

BOARD OF EDUCATION OF THE CITY OF CHICAGO
ANNUAL PENSIONS AND OTHER POST-EMPLOYMENT OBLIGATIONS DISCLOSURE
As of June 21, 2017

The information contained herein regarding annual pensions and other post-employment obligations of the Board of Education of the City of Chicago is being provided pursuant to Securities Exchange Commission Rule 15c2-12.

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BOARD OF EDUCATION OF THE CITY OF CHICAGO

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Introduction

Employees of the Board of Education of the City of Chicago (the “Board”) participate in one of two defined benefit retirement funds (the “Retirement Funds”) which provide benefits upon retirement, death or disability to Board employees and their beneficiaries. The Retirement Funds are established, administered and financed under the Pension Code, Chapter 40, Act 5, Articles 1, 1A, 17, 20 and 22 of the Illinois Compiled Statutes (the “Pension Code”) as separate legal entities and for the benefit of the members of the Retirement Funds. The two Retirement Funds are: (i) the Public School Teachers’ Pension and Retirement Fund of Chicago (the “Pension Fund”), which covers teachers, educational, administrative, professional and other certified individuals employed by the Board, and (ii) the Municipal Employees’ Annuity and Benefit Fund of Chicago (the “Annuity Fund”), which covers non-teacher employees of the Board and most civil servant employees of the City of Chicago (the “City”).

Pursuant to its continuing disclosure undertakings (its “Undertakings”), the Board has agreed to provide Annual Financial Information exclusive of Audited Financial Statements (“Annual Financial Information”) by submission to the Municipal Securities Rulemaking Board through its Electronic Municipal Market Access system for municipal securities disclosure (EMMA”). Included in the Annual Financial Information required for submission is information of the type set forth in the respective Official Statements related to the related series of bonds that are subject to the Undertakings under (i) the caption “PENSIONS AND OTHER POST-EMPLOYMENT OBLIGATIONS,” and/or (ii) the appendix attached to the applicable Official Statement entitled “PENSIONS AND OTHER POST-EMPLOYMENT OBLIGATIONS” (collectively, the “Pension Annual Financial Information”). This document entitled “Annual Pensions and Other Post Employment Obligations Disclosure” contains the Pension Annual Financial Information as of June 21, 2017 (the “Disclosure”).

The Pension Annual Financial Information is sourced primarily from documents published by the Retirement Funds (such information is collectively referred to as the “Third-Party Source Pension Information”). Except for certain information derived from the Comprehensive Annual Financial Reports of the Chicago Public Schools, including the Comprehensive Annual Financial Report of the Chicago Public Schools for the Fiscal Year ended June 30, 2016, the information contained herein pertaining to the Pension Fund relies on (i) the Public School Teachers’ Pension and Retirement Fund of Chicago Actuarial Valuation and Review as of June 30, 2016 (the “2016 Actuarial Valuation Report”), prepared by The Segal Company, independent actuaries and consultants engaged by the Pension Fund Board defined below (the “Pension Fund Actuaries”), and (ii) the comprehensive annual financial report of the Pension Fund for its Fiscal Year ending June 30, 2016 (the “Pension Fund 2016 CAFR”), prepared by the Pension Fund’s administrative staff and its independent auditors Plante & Moran, PLLC Southfield, MI (the “Pension Fund Auditors”). The 2016 Actuarial Valuation Report and the Pension Fund 2016 CAFR are referred to herein as the “Pension Fund Source Information.”

At the time of the preparation of this Disclosure, the Pension Fund 2016 CAFR and the 2016 Actuarial Valuation are the most recent audit and actuarial valuation pertaining to the Pension Fund

available to the Board. Copies of the Pension Fund 2016 CAFR and the 2016 Actuarial Valuation Report, as well as Pension Fund CAFRs and Actuarial Valuation Reports from previous Fiscal Years, may be accessed at http://www.ctpf.org/general_info/Financial_lists.htm. None of the information on such website, or on the links appearing on the url disclosed in the previous sentence, is incorporated by reference into either this Disclosure or any Official Statements related to the respective series of bonds related to the Undertakings. The Board takes no responsibility for, nor has it attempted to verify the accuracy of, the information contained on such websites. The Board has not independently verified the Pension Fund Source Information and makes no representations nor expresses any opinion as to the accuracy of the Pension Fund Source Information.

Subject to the exception noted above regarding information derived from the Board's CAFRs, the information contained herein pertaining to the Annuity Fund relies on (i) the comprehensive annual financial reports of the Annuity Fund for its Fiscal Years ending December 31, 2014 and December 31, 2015 (the "Annuity Fund 2015 CAFR"), prepared by the Annuity Fund's administrative staff and its independent auditors, Bansley and Kiener, L.L.P., Chicago, Illinois, and (ii) the actuarial valuation of the Annuity Fund as of December 31, 2016 (the "2016 Annuity Fund Actuarial Valuation" and, together with the Annuity Fund 2015 CAFR, the "Annuity Fund Source Information"), prepared by The Segal Company, independent actuaries and consultants engaged by the Annuity Fund Board (the "Annuity Fund Actuaries," and, together with the Pension Fund Actuaries, referred to herein as the "Actuaries").

At the time of the preparation of this Disclosure, the Annuity Fund 2015 CAFR and the 2016 Annuity Fund Actuarial Valuation are the most recent audit and actuarial valuation pertaining to the Annuity Fund available to the Board. Copies of the Annuity Fund 2015 CAFR and the 2016 Annuity Fund Actuarial Valuation, as well as Annuity Fund CAFRs and Actuarial Valuation Reports from previous Fiscal Years, may be viewed at <http://www.meabf.org/publications/>. None of the information on such website, or on the links appearing on the url disclosed in the previous sentence, is incorporated by reference into either this Disclosure or any Official Statements related to the respective series of bonds related to the Undertakings. The Board takes no responsibility for, nor has it attempted to verify the accuracy of, the information contained on such websites. The Board has not independently verified the Annuity Fund Source Information and makes no representations nor expresses any opinion as to the accuracy of the Annuity Fund Source Information.

Healthcare benefits for certified teachers and administrators employed by the Board are provided under a cost sharing multiple-employer plan administered by the Pension Fund (the "Health Insurance Program"). Subject to the exception noted above regarding information derived from the Board's CAFRs, the information contained herein regarding the Health Insurance Program can be found in the Pension Fund 2016 CAFR in accordance with GASB Statement No. 43, as well as the Public School Teachers' Pension and Retirement Fund of Chicago 2016 Health Insurance Plan Actuarial Valuation (the "2016 Health Insurance Plan Actuarial Valuation" and, together with relevant information in the Pension Fund 2016 CAFR, the "Health Insurance Plan Source Information"), prepared by the Actuaries. At the time of the preparation of this Disclosure, the Pension Fund 2016 CAFR and the 2016 Health Insurance Plan Actuarial Valuation are the most recent audit and actuarial valuation pertaining to the Health Insurance Program available to the Board. The Board has not independently verified the Health Insurance Plan Source Information and makes no representations nor expresses any opinion as to the accuracy of the Health Insurance Plan Source Information.

Capitalized terms used in this Disclosure and not otherwise defined have the meanings assigned to them in the respective Official Statements related to the particular series of bonds related to the Undertakings.

Overview of Retirement Funds

The benefits paid under the Retirement Funds, contributions to the Retirement Funds and investments by the Retirement Funds are governed by the Pension Code. As defined benefit pension plans, the Retirement Funds pay periodic benefits to beneficiaries, which generally consist of retired or disabled employees, their dependents and their survivors, in a fixed amount (subject to certain scheduled increases) for life. The amount of the benefit is determined at the time of retirement based, among other things, on the length of time worked and the salary earned. To fund benefits, employees, the Board, the City, the State of Illinois (the “State”) and, in certain instances, approved City charter schools make contributions to the Retirement Funds (the “Statutory Contributions”). The Board has historically paid its Statutory Contribution on the last day of its Fiscal Year. The Retirement Funds invest these contributions with the goal of achieving projected investment returns over time and increasing the assets of the Retirement Funds. Information, as reported by the Board, pertaining to the Retirement Funds and the Board’s Statutory Contributions is contained in the Board’s Comprehensive Annual Financial Reports of the Chicago Public Schools for each Fiscal Year, including the Comprehensive Annual Financial Report of the Chicago Public Schools for the Fiscal Year ended June 30, 2016.

