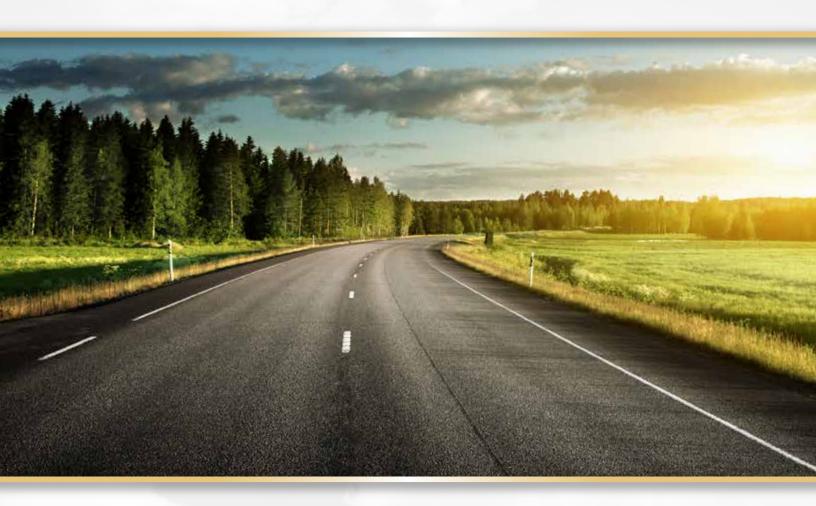


## **2016 COMPREHENSIVE ANNUAL FINANCIAL REPORT**

FOR THE YEARS ENDED DECEMBER 31, 2016, AND DECEMBER 31, 2015



· LOCALLY FUNDED, FINANCIALLY SOUND ·

# FOR THE YEARS ENDED DECEMBER 31, 2016, AND DECEMBER 31, 2015

#### PREPARED BY

The Finance Department of the Illinois Municipal Retirement Fund

#### **OAK BROOK OFFICE**

2211 York Road, Suite 500, Oak Brook, IL 60523-2337

#### SPRINGFIELD REGIONAL COUNSELING CENTER

3000 Professional Drive, Suite 101, Springfield, IL 62703

#### **CONTACT IMRF**

1-800-ASK-IMRF (275-4673) www.imrf.org

> Louis W. Kosiba Executive Director

## **IMRF MISSION STATEMENT**

IMPARTIALLY DEVELOP,
IMPLEMENT AND ADMINISTER
PROGRAMS THAT PROVIDE
INCOME PROTECTION TO
MEMBERS AND THEIR
BENEFICIARIES ON BEHALF OF
PARTICIPATING EMPLOYERS
IN A PRUDENT MANNER.

## TABLE OF CONTENTS

#### **INTRODUCTION**

- 3 Board of Trustees
- 4 IMRF Senior Leaders
- 5 Organization Chart
- 6 Certificate of Achievement
- 7 Transmittal Letter
- 15 Revenue and Expense Charts

#### **FINANCIAL**

- 18 Independent Auditor's Report
- 20 Management's Discussion and Analysis

#### Basic Financial Statements

- 24 Statements of Fiduciary Net Position
- 25 Statements of Changes in Fiduciary Net Position
- 26 Notes to Basic Financial Statements\*
- \* The Notes are an integral part of the Basic Financial Statements.

#### Supplementary Information

- 50 Required Supplementary Information
- 50 Supplementary Information

#### **INVESTMENTS**

- 52 Investment Consultant's Report
- 54 Master Trustee's Report
- 55 Investment Consultants
- 57 Investment Policies
- 60 Returns by Asset Class
- 61 Investment Portfolio Summary
- 62 Asset Allocation
- 63 Investment Portfolio Charts
- 64 Ten Largest Holdings
- 65 Domestic Brokerage Commissions
- 66 International Brokerage Commissions
- 67 Schedule of Investment Fees

#### **ACTUARIAL**

- 70 Actuarial Report
- 73 Summary of Actuarial Assumptions

- 74 Funded Status and Funding Progress
- 75 Schedule of Funding Progress
- 75 Schedule of Employer Contributions
- 76 Solvency Test
- 76 Participating Member Statistics
- 77 Schedule of Adds and Removals from Rolls
- 78 Contribution Rates
- 79 Actuarial Balance Sheet
- 79 Analysis of Under Funded Liability
- 80 Derivation of Experience Gain (Loss)
- 81 Summary of Benefits

