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May 16, 2017

The Retirement Board of the
Municipal Employees' Annuity and Benefit Fund of Chicago
321 North Clark Street, Suite 700
Chicago, Illinois 60654-4767

Dear Board Members:

We are pleased to submit this annual Actuarial Valuation and Review as of December 31, 2016. It summarizes the actuarial data used in the valuation, establishes the net pension liability under Governmental Accounting Standards Board (GASB) Statement No. 67 as of December 31, 2016, the pension expense for the fiscal year ending December 31, 2016, under GASB Statement No. 68, the actuarially determined contribution for the year ending December 31, 2017, the net OPEB obligation as of December 31, 2016, under GASB Statements No. 43 and 45, and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Municipal Employees' Annuity and Benefit Fund of Chicago (MEABF). The census information and financial information on which our calculations were based was prepared by the Fund staff. That assistance is gratefully acknowledged. We have not subjected the census data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data.

The actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the Fund's actuary. The assumptions and methods used for the December 31, 2016, actuarial valuation were based on an experience analysis covering the five-year period ending December 31, 2009, and were adopted by the Board, effective for the December 31, 2010 valuation. These actuarial assumptions and methods comply with the parameters set by the Actuarial Standards of Practice and the parameters for disclosure of GASB 43, 45, 67, and 68. Further, in our opinion, the assumptions as approved by the Board appear to be reasonably related to the experience of the Fund. The investment return assumption is based on the Fund being invested according to the target asset allocation in the Investment Policy Statement. To the extent that the liquidation of assets to pay benefit payments and expenses requires a shift in investment allocation to more liquid, lower return asset classes, a lower discount rate may be required in the future.

MEABF is funded by employer and member contributions in accordance with the funding policy specified under the Illinois Pension Code (40 ILCS 5/8). Employer contributions are equal to employee contributions from two years prior times 1.25, the contribution multiple. **The funding method mandated by the Illinois Pension Code is insufficient to avoid insolvency, and without a change, the Fund is in imminent danger of insolvency and the assets are projected to be depleted within the**

next 9 years (during 2025). The Fund’s assets are projected to be less than accumulated member contributions within the next 6 years (during 2022). At a minimum, the funding method should provide the Fund with sufficient assets to be able to pay all future benefit payments. However, we strongly recommend an actuarial funding method that targets 100% funding where payments at least cover interest on the unfunded actuarial liability and a portion of the principal balance. The actuarially determined contribution multiple (the basis of which is found in the “Development of Employer Costs”) for 2017 is 7.68. In other words, the recommended contribution for 2017 is 7.68 times the employee contributions from two years prior, rather than 1.25. **When the Fund becomes insolvent, the employer will be required to make contributions on a “pay as you go” basis, which means the employer would have to pay all benefits as they become due.**

For purposes of determining the insolvency date, we have assumed that all available assets, including accumulated contributions made by existing active members, will be used to pay benefits until insolvency; at that point, requests for refund of contributions from terminating active members will be treated as benefit payments that must be funded by employer contributions. However, the legality of this situation is questionable, and if it is determined that the reserve for accumulated active member contributions cannot be paid to existing annuitants, the Fund would become insolvent earlier than 2025.

As the insolvency date approaches, invested assets will likely be rebalanced into more liquid, lower return assets in order pay the benefits that are due. To the extent that actual returns are less than the 7.50% assumption as a result of this rebalancing, the Fund would become insolvent earlier than 2025.

This report includes the following schedules for the actuarial section of the Comprehensive Annual Financial Report:

- Active Member Valuation Data
- Retirees and Beneficiaries Added to and Removed from Rolls
- Solvency Test
- Analysis of Financial Experience

This report includes the following schedules for the financial section of the Comprehensive Annual Financial Report:

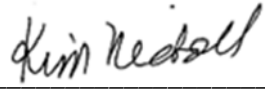
- Schedule of Funding Progress
- Schedule of Employer Contributions

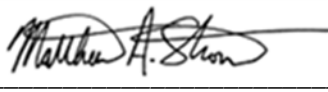
The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

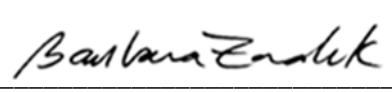
The actuarial calculations were directed under our supervision. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By: 
Kim M. Nicholl, FSA, MAAA, EA, FCA
Senior Vice President and Actuary


Matthew A. Strom, FSA, MAAA, EA
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SECTION 1: Valuation Summary for the Municipal Employees' Annuity and Benefit Fund of Chicago

Summary of Key Valuation Results

	2016	2015	
Funding ratios as of December 31:			
Actuarial accrued liability*	\$15,055,348,696	\$14,655,261,717	
Market value of assets	4,436,227,596	4,741,427,557	
Unfunded actuarial accrued liability on a market value basis	10,619,121,100	9,913,834,160	
Funded ratio on a market value basis	29.47%	32.35%	
Actuarial value of assets	\$4,590,366,241	\$4,815,126,844	
Unfunded actuarial accrued liability on an actuarial value basis	10,464,982,455	9,840,134,873	
Funded ratio on an actuarial value basis	30.49%	32.86%	
Book value of assets	\$3,816,295,756	\$4,175,111,568	
Unfunded actuarial accrued liability on a book value basis	11,239,052,940	10,480,150,149	
Funded ratio on a book value basis	25.35%	28.49%	
Demographic data as of December 31:			
Number of retirees and beneficiaries	25,236	24,964	
Number of inactive members	16,876	16,268	
Number of active members	30,296	30,683	
Total pensionable salary supplied by the Fund	\$1,646,939,238	\$1,643,480,973	
Average pensionable salary	\$54,362	\$53,563	
Contribution requirement for Fiscal Year:			
	2018	2017	2016
Applicable members' contribution, two years prior	\$129,548,602	\$130,851,422	\$129,168,659
Statutory contribution multiple	1.25	1.25	1.25
Statutory city contribution	\$161,935,753	\$163,564,278	\$161,460,824
Actuarially determined contribution requirement	N/A	1,005,456,621	970,112,414

* Includes pension and OPEB. As a result of Public Act 98-0043, the liability attributable to OPEB no longer exists as of December 31, 2016.