The Retirement Funds’ actuaries perform separate actuarial valuations of each of the Retirement Funds on an annual basis. These actuarial valuations calculate, among other things, the employer contributions, assets and liabilities of the Retirement Funds. In the actuarial valuations, the actuaries make a variety of assumptions and employ actuarial methods to calculate such contributions, assets and liabilities. The assumptions and methods used by the actuary have a significant impact on the measures of financial position of the Retirement Funds.

Forward-Looking Statements and Actuarial Assumptions

The information included under the headings “–Background Information Regarding the Pension Fund,” “– Pension Fund Contributions,” “– Pensions for Other Board Personnel” and “– Other Post-Employment Benefits and Other Board Liabilities” relies to a large extent on Pension Fund Source Information. Actuarial assessments contained under such headings and in the Pension Fund Source Information are “*forward-looking*” information that reflects the judgment of the Pension Fund fiduciaries, including the Pension Fund Actuaries. A variety of factors impact the Unfunded Actuarial Liabilities and Funded Ratios of the Pension Fund and the Annuity Fund. Increases in member salaries and benefits, a lower rate of return on investment than that assumed by the respective Fund and insufficient contributions when compared to the employer’s normal cost plus interest on the Unfunded Actuarial Liability will all cause an increase in the Unfunded Actuarial Liability and a decrease in the Funded Ratio. Conversely, decreases in member salaries and benefits, a higher return on investment than assumed and employer contributions in excess of the employer’s normal cost plus interest will decrease the Unfunded Actuarial Liability and increase the Funded Ratio. In addition, changes in actuarial assumptions and certain other factors will have an impact on the Unfunded Actuarial Liability and the Funded Ratio. No assurances can be given that the Board, the City or the State will make the contributions necessary to meet any escalating costs incurred by the Retirement Funds.

The projections herein, including those in Table 4 under “– Pension Fund Contributions,” are based upon numerous variables that are subject to change, and are forward-looking statements regarding future events based on actuarial assumptions and assumptions made regarding such future events, including but not limited to the assumptions that there are no changes to the current legislative structure and that all projected contributions to the Retirement Funds are made as required. No assurance can be given that these assumptions will be realized or that actual events will not cause material changes to the data presented in Table 4 or with respect to any other statements and projections that constitute forward-looking statements or are based on actuarial assumptions.

Background Information Regarding the Pension Fund

General. The Pension Fund is a multiple-employer, defined-benefit public employee retirement system established by the State to provide annuity, disability, survivor, death, and health benefits for certain certified teachers and other employees of the Chicago Public Schools, Pension Fund employees and approved City charter schools. “*Defined-benefit*” refers to the fact that the Pension Fund pays a periodic benefit to retired employees and survivors in a fixed (defined) benefit amount determined at the time of retirement (benefits are increased annually in retirement by the defined Automatic Annual Increase factor, which is 3% for the Tier 1 members (hired before 2011) and ½ the rate of inflation for the Tier 2 members (hired after 2010)). The Pension Fund has a Fiscal Year ending June 30.

Membership. Participation in the Pension Fund is mandatory for teachers, educational, administrative, professional and other certified individuals employed by the Board. In addition, certified teachers and staff employed by City charter schools must also participate in the Pension Fund. As of June 30, 2016, according to the most recently available information, the Pension Fund had 133 participating employers consisting of the primary employer, Chicago Public Schools, 129 charter schools and the Pension Fund itself. The Pension Fund included 63,556 members consisting of 28,298 retirees and beneficiaries currently receiving benefits, 5,715 terminated members entitled to benefits but not yet receiving them, 18,557 vested current members and 10,986 nonvested current members.

Governance of the Pension Fund. The Pension Fund is governed by a 12 member Board of Trustees (the “Pension Fund Board”) including six trustees elected by the active teacher membership, three trustees elected by the retired teacher membership, one trustee elected by the active principals and administrators, and two trustees appointed by the Board. The Pension Fund Board is authorized by State law to make investments, pay benefits, hire staff and consultants, and carry out all necessary functions in compliance with the Pension Code.

The Pension Fund Board is a fiduciary of the Pension Fund and is authorized to perform all functions necessary for operation of the Pension Fund. The Pension Code authorizes each pension board to make certain decisions, including decisions regarding the investment of funds, the management of assets, the disbursement of benefits, and the hiring of staff, financial advisors and asset managers.

The Pension Fund Board is authorized to promulgate rules and procedures regarding their administration of benefits and other matters in accordance with the Illinois Administrative Procedure Act, and their decisions in awarding, limiting, or denying benefits are subject to the Illinois Administrative Procedure Act. Certain aspects of the Pension Fund, however, including the defined benefits and the employer and employee contribution levels, are established in the Pension Code and may be amended only by an amendment to the Pension Code.

The Pension Code provides that the expenses incurred in connection with the administration of the Pension Fund are not construed to be debt imposed upon the Board. Such expenses are the obligation of the Pension Fund exclusively, as separate bodies politic and corporate.

The Illinois Attorney General and annuitants may bring a civil action to obtain relief for violations of a fiduciary duty to the Pension Fund or any act or practice which violates any provision of the Pension Code.

Benefits and Contributions. Article 17 of the Pension Code governs the retirement, survivor and disability benefits provided by the Pension Fund and establishes the statutorily required contributions from the Board, the State and participating employees. The amount of the periodic benefit is generally determined on the basis of service credits and salary. Eligible employees receive the defined benefit on a

periodic basis for life, along with certain benefits to spouses and children that survive the death of the employee.

To fund the benefits to be paid by a defined-benefit pension plan, both employees and employers make contributions to the plan. Generally in a defined-benefit pension plan, employees contribute a fixed percentage of their annual salary and employers contribute the additional amounts required (which amounts may be determined pursuant to statute, as in the case of the Board), when combined with the investment earnings on plan assets, to pay the benefits under the pension plan. The benefits available under the Pension Fund accrue throughout the time a member is employed by the Board. Although the benefits accrue during employment, certain age and service requirements must be achieved by an employee to generate a retirement or survivor's periodic defined benefit payment upon retirement or termination from the Board. The Pension Fund also provides certain disability benefits and retiree healthcare benefits to eligible members. Section 5 of Article XIII of the Illinois Constitution (the "Illinois Pension Clause") provides as follows:

"Membership in any pension retirement system of the State, any unit of local government or school district, or any agency or instrumentality thereof, shall be an enforceable contractual relationship, the benefits of which shall not be diminished or impaired."

For purposes herein, references to "employee" or "member" are references to the employees of the Board; the employees of the Pension Fund and approved City charter school employees that also participate in the Pension Fund.

Public Act 96-0889. On April 14, 2010, the Governor signed Public Act 96-0889 ("P.A. 96-0889") into law. P.A. 96-0889 was designed in part to provide relief to the Board from its pension funding obligations by extending the statutory deadline for the Board to bring the ratio of the actuarially determined value of the assets of the Pension Fund to its actuarially determined accrued liabilities to 90% and substantially reducing the Board's contribution requirements for Fiscal Years 2011, 2012 and 2013. In addition it provided reduced retirement benefits for future employees who become members of the Pension Fund after January 1, 2011. P.A. 96-0889 established a "two-tier" benefit system with less generous benefits for future employees who become members of the Pension Fund after January 1, 2011, as compared to those provided to current Board employees. Among other reforms, P.A. 96-0889:

- Increased the minimum age at which an employee may retire with unreduced benefits to age 67, from age 60 (or even younger based on a formula combining the age of the employee and the number of years of service);
- Reduced the Automatic Annual Increase adjustment for beneficiaries in retirement to the lower of 3% or 50% of the change in the Consumer Price Index for all urban consumers, whichever is lower, for employees hired after January 1, 2011;
- Increased the minimum age for eligibility of the Automatic Annual Increase adjustment stated above from age 61 to age 67
- Calculated benefits based on the highest continuous eight years of compensation in the employee's last 10 years of employment for employees hired after January 1, 2011;
- Capped the salary on which a pension may be calculated at \$106,800 in 2011 (subject to certain adjustments for future inflation); and
- Suspended retirement annuities if the annuitant accepts another public sector job covered by a public retirement system.