#### **STATISTICAL**

#### Financial Tables

- 88 Changes in Fiduciary Net Position
- 89 Benefit Expense by Type
- 90 Net Cash Flow From Contributions After Benefits

#### Operating and Demographic Tables

- 90 Operating Statistics:
  Number of Initial Benefit Payments
- 91 Number of Employees
- 91 Number of Actively Participating Employers
- 92 Principal Participating Employers
- 92 Number of Actively Participating Members
- 93 Participating Members' Length of Service
- 93 Active Members by Age
- 94 Annuitants by Age

#### Benefit Payment Tables

- 94 Average Initial Benefit Payment Amounts
- 95 Analysis of Initial Retirement Benefits: Regular Plan
- 96 Analysis of Initial Retirement Benefits: SLEP Plan
- 97 Analysis of Initial Retirement Benefits: ECO Plan
- 98 Distribution of Current Annuitants by Pension Amount

## **BOARD OF TRUSTEES**



SUE STANISH
2017 Board President
Executive Trustee
Naperville Park District
Jan. 1, 2014-Dec. 31, 2018



NATALIE COPPER
2017 Board Vice President
Employee Trustee
Evanston School District 65
Jan. 1, 2015-Dec. 31, 2019



DAVID MILLER
2017 Board Secretary
Executive Trustee
North Shore Water
Reclamation District
Jan. 1, 2017-Dec. 31, 2021



**TOM KUEHNE** *Executive Trustee*Village of Arlington Heights
Jan. 1, 2013-Dec. 31, 2017



**GWEN HENRY** *Executive Trustee*DuPage County
Jan. 1, 2016-Dec. 31, 2020



ALEX WALLACE, JR. Employee Trustee
Oswego Community Unit School District 308
Jan. 1, 2017-Dec. 31, 2020



SHARON U. THOMPSON

Annuitant Trustee

Lee County (formerly)

