7%
2021	2,267.1	885.9	39.1%	204.0	24,079.2	11,441.8	12,637.4	47.5%										
2022	2,326.5	909.1	39.1%	209.4	24,506.6	11,582.4	12,924.2	47.3%										
2023	2,386.2	932.4	39.1%	214.8	24,944.0	11,786.4	13,157.6	47.3%										
2024	2,446.4	955.9	39.1%	220.2	25,389.9	12,001.8	13,388.1	47.3%										
2025	2,506.4	979.4	39.1%	225.6	25,843.9	12,230.6	13,613.3	47.3%										
2026	2,565.9	1,002.7	39.1%	230.9	26,304.8	12,471.9	13,832.9	47.4%										
2027	2,625.5	1,025.9	39.1%	236.3	26,771.8	12,725.0	14,046.8	47.5%										
2028	2,685.3	1,049.3	39.1%	241.7	27,244.0	12,990.2	14,253.8	47.7%										
2029	2,745.0	1,072.6	39.1%	247.0	27,718.4	13,265.5	14,452.9	47.9%										
2030	2,806.0	1,096.5	39.1%	252.5	28,206.9	13,564.5	14,642.4	48.1%										
2031	2,866.9	1,120.3	39.1%	258.0	28,696.7	13,875.7	14,821.0	48.4%										
2032	2,928.9	1,144.5	39.1%	263.6	29,186.7	14,199.5	14,987.2	48.7%										
2033	2,991.6	1,169.0	39.1%	269.2	29,674.5	14,535.4	15,139.1	49.0%										
2034	3,054.8	1,193.7	39.1%	274.9	30,158.7	14,883.7	15,275.0	49.4%										
2035	3,118.1	1,218.4	39.1%	280.6	30,637.3	15,246.5	15,390.8	49.8%										
2036	3,181.7	1,243.3	39.1%	286.4	31,108.9	15,624.6	15,484.3	50.2%										
2037	3,245.4	1,268.2	39.1%	292.1	31,571.8	16,018.5	15,553.3	50.7%										
2038	3,309.6	1,293.3	39.1%	297.9	32,024.1	16,429.2	15,594.9	51.3%										
2039	3,374.7	1,318.7	39.1%	303.7	32,463.0	16,856.6	15,606.4	51.9%										
2040	3,441.4	1,344.8	39.1%	309.7	32,886.6	17,301.9	15,584.7	52.6%										
2041	3,510.2	1,371.6	39.1%	315.9	33,292.3	17,766.3	15,526.0	53.4%										
2042	3,579.4	1,398.7	39.1%	322.1	33,677.5	18,250.3	15,427.2	54.2%										
2043	3,650.3	1,426.4	39.1%	328.5	34,042.1	18,756.7	15,285.4	55.1%										
2044	3,724.5	1,455.4	39.1%	335.2	34,386.7	19,290.2	15,096.5	56.1%										
2045	3,801.5	1,485.5	39.1%	342.1	34,713.2	19,855.8	14,857.4	57.2%										
2046	3,882.6	1,517.2	39.1%	349.4	35,025.6	20,461.1	14,564.5	58.4%										
2047	3,966.7	1,550.0	39.1%	357.0	35,326.7	21,112.4	14,214.3	59.8%										
2048	4,053.6	1,584.0	39.1%	364.8	35,622.0	21,818.8	13,803.2	61.3%										
2049	4,142.7	1,618.8	39.1%	372.8	35,915.3	22,587.8	13,327.5	62.9%										
2050	4,233.6	1,654.3	39.1%	381.0	36,208.9	23,426.2	12,782.7	64.7%										
2051	4,325.0	1,690.0	39.1%	389.2	36,504.7	24,340.3	12,164.4	66.7%										
2052	4,417.5	1,726.2	39.1%	397.6	36,802.1	25,334.4	11,467.7	68.8%										
2053	4,510.7	1,762.6	39.1%	406.0	37,100.5	26,413.1	10,687.4	71.2%										
2054	4,605.9	1,799.8	39.1%	414.5	37,399.1	27,581.7	9,817.4	73.7%										
2055	4,702.7	1,837.6	39.1%	423.2	37,694.8	28,843.6	8,851.2	76.5%										
2055	4,800.9	1,876.0	39.1%	432.1	37,985.1	30,203.1	7,782.0	70.5 <i>%</i>										
2050	4,900.3	1,914.8	39.1%	441.0	38,268.9	31,666.2	6,602.7	82.7%										
2058	4,900.5 5,000.6	1,914.8	39.1%	450.1	38,208.9	33,241.6	5,305.3	86.2%										
2059	5,101.4	1,993.4	39.1 <i>%</i>	459.1	38,340.9	34,940.6	3,881.9	90.0%										