Pension Fund Contributions

Required Contributions. The Pension Code requires funding of the Pension Fund from contributions by the Board (the employer), the State and employees. Board (and State) contributions are required (the “Statutory Required Contributions”) only if the actuarially determined value of the assets as a percentage of its actuarially determined accrued liabilities (the “Funded Ratio”) is less than 90%. The Pension Code does not require that assets of the Pension Fund at any time equal or exceed the actuarially determined accrued liabilities of the Pension Fund. On an annual basis, an actuarial valuation is performed by an independent actuary firm retained by the Pension Fund Board (each an “Actuarial Valuation”) in order to determine the amount of required contributions. The Pension Code provides for an actuarially based funding ramp intended to maintain the actuarial assets of the Pension Fund at a level equal to 90% of the actuarial liabilities of the Pension Fund beginning in the 2059 Fiscal Year.

Member Contributions. The Pension Fund’s active contributors make biweekly contributions to the Pension Fund from their salaries which contributions are currently set at 9% of covered payroll. Historically, as part of its collective bargaining agreement with the Chicago Teachers’ Union (“CTU”), the Board has paid a substantial portion of the employee contribution in an amount equal to 7% of covered payroll. This contribution arrangement for the current CTU Pension Fund members was reaffirmed upon the final approval by the Board of a new collective bargaining agreement between the Board and CTU on December 7, 2016. New CTU Pension Fund members hired after January 1, 2017 will make their entire 9% employee contribution, but will receive a 7% increase to their base salary such that their total compensation does not decrease. Between January 1, 2017 and June 30, 2017, new hires will have 3.5% added to compensation. Beginning July 1, 2017, and thereafter, their base pay increase increases to 7%.

Employer Required Annual Statutory Contributions. Prior to the enactment of P.A. 96-0889, the Pension Code required that the Board’s minimum contributions for each Fiscal Year be in an amount sufficient to bring the Funded Ratio to equal 90% by Fiscal Year 2045. P.A. 96-0889 extended the deadline to achieve the required 90% Funding Ratio by fourteen years from Fiscal Year 2045 to Fiscal Year 2059. In addition P.A. 96-0889 specified fixed Board contribution amounts for Fiscal Years 2011, 2012 and 2013 (\$187,000,000, \$192,000,000 and \$196,000,000, respectively) which are substantially lower than the amounts which would otherwise be required by the Pension Code (required contributions were decreased approximately \$400,000,000 for each of those years). This reduction in required contributions by the Board further increased the Unfunded Actuarial Liability of the Pension Fund. See Table 2 – “Actuarial Value of Assets, Actuarial Accrued Liability, Unfunded Actuarial Accrued Liability and Funded Ratio of the Pension Fund Based on Statutory Actuarial Valuations for Fiscal Years 2005-2016.”

Beginning in Fiscal Year 2014, the Board’s minimum contributions for Fiscal Years 2014 through 2059, as determined by the Pension Fund, are required to be sufficient to bring the Actuarial Funded Percentage to 90% by the end of Fiscal Year 2059, and the Board will be required to make annual contributions to maintain the 90% Funded Percentage in each Fiscal Year thereafter. See Table 4 – “Projections of Contributions, Liabilities and Assets.”

State and Board Required Payroll Contributions. The Pension Code requires that the State and Board each make an annual contribution to the Pension Fund equal to a defined percentage of total teacher payroll (0.544% of payroll for the “*State Payroll Contribution*” and 0.580% of payroll for the Board contribution for the “*Board Payroll Contribution*”). These contributions are not required in those years in which the Pension Fund Board has certified that the Pension Fund is at least 90% funded. The required contributions based on payroll for Fiscal Year 2016 were \$12,105,000 for the State and \$12,906,000 for the Board. This required payroll contribution was added to the Pension Code by Public Act 90-0582, and was intended by the General Assembly to cover part of the cost of a benefit increase resulting from that Act.

State Appropriation Contributions. The State historically made additional discretionary contributions to the Pension Fund from State appropriations in the amount of approximately \$65,000,000 per year in addition to the State's required statutory contributions. These contributions were in furtherance of provisions of the Pension Code regarding the goal and intention of the State to make annual contributions to the Pension Fund in an amount that is between 20% and 30% of the amount of the annual State contribution to the other teachers' retirement system in the State. For several previous Fiscal Years the State discretionary appropriation was either reduced or not contributed. In Fiscal Year 2016, the State made Pension Fund contributions of \$12,105,000. There were no discretionary contributions by the State in Fiscal Year 2016 to supplement the Board's required contribution. The Board does not anticipate that the State will make contributions in excess of its statutorily-required contributions in the future.

Credit for State Contributions. The Pension Code provides that "*any contribution by the State to or for the benefit of the Fund . . . shall be a credit against any contribution required to be made by the Board of Education*"

The financial health of the Pension Fund and the projected impact of the Pension Fund's underfunding on future contributions required to be made by the Board in order to mitigate such underfunding have impacted the determination of the Board's creditworthiness by municipal bond rating agencies in recent years.

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Historical Contributions. The following table provides historical contribution information and the Actuarially Required Contribution (as defined herein) for Fiscal Years 2005-2016.

Table 1

Historical Contributions
(All dollar amounts are in millions)

Fiscal Year	Employee Contributions	Employer Contributions			Actuarially Required Contribution (ARC) ⁽³⁾
		State Appropriations and Payroll Contributions ⁽¹⁾	BOE Contributions ⁽²⁾	Total Employer Contributions	
2005	\$158.6	\$65.0	\$ 9.7	\$ 74.7	\$258.9
2006	158.6	74.9	35.2	110.1	328.4
2007	148.2	75.2	92.0	167.2	370.2
2008	161.2	75.2	149.9	225.1	290.1
2009	166.8	74.8	188.2	263.1	292.1
2010	161.2	37.6	324.6	362.2	355.8
2011	167.0	10.4	168.0	178.4	425.6
2012	167.7	10.4	195.8	206.2	510.1
2013	165.9	10.9	234.5	245.4	585.5
2014	163.8	11.9	601.6	613.0	719.8
2015	168.1	62.2	634.4	696.5	728.5
2016	158.2	12.1	675.9	688.0	749.8

Sources: Chicago Public Schools Comprehensive Annual Financial Reports for Fiscal Years ended June 30, 2005-2016.

- ⁽¹⁾ As discussed above under “– *State Appropriation Contributions*,” the State historically appropriated \$65 million in non-GSA funds to the Pension Fund except that for Fiscal Year 2004 the State failed to make such appropriation and instead provided that amount to the Board for capital purposes. The figures for Fiscal Years 2006 through 2009 reflect additional payroll contributions received from the State.
- ⁽²⁾ “**BOE Contributions**” are comprised of a number of contributions that are described in Note 13 to the Chicago Public School Comprehensive Annual Financial Report for the Fiscal Year ended June 30, 2016 and are included in the “**Total Employer Contributions**” (“**Total Employer Contributions**” - “**State Appropriations**” = “**BOE Contributions**”). The numbers may differ from actuarially or statutorily required contribution amounts and have been the subject of various litigation proceedings.
- ⁽³⁾ “**Actuarially Required Contributions**” do not include the required contributions associated with the Health Insurance Program as described below under “– Other Post-Employment Benefits and Other Board Liabilities.” Also note that this concept is referred to in the Chicago Public Schools Comprehensive Annual Financial Reports as “*Annual Required Contributions*” – see footnote to section “– *Actuarial Process*” for explanation of naming convention herein.