Jan. 1, 2016-Dec. 31, 2020



**TRUDY WILLIAMS** *Employee Trustee*Fulton County
Jan. 1, 2016-Dec. 31, 2020

## IMRF SENIOR LEADERS (from left)



## **CARA BANNON** *Human Resources Manager*

**DAN DUQUETTE**Deputy Executive Director

**KATHY GOERDT** *Performance Excellence Manager* 

ROBERT WOOLLEN
Chief Information Services Officer

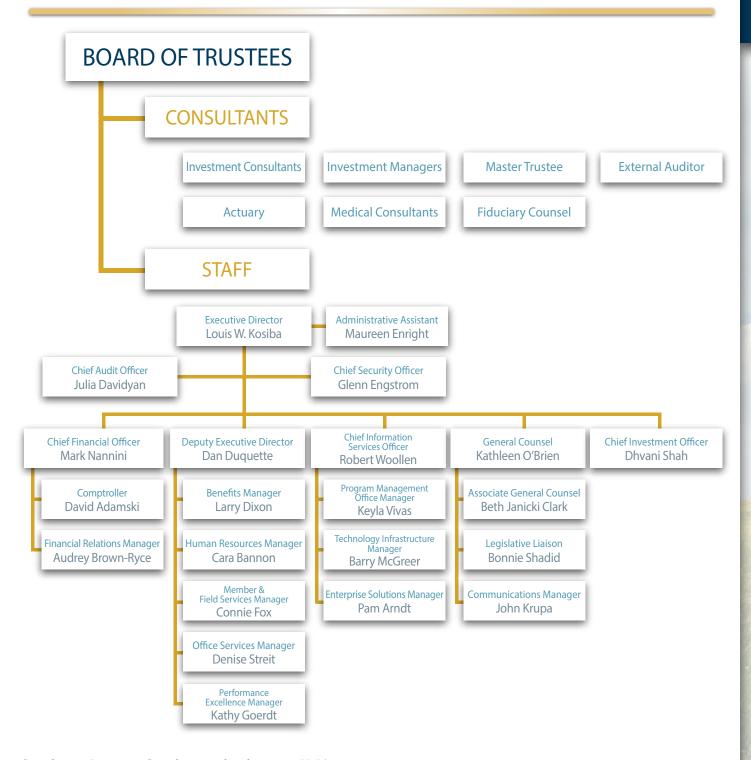
## DHVANI SHAH Chief Investment Officer

KATHLEEN O'BRIEN
General Counsel

MARK NANNINI Chief Financial Officer

LOUIS W. KOSIBA Executive Director

## **ORGANIZATION CHART**



#### Consultants - Investment Consultants are listed on pages 55-56

Actuary
Gabriel, Roeder,
Smith & Company
Brian B. Murphy, F.S.A.
Mark Buis, F.S.A.
Southfield, Michigan

External Auditors
RSM US LLP
Joseph Evans
William Sarb
Schaumburg, Illinois

Master Trustee
The Northern Trust
Kimberly Miller
Senior Vice President
Chicago, Illinois

Independent Fiduciary

Counsel
Seyfarth Shaw

ident Attorneys, LLP
Lawrence Moss
Chicago, Illinois

Medical Consultants
Marianjoy Medical Group
Wheaton, Illinois
Northwest Psychiatric, S.C.
Buffalo Grove, Illinois

Adjudicators
Ottosen Britz Kelly Gilbert
& Dinolfo, LTD
Susan Davis Brunner, LLC.



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Reporting

Presented to

## Illinois Municipal Retirement Fund

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

December 31, 2015

Executive Director/CEO



2211 York Road, Suite 500 Oak Brook, IL 60523-2337 1-800-ASK-IMRF (275-4673)

www.imrf.org

May 31, 2017

Board of Trustees Illinois Municipal Retirement Fund Oak Brook, Illinois 60523-2337

#### Formal Transmittal

We are pleased to submit the Comprehensive Annual Financial Report of the Illinois Municipal Retirement Fund (IMRF) for the year ended December 31, 2016. The management of IMRF is responsible for the compilation and accuracy of the financial, investment, actuarial, and statistical information contained in this report. To the best of our knowledge and belief, the enclosed information is accurate in all material respects and is reported in a manner designed to fairly present the fiduciary net position and changes in the fiduciary net position of IMRF.

In developing and evaluating IMRF's accounting system, we consider the adequacy of internal accounting controls. We design these controls to provide reasonable assurance regarding the safekeeping of assets and the reliability of financial records. Because the cost of internal control should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

IMRF's Internal Audit department is comprised of seven full-time employees, including one Chief Audit Officer. The Internal Audit department uses a detailed internal audit program that encompasses examination of internal controls, employer compliance, and the Fund's financial transactions and records. IMRF engages an independent accounting firm annually to review and test internal controls over our information systems.

The internal audit function reports directly to the Executive Director and the Board of Trustees. The Board of Trustees has established an Audit Committee, comprised of three Board members. Annually, the Chief Audit Officer presents a report to the Audit Committee covering the results of internal audit procedures performed. The Chief Audit Officer may also meet with the committee on an as-needed basis. Again this year, the Chief Audit Officer reported that IMRF's system of internal controls appears adequate and is being adhered to in the areas tested.

The Illinois Pension Code requires an annual audit of the financial statements of the Fund by independent certified public accountants selected by the Board of Trustees and approved by the State Auditor General. IMRF satisfied this requirement and the independent accountants' unmodified report on IMRF's 2016 Financial Statements is included in this report. The independent accountants meet at least twice a year with the Audit Committee—once to report on the planned scope of their audit and a second time to report on its results.

#### Profile of IMRF

IMRF is the administrator of an agent multiple-employer public employee retirement system. The Illinois State Legislature established IMRF in 1939. It began operations in 1941 in order to provide retirement, death, and disability benefits to employees of local units of government in Illinois. Members, employers, and annuitants elect eight trustees who govern IMRF. IMRF is separate and apart from the Illinois state government and is not included in the state's financial statements. IMRF now serves 2,987 different employers, 175,019 participating members, and 123,206 benefit recipients. The Illinois Pension Code requires IMRF to provide its financial statements to participating employers and to any participating member who requests them. These financial statements also appear on IMRF's website, www.imrf.org.