¹ Total employer contributions consist of the required Board of Education contributions, additional Board of Education contributions, required State contributions, and additional State contributions.



COMMISSION OVERVIEW

The Commission on Government Forecasting & Accountability is a bipartisan legislative support service agency responsible for advising the Illinois General Assembly on economic and fiscal policy issues and for providing objective policy research for legislators and legislative staff. The Commission's board is comprised of twelve legislators—split evenly between the House and Senate and between Democrats and Republicans. Effective December 10, 2018, pursuant to P.A. 100-1148 the former Legislative Research Unit was merged into the Commission.

The Commission has three internal units––Revenue, Pensions, and Research, each of which has a staff of analysts and researchers who analyze policy proposals, legislation, state revenues & expenditures, and benefit programs, and who provide research services to members and staff of the General Assembly. The Commission's staff fulfills the statutory obligations set forth in the Commission on Government Forecasting and Accountability Act (25 ILCS 155/), the State Debt Impact Note Act (25 ILCS 65/), the Illinois Pension Code (40 ILCS 5/), the Pension Impact Note Act (25 ILCS 55/), the State Facilities Closure Act (30 ILCS 608/), the State Employees Group Insurance Act of 1971 (5 ILCS 375/), the Public Safety Employee Benefits Act (820 ILCS 320/), the Legislative Commission Reorganization Act of 1984 (25 ILCS 130/), and the Reports to the Commission on Government Forecasting and Accountability Act (25 ILCS 110/).

- The **Revenue Unit** issues an annual revenue estimate, reports monthly on the state's financial and economic condition, and prepares bill analyses and debt impact notes on proposed legislation having a financial impact on the State. The Unit publishes a number of statutorily mandated reports, as well as on-demand reports, including the Monthly Briefing newsletter and annually, the Budget Summary, Capital Plan Analysis, Illinois Economic Forecast Report, Wagering in Illinois Update, and Liabilities of the State Employees' Group Insurance Program, among others. The Unit's staff also fulfills the agency's obligations set forth in the State Facilities Closure Act.
- The **Pension Unit** prepares pension impact notes on proposed pension legislation and publishes several statutorily mandated reports including the Financial Condition of the Illinois State Retirement Systems, the Financial Condition of Illinois Public Pension Systems and the Fiscal Analysis of the Downstate Police & Fire Pension Funds in Illinois. The Unit's staff also fulfills the statutory responsibilities set forth in the Public Safety Employee Benefits Act.
- The **Research Unit** primarily performs research and provides information as may be requested by members of the General Assembly or legislative staffs. Additionally, the Unit maintains a research library and, per statute, collects information concerning state government and the general welfare of the state, examines the effects of constitutional provisions and previously enacted statutes, and considers public policy issues and questions of state-wide interest. Additionally, the Unit publishes First Reading, a quarterly newsletter which includes abstracts of annual reports or special studies from other state agencies, the Illinois Tax Handbook for Legislators, Federal Funds to State Agencies, various reports detailing appointments to State Boards and Commissions, the 1970 Illinois Constitution Annotated for Legislators, the Roster of Illinois Legislators, and numerous special topic publications.

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