Funded Status of Pension Fund. As of the end of its Fiscal Year 2016, the Pension Fund had liabilities of \$20,46,140,298 and assets (excluding any amounts dedicated to retiree health insurance subsidies) of: (i) \$10,610,746,831 if valued on an actuarial basis (using the “Asset Smoothing Method” (as described below), or (ii) \$10,093,067,588 if valued based on market value. This results in an aggregate Unfunded Actuarial Liability of the Pension Fund of approximately \$9.63 billion on an actuarial basis (using the Asset Smoothing Method), and \$10.15 billion on a market value basis and Funded Ratios of 52.41% on an actuarial basis (using the Asset Smoothing Method) and 49.85% on a market value basis. The Fiscal Year 2016 Actuarial Liability of \$20,246,140,298 represents a net increase of \$294.9 million

compared to the Actuarial Liability as of June 30, 2015. Additional information regarding the financial condition of the Pension Fund, including the actuarial value of assets and actuarial liability can be found in the 2016 Actuarial Valuation Report. Information in the Actuarial Valuation regarding the reconciliation of change in Unfunded Actuarial Liability shows the impact of such factors as salaries, funding status and investment returns.

The following table summarizes the Actuarial Value of Assets, Actuarial Accrued Liability, Unfunded Actuarial Accrued Liability and Funded Ratio of the Pension Fund for Fiscal Years 2005-2016 and the Annual Covered Payroll.

Table 2

Actuarial Value of Assets, Actuarial Accrued Liability, Unfunded Actuarial Accrued Liability and Funded Ratio of the Pension Fund Based on Statutory Actuarial Valuations for Fiscal Years 2005-2016

(All dollar amounts are in thousands)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded/ (Overfunded) AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
	(a)	(b)	(b) - (a)	(a) / (b)	(c)	[(b) - (a)] / (c)
06/30/2005	\$10,506,471,213**	\$13,295,876,206	\$2,789,404,993	79.02%	\$1,968,612,235	141.7%
06/30/2006	10,947,998,433**	14,035,627,452	3,087,629,019	78.00%	1,944,358,215	158.8%
06/30/2007	11,759,699,063	14,677,184,345	2,917,485,282	80.12%	1,863,182,086	156.6%
06/30/2008	12,069,417,038	15,203,740,567	3,134,323,529	79.38%	1,914,558,916	163.7%
06/30/2009	11,493,255,754	15,683,241,527	4,189,985,773	73.28%	1,996,194,224	209.9%
06/30/2010	10,917,416,993	16,319,743,665	5,402,326,672	66.90%	2,107,934,080	256.3%
06/30/2011	10,109,314,922	16,940,626,445	6,831,311,523	59.67%	2,090,131,858	326.8%
06/30/2012	9,364,076,672	17,375,660,369	8,011,583,697	53.89%	2,224,903,121	360.1%
06/30/2013	9,422,519,190	19,044,533,016	9,622,013,826	49.48%	2,239,347,051	429.7%
06/30/2014	10,045,542,575	19,503,893,632	9,458,351,057	51.51%	2,233,280,995	423.5%
06/30/2015	10,344,375,122	19,951,289,974	9,606,914,852	51.85%	2,273,551,432	422.6%
06/30/2016	10,610,746,831	20,246,140,298	9,635,393,467	52.41%	2,281,268,890	422.4%

Sources: Public School Teachers' Pension and Retirement Fund of Chicago Actuarial Valuation for its Fiscal Years ending June 30, 2005-2014, Exhibit III. Public School Teachers' Pension and Retirement Fund of Chicago Actuarial Valuation and Review, Valuation Information, Section 4, Exhibit I and Section 5, Exhibit 2 for Fiscal Years 2015-2016.

** Health Insurance Fund assets are included for Fiscal Years ending 6/30/2005 and 6/30/2006 and are excluded with the results for the Fiscal Year ending 6/30/2007 and thereafter.

Table 3

**Actuarial Value of Assets, Actuarial Accrued Liability, Unfunded Actuarial Accrued Liability and
Funded Ratio of the Pension Fund for Based on GASB No. 67 Actuarial Valuations Fiscal Years
2014-2016 ⁽¹⁾**

Actuarial Valuation Date	Fiduciary Net Position (FNP) (a)**	Total Pension Liability (b)	Net Pension Liability (NPL) (b) - (a)	GASB 67 Funded Ratio (a) / (b)	Covered Payroll (c)	NPL as a Percentage of Covered Payroll [(b) - (a)] / (c)
06/30/2014	\$10,815,694,614	\$20,316,899,952	\$9,501,205,338	53.23%	\$2,233,280,995	425.4%
06/30/2015	\$10,689,954,320	\$20,713,217,296	\$10,023,262,976	51.61%	\$2,273,551,432	440.9%
06/30/2016	\$10,093,067,588	\$21,124,697,012	\$11,031,629,424	47.78%	\$2,281,268,890	483.57%

Sources: Public School Teachers' Pension and Retirement Fund of Chicago Actuarial Valuation for its Fiscal Years ending June 30, 2005-2014, Exhibit III. Public School Teachers' Pension and Retirement Fund of Chicago Actuarial Valuation and Review, Section 5, , Exhibit 2 for Fiscal Years 2015-2016.

⁽¹⁾ Excludes Health Insurance Fund Assets.

Table 4 shown on the following page presents projected required contributions, liabilities, assets, unfunded liability and funded ratios in the Fiscal Years 2016 through 2059 for the Pension Fund prepared by the Actuaries and which reflect the impact of P.A. 96-0889.

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Table 4**Projection of Contributions, Liabilities and Assets⁽¹⁾**

(Board contributions are based on P. A. 96-0889)

(All dollar amounts are in millions. Actuarial Liability and asset figures as of end of Fiscal Year.)