### **Economic Conditions**

## Summary of Financial Information

The following table summarizes additions and deductions to the Fund's fiduciary net position for 2016 and 2015.

	2016 (millions)	2015 (millions)	Dollar Change (millions)	Percent Change
Additions	\$3,979	\$1,470	\$2,509	170.7%
Deductions	1,977	1,824	153	8.4%
Net Change	\$2,002	\$ (354)	\$2,356	NM

NM - Not Meaningful

The increase in Additions between 2016 and 2015 is primarily due to a \$2,464 million increase in investment income. The financial markets in 2016 were impacted by the increase in Federal rates for overnight borrowing, crude oil fluctuations, the Brexit vote in Britain, and the presidential election. The increase in Deductions is primarily due to increased benefit payment amounts and an increase in the number of benefit recipients from 118,038 to 123,206. For a full understanding of IMRF's financial results, you are encouraged to review the "Financial" section of this report, which includes the Independent Auditor's Report, Management's Discussion and Analysis, Financial Statements, and other supplemental information. Management's Discussion and Analysis provides a narrative introduction, overview, and analysis of the financial statements and complements this transmittal letter.

### **Funding**

The funding of IMRF is comprised of three components. The first is member contributions of either 4.5 (regular plan) or 7.5 (SLEP and ECO plans) percent of the covered wages established by the Illinois Pension Code. The second portion of the funding is employer contributions. These contributions are based on an individual rate calculated for each employer annually by our actuary. It is based on each employer's member demographics, wages, and experience. The final and most important component of funding the plan is investment income. IMRF has advocated for a 100 percent funding goal as it, in the long run, is the most cost efficient for our employers. For additional information on investments, see the "Investments" section.

IMRF's actuary uses a five-year smoothed market-related value with a 20 percent corridor to determine the actuarial value of assets. The smoothing is intended to prevent extreme volatility in employer contribution rates due to short-term fluctuations in the investment markets. For the December 31, 2016, valuation, the aggregate actuarial value of assets was \$36.8 billion. The aggregate actuarial liability for all IMRF employers was \$41.4 billion. The aggregate actuarial funding ratio is currently 88.9 percent (an increase from the 2015 ratio of 88.4 percent). This takes into account the market impact on returns. If the market value of assets is used (i.e., no actuarial smoothing), the aggregate funding ratio is 88.3 percent as of December 31, 2016, an increase from 87.4 percent as of December 31, 2015. The reason for the increase in the net market funding ratio is the smoothing of investment return in 2015. As of December 31, 2016, IMRF's market-based funding value change was lower than the actuarial funding value since there were \$327 million of unrecognized actuarial investments losses, which will be reflected in the 2017 through 2020 period in keeping with the five-year smoothing technique discussed above.

The preceding ratios are for the Fund as a whole. Under the Illinois Pension Code, each employer funds the pensions for its own employees. Funding ratios for individual employers and individual plans vary widely. IMRF members can look with a sense of security to the net asset base since these assets are irrevocably committed to the payment of their pensions when they retire. The actuary has determined that the present net asset base, expected future contributions, and investment earnings thereon are sufficient to provide for full payment of future benefits under the level payroll percentage method of funding. The "Actuarial" section of this report contains the actuary's letter and further information on IMRF's funding. The funding policy was last reviewed by the IMRF Board of Trustees in December 2016 and new mortality tables were adopted by the IMRF Board of Trustees in December 2014.

#### **Investments**

The investment portfolio is a major contributor to the Fund. Year 2016 investment results showed a gain of \$2,655 million and represented 67.0 percent of Plan Additions for the year. In the past five years—2012 through 2016—investment income represented the following percentage of Additions to fiduciary net position:

Year	Percentage of Additions
2016	67.0%
2015	13.7%
2014	61.1%
2013	81.5%
2012	73.7%

IMRF's primary goal is to optimize the long-term total return of the Fund's investments through a policy of diversification within a parameter of prudent risk, as measured on the total portfolio. Currently, the public markets portfolio is managed by 42 professional investment management firms handling 47 mandates. These firms make investment decisions under the Prudent Man Rule authorized by Article 1 of the Illinois Pension Code and by investment policy guidelines adopted by the Board of Trustees. The private markets portfolio is invested with 39 investment firms across 65 separate funds. These firms make investment decisions under the Prudent Man Rule, authorized by Article 1 of the Illinois Pension Code and by investment policy guidelines adopted by the Board of Trustees.