Fiscal Year	Employee Contributions	Required Employer Contributions	Additional State Contribution	Additional Board Contribution	Required Board of Education Contributions ⁽²⁾	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio
2017	187.3	745.4	12.2	13	720.2	20,680.40	10,812.60	9,867.80	52.30%
2018	193.4	784.4	11.7	12.5	760.2	21,128.40	10,769.50	10,359.00	51.00%
2019	199.7	809.8	12.1	12.9	784.9	21,593.20	10,808.30	10,784.90	50.10%
2020	206	835.5	12.5	13.3	809.8	22,075.90	11,047.30	11,028.60	50.00%
2021	212.5	861.8	12.8	13.7	835.2	22,577.20	11,317.10	11,260.10	50.10%
2022	219.1	888.6	13.2	14.1	861.2	23,098.60	11,620.70	11,477.90	50.30%
2023	225.8	915.8	13.7	14.6	887.6	23,641.40	11,956.20	11,685.20	50.60%
2024	232.6	943.4	14.1	15	914.3	24,206.50	12,321.80	11,884.70	50.90%
2025	239.4	970.9	14.5	15.4	941	24,793.80	12,718.20	12,075.60	51.30%
2026	246.1	997.8	14.9	15.9	967.1	25,403.50	13,145.60	12,257.90	51.70%
2027	252.5	1,023.90	15.3	16.3	992.4	26,033.40	13,602.40	12,431.00	52.20%
2028	258.5	1,048.40	15.6	16.7	1,016.10	26,683.60	14,087.90	12,595.70	52.80%
2029	264.3	1,071.60	16	17	1,038.60	27,352.00	14,600.40	12,751.60	53.40%
2030	269.7	1,093.90	16.3	17.4	1,060.20	28,037.00	15,138.80	12,898.20	54.00%
2031	275	1,115.30	16.6	17.7	1,081.00	28,736.40	15,701.70	13,034.70	54.60%
2032	280.2	1,136.30	16.9	18.1	1,101.30	29,449.30	16,289.20	13,160.10	55.30%
2033	285.4	1,157.30	17.2	18.4	1,121.60	30,172.70	16,900.30	13,272.40	56.00%
2034	290.4	1,177.70	17.6	18.7	1,141.40	30,904.80	17,534.40	13,370.20	56.70%
2035	295.3	1,197.50	17.8	19	1,160.60	31,642.10	18,190.50	13,451.60	57.50%
2036	300	1,216.40	18.1	19.3	1,178.90	32,379.50	18,864.60	13,515.00	58.30%
2037	304.4	1,234.40	18.4	19.6	1,196.40	33,122.50	19,564.00	13,588.60	59.10%
2038	308.7	1,251.70	18.7	19.9	1,213.30	33,855.60	20,275.80	13,579.80	59.90%
2039	312.7	1,268.10	18.9	20.2	1,229.10	34,571.90	20,995.30	13,576.70	60.70%
2040	316.5	1,283.60	19.1	20.4	1,244.00	35,265.70	21,718.20	13,547.40	61.60%
2041	320.1	1,298.20	19.4	20.6	1,258.20	35,930.70	22,440.70	13,490.00	62.50%
2042	232.6	1,312.30	19.6	20.9	1,271.90	36,559.00	23,157.50	13,401.50	63.30%
2043	326.8	1,325.30	19.8	21.1	1,284.50	37,144.70	23,864.70	13,280.00	64.20%
2044	329.9	1,337.90	19.9	21.3	1,296.70	37,686.90	24,562.60	13,124.30	65.20%
2045	333.2	1,351.30	20.1	21.5	1,309.60	38,181.70	25,250.60	12,931.10	66.10%
2046	336.6	1,365.00	20.3	21.7	1,323.00	38,632.40	25,933.00	12,699.30	67.10%
2047	340.6	1,381.10	20.6	21.9	1,338.50	39,042.90	26,616.80	12,426.10	68.20%
2048	345.1	1,399.40	20.9	22.2	1,356.30	39,417.00	27,310.10	12,106.90	69.30%
2049	350	1,419.40	21.2	22.6	1,375.70	39,759.90	28,021.00	11,738.90	70.50%
2050	355.5	1,441.70	21.5	22.9	1,397.30	40,076.20	28,758.70	11,317.50	71.80%
2051	361.5	1,465.90	21.9	23.3	1,420.80	40,367.00	29,529.30	10,837.70	73.20%
2052	367.9	1,491.70	22.2	23.7	1,445.80	406,337.00	30,342.30	10,294.70	74.70%
2053	374.6	1,519.10	22.6	24.1	1,472.40	40,879.70	31,198.40	9,681.30	76.30%
2054	381.6	1,546.70	23.1	24.6	1,499.10	41,095.40	32,102.40	8,993.00	78.10%
2055	388.6	1,575.80	23.5	25	1,527.30	41,286.30	33,062.80	8,223.50	80.10%
2056	396.1	1,606.40	23.9	25.5	1,556.90	41,452.90	34,086.70	7,366.20	82.20%
2057	404.1	1,638.70	24.4	26	1,558.20	41,603.50	35,189.90	6,413.60	84.60%
2058	412.4	1,672.50	24.9	26.6	1,621.00	41,740.20	36,383.70	5,356.50	87.20%
2059	420.8	1,706.50	25.4	27.1	1,653.90	41,870.40	37,683.30	4,187.00	90.00%

Source: Public School Teachers' Pension and Retirement Fund of Chicago Actuarial Valuation and Review as of June 30, 2016, Valuation Information, Section 4, Exhibit III.

⁽¹⁾ Total Actuarial Liability, Actuarial Value of Assets and Unfunded Actuarial Liability reflect the combined actuarial valuation of the pension and retiree health insurance benefits performed by the Actuaries. The projected amounts shown above assume that all of the actuarial assumptions from the June 30, 2016 actuarial valuation, including the 7.75% assumed rate of investment return, are exactly realized each year.

⁽²⁾ Any discretionary contributions by the State of Illinois (other than the Additional State Contribution shown above) are to be credited against the required Board Payroll Contributions.

The projections in Table 4 rely on information produced by the Pension Fund's Actuaries (based on the actuarial assumptions employed by the Pension Fund) and were not prepared with a view toward complying with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information. This information is not fact and should not be relied upon as being necessarily indicative of future results (including results of Fiscal Year 2016), and readers are cautioned not to place undue reliance on the prospective financial information. Neither the Board nor the Board's independent auditors, have compiled, examined, or performed any procedures with respect to the prospective financial information herein, nor have they expressed any opinion or any other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information.

Investment Authority, Performance and Valuation of Assets. Investment authority for the Pension Fund is found in the Illinois Compiled Statutes, Chapter 40, Act 5, Articles 1 and 17. A discussion of the specific investment authority, policy provisions, diversification posture, performance objective and asset allocation is available in the Pension Fund 2016 CAFR. The Pension Fund maintains a highly diversified portfolio of investments among U.S. stocks, real estate, fixed income, private equity, and international investments.

Investment Return. The 2016 Actuarial Valuation Report assumes an investment rate of return on the assets in the Pension Fund. For valuation purposes, the assumed rate of return on the actuarial value of the assets for the year ending June 30, 2016 was 7.75%. This rate of return was the same as that used for the Fiscal Year ending June 30, 2015 and June 30, 2014 but was a decrease versus the ten Fiscal Years prior to the Fiscal Year ending June 30, 2014 where the Pension Fund assumed an investment rate of return of 8.0%. Due to the volatility of the market, however, the actual rate of return earned by the Pension Fund on its assets may be higher or lower than the assumed rate. The actual rate of return on an actuarial basis for the year ending June 30, 2016, was 8.6%. Since the actual return on an actuarial basis was greater than the assumed return, the Pension Fund experienced an actuarial gain with regard to its investments during the year ended June 30, 2016. The following table summarizes the actuarial and market investment returns on the assets in the Pension Fund for its Fiscal Years 2006-2016.

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Table 5**Investment Return**

<u>Fiscal Year</u>	<u>Market Value</u>	<u>Actuarial Value</u>
2006	10.7%	9.6%
2007	17.7%	13.3%
2008	-5.3%	7.9%
2009	-22.4%	0.2%
2010	13.6%	-0.4%
2011	24.8%	-0.5%
2012	-0.4%	1.0%
2013	13.1%	11.2%
2014	17.9%	12.7%
2015	3.6%	8.2%
2016	-0.3%	8.6%
Average Returns		
Last 10 years:	5.3%	6.1%

Sources: Public School Teachers' Pension and Retirement Fund of Chicago Actuarial Valuation and Review as of June 30, 2016

Asset Smoothing. See “– Actuarial Methods – Actuarial Value of Assets” below for a discussion of the impact of Asset Smoothing on the valuation of investment returns.

Risks and Uncertainties. The Pension Fund invests in various investment securities that are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the Pension Fund's assets and impact required contributions.

The Actuarial Valuation

General. In addition to the process outlined herein, the Pension Code requires that the Pension Fund annually submit to the Board a report containing a detailed statement of the affairs of the Pension Fund, its income and expenditures, and assets and liabilities, which consists of the Actuarial Valuation. The Actuarial Valuation measures the funded status of the plan and establishes the statutorily required contribution amount. To calculate these amounts, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. Overall experience that is more favorable than anticipated (an actuarial gain), will have a decreasing effect on the contribution requirement. On the other hand, overall experience that is less favorable than expected (an actuarial loss) will have an increasing effect. A description of the statistics generated by the Pension Fund actuaries in the Actuarial Valuations follows in the next few paragraphs. The Governmental Accounting Standards Board (“GASB”), which is part of a private non-profit entity known as the Financial Accounting Foundation, promulgates standards regarding accounting and financial reporting for governmental entities. These GASB principles impact financial reporting by the Pension Fund and the employer but have no legal effect and do not impose any legal liability on the Board. Moreover, these GASB principles have no effect on the Pension Fund's statutorily required contribution

amount. The references to GASB principles in this section do not suggest any legal effect or legal liability and should not be construed to suggest otherwise.

Actuarial Process. Under the Pension Code, the required employer contributions to fund the Pension Fund are determined by independent actuaries on an annual basis within nine months of the end of the Pension Fund's Fiscal Year. To meet the requirements of the Pension Code, the actuaries use demographic and other data (such as employee age, salary and service credits) and various assumptions (such as assumed investment return, estimated salary increases, interest rates, employee turnover, mortality and disability rates) to determine the amount that must be contributed in a given year. Because actuarial calculations reflect a long-term perspective, actuarially determined amounts are subject to continual revision, as results are compared to past expectations and new estimates are made about the future. On an annual basis, the Pension Fund's actuary then produces a report called the "Actuarial Valuation," in which the actuary reports on the Pension Fund's assets, liabilities and the Required Annual Statutory Contribution for the following Fiscal Year.

Actuarial Methods

Pension Fund actuaries can employ a variety of actuarial methods to arrive at the Actuarial Value of Assets and the Actuarial Accrued Liability.

Actuarial Value of Assets. The Pension Fund calculates the respective Actuarial Value of Assets by smoothing investment gains and losses over a period of four years, a method of valuation referred to as the "Asset Smoothing Method." Under the Asset Smoothing Method, the Retirement Funds recognize in the current year 25% of the investment gain or loss realized in that year and each of the previous three years. "Asset Smoothing" is an allowable method of determining the actuarial contribution and expense levels according to GASB; however, note that GASB No. 67 reporting now uses the market value of plan assets in order to calculate the NPL. As a result of the use of the Asset Smoothing Method, only a portion of investment gains or losses will be recognized in the year when realized. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next. The smoothing of unexpected gains and losses occurs over a period of 4 years. The gain or loss for a year is calculated as the total investment income on the market value of assets, minus expected investment return on the prior actuarial value of assets. The final actuarial value is equal to the expected actuarial value plus (or minus) 25% of the calculated gain (or loss) in the prior 4 years. "Asset Smoothing" lessens the immediate impact of market fluctuations on the Actuarial Value of Assets, which is used to calculate the Unfunded Actuarial Accrued Liability ("UAAL") and the Funded Ratio that may otherwise occur as a result of market volatility. However, "Asset Smoothing" delays recognition of gains and losses, thereby providing an Actuarial Value of Assets that does not reflect the true market value of pension plan assets at the time of the measurement. As a result, presenting the Actuarial Value of Assets as determined under the Asset Smoothing Method might provide a more or less favorable presentation of the current financial position of a pension plan than would a method that recognizes investment gains and losses annually (e.g., GASB No. 67 for reporting of the NPL).

Actuarial Assumptions

Use of Estimates and Assumptions. The Actuarial Valuations of the Pension Fund use a variety of estimates and assumptions to calculate the Actuarial Liability and the Actuarial Value of Assets. No assurance can be given that any of the assumptions underlying the Actuarial Valuations will reflect the actual results experienced by the Pension Fund. Actual results almost always differ from those estimates and assumptions. Variances between the assumptions and actual results may cause an increase or decrease in the Actuarial Value of Assets, the Actuarial Liability, the Unfunded Actuarial Liability, the Funded Ratio

or the actuarially calculated contributions and expense levels. Certain of these assumptions include the assumed rate of return on investments, mortality rates, termination rates, disability rates, retirement rates, salary progression, other interest rates used in the valuation, marital status, spouse's age and total service credit at retirement. The 2016 Actuarial Valuation Report, a copy of which may be viewed as described in "– Introduction" above, contains additional information on these assumptions.

The Pension Code requires the Pension Fund to conduct an actuarial experience review every five years. The purpose of the experience review is to determine the adequacy of the actuarial assumptions regarding mortality, retirement, disability, employment, turnover, interest and earnable compensation of the members and beneficiaries of the Pension Fund. Based upon the results of this review, the Pension Fund may change the actuarial assumptions as it deems appropriate.

Actuarial Valuation. The primary purpose of the Actuarial Valuation is to determine the amount the Board must contribute to the Pension Fund in a given Fiscal Year as provided in the Pension Code (the "Required Annual Statutory Contribution"). To determine the Required Annual Statutory Contribution, the actuary calculates both the "Actuarial Liability" and the "Actuarial Value of Assets." The Actuarial Liability is an estimate of the portion of the present value of the benefits that is attributable to the past service of the current employees and the retired members, which the Pension Fund is obligated to pay over time as those benefits become due. The Actuarial Liability is calculated by use of the Projected Unit Credit cost method and a variety of demographic assumptions (such as estimated salary increases, interest rates, employee turnover, mortality and disability rates). See Table 4, "Projection of Contributions, Liabilities and Assets" herein.

Any shortfall between the Actuarial Value of Assets and the Actuarial Liability is referred to as the "Unfunded Actuarial Liability" and represents the excess of the portion of the present value of benefits that is attributed to past service over the actuarial value of plan assets. In addition, the actuary will compute the "Funded Ratio," which is the result obtained by dividing the Actuarial Value of Assets by the Actuarial Liability and is expressed as a percentage. An increasing Unfunded Actuarial Liability and a decreasing Funded Ratio from year to year signals a deterioration in the financial health of a pension plan because it indicates the incurrence of additional liability without a corresponding increase in assets necessary to pay those additional liabilities. Conversely, a decreasing Unfunded Actuarial Liability and an increasing Funded Ratio indicates an improvement in the financial health of a pension plan because such change reflects a closing gap between the liabilities accrued by the pension plan and the assets necessary to pay those liabilities when they become due.

The Actuaries use the Actuarial Liability, the Actuarial Value of Assets and the Unfunded Actuarial Liability to compute the Required Annual Statutory Contribution for the Pension Fund in accordance with the Pension Code. See "– State and Board Required Payroll Contributions" herein.

GASB Statements 67, 68 and 71

On June 25, 2012, GASB approved two new standards for employee pension accounting and financial reporting by state and local governments. The two new GASB statements, Nos. 67 and 68 ("GASB 67" and "GASB 68" and collectively, the "Statements"), replace some of the requirements of previous GASB statements (Nos. 25, 27, and 50) related to pension plans. Some of the key changes imposed by the Statements include: (1) requiring governments for the first time to recognize a Net Pension Liability ("NPL"), which is the difference between the Total Pension Liability ("TPL"; i.e., the portion of the present value of projected benefit payments to employees that is attributed to their past service under the level percentage of payroll Entry Age Normal cost method and the blended discount rate as described in GASB 67 and 68) and pension assets (mostly investments reported at fair market value) as a liability of the employer; (2) immediate recognition of annual service cost (net of employee contributions), interest on the

Total Pension Liability, expected return on assets (a negative component of expense), and immediate recognition of the effect on net pension liability of changes in benefit terms, and amortization of gains and losses (including changes in assumptions); (3) the effects on net pension liability of differences between expected and actual investment returns will be recognized in pension expense over a closed 5-year period (previously 15-30-year period); (4) with respect to benefits not covered by projected plan assets, the use of a discount rate based on a yield or index rate on tax-exempt 20-year, AA-or-higher rated municipal bonds rather than the expected rate of return on plan investments; and (5) revising the presentation of pension liabilities in a government's financial statements. The use of the Statements will have an impact on the Unfunded Actuarial Liability. However, because the Board contributes to the Pension Fund pursuant to methods established by the Pension Code, the Statements would not impact the contributions made by the Board without legislative action. GASB 67 went into effect for Fiscal Year 2014 and GASB 68 became effective for Fiscal Year 2015.

GASB 68, Accounting and Financial Reporting for Pensions, was effective for the Board beginning with its Fiscal Year ending June 30, 2015. The objective of this Statement is to improve accounting and financial reporting by state and local governments for pensions. It also improves information provided by state and local governmental employers about financial support for pensions that is provided by other entities. This Statement replaces the requirements of Statement No. 27, Accounting for Pensions by State and Local Governmental Employers, as well as the requirements of Statement No. 50, Pension Disclosures, as they relate to pensions that are provided through pension plans administered as trusts or equivalent arrangements that meet certain criteria. The implementation of this standard will result in an unfunded pension liability to be recognized on the Statement of Net Position.

GASB 71, Pension Transition for Contributions Made Subsequent to the Measurement Date, was effective for the Board with Fiscal Year 2015. The objective of this Statement is to address an issue regarding application of the transition provisions of Statement No. 68, Accounting and Financial Reporting for Pensions. The issue relates to amounts associated with contributions, if any, made by a state or local government employer or nonemployer contributing entity to a defined benefit pension plan after the measurement date of the government's beginning net pension liability. The requirements of this Statement will eliminate the source of a potential significant understatement of restated beginning net position and expense in the first year of implementation of Statement No. 68 in the accrual-basis financial statements of employers and nonemployer contributing entities.

Actuaries, the Actuarial Process and GASB. GASB standards are completely independent from the Pension Code's requirements. GASB No. 67, which became effective for plan reporting for the Fiscal Year ending June 30, 2014 and is discussed in more detail below, relates to the reporting of an NPL and an Actuarially Determined Contribution ("ADC"). The NPL reported is equal to the difference between the TPL, as calculated using the level percentage of payroll Entry Age Normal Cost actuarial cost method and the blended discount rate as described in GASB 67, and the Plan's Fiduciary Net Position ("FNP", i.e., the market value of plan assets). The amount of the GASB No. 67 ADC reported is the employer's Normal Cost plus a 30-year fixed-period amortization payment on the UAAL beginning July 1, 2013 as a level percentage of payroll. Starting in Fiscal Years that begin after June 15, 2014, GASB Statement No. 68 changes the way that an employer's accounting expense is determined for a pension plan. Under the new method, the annual expense reported is determined on an actuarial basis (using the level percentage of payroll Entry Age Normal actuarial cost method and the blended discount rate as described in GASB 68) and by amortizing any unfunded liability over a period no longer than the average remaining service period of covered employees (actives and inactive employees combined).

Board's Contributions Not Related to GASB Standards. The Board's contribution to the Pension Fund is not based on the standards promulgated by GASB for reporting purposes. Instead, the Board's contribution is based on the requirements of the Pension Code. While both the GASB and the Pension

Code calculations are determined utilizing actuarial techniques, there are many differences between these two calculations. Thus, the contribution amount required by the Pension Code is different than the GASB No. 67 ADC or the GASB No. 68 accounting expense amount. One primary difference is that the goal of the Pension Code's statutorily-required contribution amounts is to reach a Funded Percentage in the Pension Fund of 90% by 2059 via contribution amounts that remain a level percentage of salary over a 43-year period from FY 2017 to FY 2059; whereas, GASB's financial reporting standards require the calculation of an ADC or annual expense amount that amortizes the plan's entire UAAL over a shorter time period (i.e., over a 30-year fixed-period beginning July 1, 2016) and which is designed to recognize 100% of the total plan liability, rather than just 90% of the total plan liability.

Overlapping Taxing Bodies

The Board's tax base overlaps with numerous other units of government, including the Overlapping Taxing Districts and the State of Illinois. Certain of the Overlapping Taxing Districts and the State maintain their own defined benefit pension plans (collectively, all such other plans are referred to herein as the "Other Retirement Funds"), many of which are also significantly underfunded. The underfunding of these Other Retirement Funds places a substantial additional potential burden on the City's taxpayers, who bear the burden of funding a portion of the contributions to such plans. Additional information regarding each of the Overlapping Taxing Districts and the State (including with respect to their pension plans) may be obtained on their respective websites. None of the information on such websites is incorporated by reference into this Disclosure and the Board takes no responsibility for the information contained therein nor has the Board attempted to verify the accuracy of such information.

Recent Reports Regarding the Pension Fund

For more information on the Pension Fund and the retirement funds of the overlapping taxing bodies, please refer to the State's Commission on Government Forecasting and Accountability ("COGFA") website. None of the information on such website is incorporated by reference into this Disclosure and neither the Board nor the Underwriters take responsibility for the information contained therein nor have they attempted to verify the accuracy of such information.

The COGFA is a bipartisan, joint legislative commission intended to provide the State General Assembly with information relevant to the State's economy, taxes, and other sources of revenue and debt obligations of the State. Among COGFA's list of specific responsibilities is to make an annual estimate of public pension funding requirements and to prepare pension impact notes. Furthermore, COGFA has a mandate to report to the General Assembly on economic trends in relation to long-range planning and budgeting and to study and make such recommendations as it deems appropriate on local and regional economic and fiscal policies and on federal fiscal policy as the same may affect the State. As a result of these responsibilities, COGFA issues several reports on an annual basis which provide an overview of the financial condition of various Illinois pension funds, including the Pension Fund. The COGFA reports provide significant information on the funded status, historical and projected information with respect to pensions and a history of pension legislation. COGFA does not make findings in the COGFA Report.

Pensions for Other Board Personnel

Overview. Employees of the School District that are not members of the Pension Fund participate in the Annuity Fund which is considered a cost-sharing defined benefit, multiple employer plan. Except as described below in the section captioned "*Members and Member Contributions*," the Board makes no direct contributions to the Annuity Fund. The Annuity Fund receives its income from three primary sources: a City tax levy; income from investments; and deductions from participating employees' salaries.

The Annuity Fund is administered under the direction of a five-member retirement board (the “Retirement Board”) comprised of three elected members and the City Treasurer and the City Comptroller serving ex-officio. The Retirement Board sets investment policies and objectives, hires investment managers and investment consultants, reviews investment performance and makes the final decision in granting or denying rights, credits and benefits to members.

The Annuity Fund is a public employee retirement system established by the State of Illinois to provide annuity, disability, survivor, death, and health benefits for certain employees of the City and the Board. It is administered in accordance with the Pension Code and has a Fiscal Year ending December 31.

Legal Authority and Funding. Article 8 of the Pension Code governs the retirement, survivor and disability benefits provided by the Annuity Fund and establishes the statutorily required contributions from participating employers and employees. Current active members (totaling 30,296 active members as of December 31, 2016) contribute 8.5% of their salary. The Pension Code requires that the City of Chicago contribute 1.25 times the amount the member contributed two years prior (the “Annuity Fund Statutory Required Contributions”). The City is required to levy a tax at a rate not more than an amount equal to the total amount of contributions by the employees to the Annuity Fund made in the calendar year two years prior to the year for which the annual applicable tax is levied, multiplied by 1.25 annually. The Pension Code does not require that the Annuity Fund Statutory Required Contributions be sufficient to cover the actuarially determined contribution requirement (the “Annual Required Contribution”). For the past ten years the Annuity Fund Statutory Required Contribution has been less than the Annual Required Contribution and does not conform to the requirements of GASB 25.

Members and Member Contributions. As of December 31, 2016, the Annuity Fund had 72,408 total members including 25,236 retirees and beneficiaries, 16,876 inactive members entitled to benefits and 30,296 active members (of which 15,741 were vested and 14,555 were non-vested). As of December 31, 2015, the most recently available information, CPS employees comprised about 56% of the Annuity Fund’s active participants. In Fiscal Year 2015, the Board agreed to pay (as it has done in recent years) 7% of current members salary to offset the required employees’ contribution (8.5%) to the Annuity Fund. The Board received a portion of the cost of providing pension benefits from grants by the Federal government for career service employees paid from certain Federally-funded programs. In the opinion of the Board and its legal counsel, the Board has no statutory duty to contribute any sum to the Annuity Fund. In August 2015, the Board announced a scheduled end to contributions made by CPS directly on behalf of non-union employees. Over the three years ending in Fiscal Year 2019 (calendar year ending June 30, 2019), the biweekly contributions made by CPS will be phased out and replaced by offsetting increases in the biweekly contributions made directly by the employees. The CPS non-union employees who participate in either the Annuity Fund or the Pension Fund are subject to this change.

Funded Status of Annuity Fund. As of the end of its Fiscal Year 2016, the Annuity Fund had actuarial accrued liabilities of \$15,055,348,696, compared to \$14,655,261,717 as of the end of Fiscal Year 2015, and assets of: (i) \$4,590,366,241, compared to \$4,815,126,844 as of the end of Fiscal Year 2015, if valued on an actuarial basis (using the Asset Smoothing Method as required by the Pension Code, or (ii) \$4,436,227,596, compared to \$4,741,427,557 as of the end of Fiscal Year 2015, if valued based on market value. This results in an aggregate Unfunded Actuarial Liability of the Annuity Fund of approximately \$10,464,982,455, compared to \$9,840,134,873 as of the end of Fiscal Year 2015, on an actuarial basis (using the Asset Smoothing Method), and \$10,619,121,100, compared to \$9,913,834,160 as of the end of Fiscal Year 2015, on a market value basis; and Funded Percentages of 30.49% compared to 32.86% as of the end of Fiscal Year 2015, on an actuarial basis (using the Asset Smoothing Method) and 29.47% compared to 32.35% as of the end of Fiscal Year 2015, on a market value basis. The Actuaries project that, under current law and without additional funding, the Annuity Fund will not have assets on hand to make payments to beneficiaries beginning in 2025. As of the date of this Disclosure, the Actuaries have not

reassessed the funding status of the Annuity Fund in light of the provisions of SB 14 (see, “– Legislation and Litigation Relevant to the Retirement Funds” below).

Other Post-Employment Benefits and Other Board Liabilities

Retiree Health Insurance Program. Healthcare benefits for certified teachers and administrators are provided under a cost sharing multiple-employer plan administered by the Pension Fund (the “Health Insurance Program”). The actuarial analysis is contained Pension Fund 2016 CAFR and is available by contacting the Public School Teachers’ Pension & Retirement Fund of Chicago, 203 North LaSalle Street, Chicago, Illinois, 60601 or as described under “– Introduction” herein. A recipient of a retirement pension, survivor pension, or disability pension may be eligible to participate in the Health Insurance Program and premium rebate sponsored by the Pension Fund, provided the Pension Fund is the recipient’s final pension system prior to retirement. The purpose of this program is to help defray the retired member’s premium cost for health insurance. The member is responsible for paying the cost of the insurance and may purchase insurance from the Pension Fund’s providers or other outside providers.

Each year, the Board of Trustees of the Pension Fund establishes a rebate percentage that is used to defray a portion of the cost of the insurance. The rebate percentage was 60% of the individual member’s cost for calendar years 2012, 2013 and 2014; in 2015, the premium subsidy was lowered to 50%. Effective January 1, 2015, a premium subsidy of 50% has been used. In accordance with Illinois Compiled Statutes (ILCS) Article 40 Chapter 5 Article 17 Section 142.1, the total health insurance benefits provided in any one year may not exceed \$65.0 million plus any previous year amounts authorized but not yet expended. This spending limit has changed several times within the last twenty years and is subject to further change if new legislation is passed. The statutory threshold, however, does not fall under the definition of a funding cap as set forth in GASB Statement No. 45, *Accounting and Financial Reporting of Employers for Postemployment Benefits Other than Pension*.

The Pension Fund has total discretion over the program, and no direct contributions are made for the subsidy. Although the Board does not contribute directly to retirees’ health care premiums, the impact of the annual retiree healthcare payments from the Pension Fund does require increased contributions by the Board to build assets to the 90% funded percentage requirement. As of June 30, 2016, there were 18,063 retirees and beneficiaries in the Chicago Teachers’ Pension Fund Retiree Health Insurance Program. This provision reduces the net position of the Pension Fund. The Board contributes to the Pension Fund on a level percentage of pay basis to the extent the Funded Ratio of the Pension Fund is less than 90%. Amounts diverted from the Pension Fund to the Health Insurance Program reduce the Funded Ratio of the Pension Fund and require subsequently increased contributions by the Board to build assets to the 90% funded percentage requirement for the Pension Fund.

Pursuant to the 2016 Health Insurance Plan Actuarial Valuation Report, as of June 30, 2016 (a) the total actuarial liability for the Health Insurance Program has been estimated to be \$2,222,546,319, (b) the actuarial value of assets is \$20,229,722, (c) the unfunded actuarial liability is \$2,202,316,597, (d) the funded ratio is 0.91% and (e) the annual required contribution was \$135,505,273. This estimate represents the amount of healthcare benefits under the Health Insurance Program, without any assumption as to a limit on the amount the Pension Fund may divert to the Health Insurance Program.

Sick Pay Benefits. In addition to the Pension and Health Insurance benefits noted above, as of June 30, 2016, the Board had \$311,378,000 in accrued sick pay benefits. The Board provides sick pay benefits for substantially all of its employees. Additional information regarding sick pay benefits is included within Note 12 of the Chicago Public Schools Comprehensive Annual Financial Reports for Fiscal Years ended June 30, 2016.

Legislation and Litigation Relevant to the Retirement Funds

From time to time, legislation has been introduced in the State General Assembly that would reform the Retirement Funds and the formulae for State funding of school districts generally. Certain of such proposed legislation in the past has addressed changes to the Board's statutorily-required contribution formula, required State pension contributions, employee contributions and benefits (including cost of living adjustments and retirement ages). In addition, proposed legislation has addressed general State funding of schools which would incidentally impact the funds available to the Retirement Funds. The Board cannot predict if the State General Assembly will adopt and the Governor will sign any such legislation or the final form of any such legislation. In addition, the Board cannot predict if any such legislation if enacted, including particularly pension reform legislation, would withstand any legal challenges. Following is a discussion of recent legislation and certain pending legislation as of the date of the Disclosure.

Senate Bill 2822. The Board's Fiscal Year 2017 Budget assumed that new State funding of a portion of the Board's required contribution to the Pension Fund for Fiscal Year 2017 in the amount of \$215.2 million would be provided by the State for Fiscal Year 2017. Senate Bill 2822 providing for such funding was forwarded to Governor Rauner for signature on November 7, 2016 and was vetoed by the Governor on December 1, 2016. Pursuant to provisions of the Illinois Constitution, the bill was returned to the Senate following the Governor's veto, and the Senate voted to override the Governor's veto. The House, however, failed to override the Governor's veto. The Board has subsequently taken action to obtain the funds necessary to replace the funds that would have been available under Senate Bill 2822 so that the pension contribution for Fiscal Year 2017 may be made.

Public Act 099-0521. In 2016, the State General Assembly adopted and Governor Rauner signed, Public Act 099-0521 that authorized the Board to annually levy a property tax on all real property within the boundaries of the School District at a rate not to exceed 0.383%. The proceeds from this additional tax are expected to be approximately \$250 million in Fiscal Year 2017 and will be paid directly to the Pension Fund to be credited to the Board's annual required contribution. The pension property tax levy is not subject to the limitations of PTELL and does not impact State Aid Revenues received by the Board. Public Act 099-0521 became effective June 1, 2017 and the Board has authorized the levy of this additional tax for tax year 2016 and expects that the full 2016 pension property tax levy will be collected in an approximate amount of \$250 million with the second property tax installment payment expected to be due August 1, 2017. The Board's Fiscal Year 2017 budget reflects that this \$250 million in revenue will be credited to its required Statutory Contribution to the Pension Fund due on June 30, 2017; however, agreement on this credit has not been finalized with the Pension Fund and the Board cannot predict whether the Pension Fund will apply the credit to the June 2017 required Statutory Contribution. The Pension Fund has threatened to file suit against the Board if the Board credits the second installment of pension property tax levy revenues against its Statutory Contribution due June 30, 2017. The Board believes such credit is permitted by Public Act 099-0521. The Board cannot predict if such litigation will be filed, the remedy that will be sought, or the eventual outcome of any such litigation and the Board intends to vigorously defend any such litigation.

Senate Bill 14. Senate Bill 14 ("SB 14") has been introduced in the current session of the Illinois General Assembly. It has passed the Senate and the House, but has not yet been sent to Governor for his signature. SB 14 makes changes to the funding requirements of the Annuity Fund and impacts the amounts of cost of living adjustments, retirement ages and employee contributions in order to address the Annuity Fund's underfunding. The Board can make no predictions as to if or when SB 14 may be sent to the Governor for his signature, if or when the Governor may sign SB 14 if it is sent to him by the General Assembly or whether there may be any future legal challenges to the legislation or what the outcome of such challenges may be if SB 14 becomes law.

As of the date of this Disclosure, there is no litigation relevant to the Board's statutorily-required contribution formula, required State pension contributions, employee contributions or benefits (including cost of living adjustments and retirement ages) related to the Retirement Funds.