The Board employs an Investment Consultant to assist Staff in the development and evaluation of IMRF's strategic asset allocation, asset liability modeling study, and investment policy statements. The Investment Consultant also assists with the selection of investment management firms and in the monitoring and evaluation of investment manager performance.

The "Investments" section of this report contains a summary of IMRF's investment portfolio, investment performance, the Investment Consultant's report, the Master Trustee's report, and a summary of the investment objectives and policies.

## Current and Future Developments

#### a. Board of Trustees

David Miller, who has served as Trustee since 2015, was elected to his second term as Executive Trustee. His second term will run from January 1, 2017, through December 31, 2021.

Alex Wallace, Jr., who was appointed to fill a vacancy on the IMRF Board of Trustees in July 2016, was elected as Employee Trustee. His four year term began January 1, 2017.

#### b. Legislative Activity Applicable to IMRF (Passed in 2016)

Eight bills that affect IMRF passed the General Assembly in 2016:

**Public Act 99-580** This law became effective on July 15, 2016, and removes the one-year limitation on the retroactive payment of surviving spouse pensions.

**Public Act 99-682** This law has two parts. The first allows certain annuitants to re-establish eligibility for a surviving spouse pension. The bill became effective as of July 29, 2016, although the window to apply to re-establish surviving spouse pension eligibility began December 29, 2016.

**Public Act 99-683** This law became effective on July 29, 2016, and requires all pension systems to conduct checks at least monthly to confirm benefit recipients are still living.

**Public Act 99-745** This law became effective August 5, 2016, and gives IMRF the authority to assess employer's penalties for return-to-work violations of up to half of the annuity paid to the member during the return-to-work period.

**Public Act 99-747** This law became effective January 1, 2017. It increases the threshold from the current \$30 to \$100, above which a member can no longer take a refund if he or she is immediately eligible to take a pension of at least that amount.

**Public Act 99-830** This law became effective January 1, 2017. In the provisions applicable to IMRF, it excludes new employees of four IMRF employers from participation (Illinois Municipal League, Illinois Association of Park Districts, Township Officials of Illinois, and the United Counties Council).

**Public Act 99-900** This law became effective beginning August 26, 2016. It prohibits IMRF participation for new county board members. For current board members, the employer must file a resolution no less than 90 days after an election of any board member certifying that the position continues to meet the hourly standard and the member must submit monthly logs of time worked to the employer.

**Public Act 99-646** This law was effective beginning July 28, 2016. It requires the governing bodies of IMRF employers to approve certain payments to members before they can be paid to the member. This bill does not affect IMRF directly, as it does not amend the Pension Code.

#### c. Systems Development

IMRF's major 2016 system development priorities focused on:

- Developing the internal expertise and deploying the technology to both support and enhance the functionality of the first phase of the Horizon system.
- Developing and issuing a comprehensive request for proposal (RFP) for the final phase of the Horizon system, which will replace the current Pension Administration functionality.

IMRF's major 2017 system development priorities will focus on:

- Continuing the development of the final phase of the Horizon system, including vendor selection, project initiation, and requirements confirmation.
- Re-engineering business processes to achieve IMRF's Customer Service Goals, while also maintaining all internal control and efficiency objectives.
- Deploying a new intranet (COMPASS), including improved tools and information.

#### d. Investment Activities

The Board of Trustees, its consultant, and IMRF staff review the investment asset allocation annually. An asset liability modeling (ALM) study is also conducted on a triennial basis. The most recent study was completed in November 2016. Following this study, IMRF's strategic targets were revised and adopted in 2016. They are as follows:

Asset Class	2016 Target
U.S. Equities	38%
International Equities	17%
Fixed Income	27%
Real Estate	8%
<b>Alternative Investments</b>	9%
Cash	1%

Major investment activities in 2016 through March 31, 2017, were as follows:

- The IMRF Investment Committee Charter, Statement of Investment Policy, and Real Estate Statement of Investment Policy were revised by Staff and approved by the Board.
- An Asset Liability Modeling Study was performed which resulted in establishing the following asset allocation targets for the investment portfolio: 38 percent U.S. Equities; 17 percent International Equities; 27 percent Fixed Income; 8 percent Real Estate; 9 percent Alternative Investments; and 1 percent Cash.
- Additional commitments were made to ten follow-on funds of ten existing real estate managers.
- New commitments were made to two new real estate firms.
- Additional commitments were made to ten follow-on funds of nine existing private equity managers.
- Public market investment manager terminations consisted of one large-cap growth domestic equity portfolio, one small-cap value domestic equity portfolio, one micro-cap value domestic equity portfolio, and one international large cap value equity portfolio.
- Additional allocations were funded to one existing micro-cap domestic equity portfolio and one existing fixed income portfolio.
- Funds were withdrawn from one actively-managed small-cap growth domestic equity portfolio and allocated to one passively-managed large-cap value domestic equity index fund.
- Finally, a risk management service provider search was conducted which resulted in the hiring of one firm, and the engagement of another, to provide a multi-asset class risk management system for internal analysis of IMRF's investment managers.

#### e. Strategic Plan

IMRF's Strategic Plan provides the Fund with a road map for meeting the challenges and opportunities in achieving our Vision to provide the highest quality retirement services to our members, their beneficiaries, and employers in a cost-effective manner. The Plan guides our efforts to continuously improve customer service to our employers and members.

The 2017-2019 IMRF Strategic Plan includes elements of the Baldrige Criteria for Performance Excellence to ensure we align our objectives, processes, and resources with our Vision. IMRF Staff implemented a series of action plans that support our four Strategic Objectives during 2016. We include the following four key result areas on our leadership scorecard to measure our progress towards meeting our objectives:

- Financial Health
- Customer Engagement
- Workforce Engagement
- Operational Excellence

Baldrige recipient organizations often set their overarching Strategic Objectives to achieve a top decile ranking in each key area of importance to their stakeholders. IMRF is following that same path, as our Strategic Objectives challenge us to achieve top 10 percent performance for most key result areas. Our stakeholders, IMRF staff, and the Board of Trustees provided input for the development of our new Strategic Objectives.

#### f. Illinois Performance Excellence\Baldrige Criteria for Performance Excellence

Illinois Performance Excellence (ILPEx) is a non-profit organization that seeks to help organizations improve their performance by utilizing the Baldrige Criteria for Performance Excellence and aligning their processes to become more efficient and sustainable. Organizations that pursue the Baldrige management framework can demonstrate through the ILPEx award application that they have adopted proven performance practices, principles, and strategies that nurture excellence in all aspects of their operations. This can range from customer relations to workforce engagement to specific operational and financial results. The comprehensive feedback report received from ILPEx provides additional guidance on how IMRF can further leverage our strengths and pursue opportunities for improvement. IMRF received a Silver Award denoting "Progress toward Excellence" in 2012, and again in 2014. These awards demonstrate IMRF's continued dedication to delivering excellent customer service to its members, annuitants, and employers. IMRF will submit a new award application in June 2017. IMRF is committed to continuing its journey to maintain excellence using the Baldrige Criteria for Performance Excellence.

#### g. Defined Benefit Administration Benchmarking Analysis

CEM Benchmarking Inc. conducts an annual Defined Benefit Administration Benchmarking Analysis for public pension systems. IMRF has participated in this benchmarking program since 2001. This program provides insight into benefit administration costs, customer service levels, and industry best practices. IMRF's total service score placed in the top 15 percent, while our costs were below the median, as compared to our peer group of 44 public systems in the United States and Canada. IMRF will continue to participate in this benchmarking program, as it is an important part of our Continuous Process Improvement Program.

### Reports to Membership

IMRF issued a variety of reports covering 2015 and 2016 activity. We provided Employer Statements every month. We issued Annuitant Statements in November 2016, inactive Member Statements were sent in March 2017, and we mailed our annual Member Statements in February 2017. We will include a summary of this Annual Report for members and annuitants in *Fundamentals*, IMRF's member newsletter. We will advise Authorized Agents in June 2017 that this report, as well as our Popular Annual Financial Report, is available on our website, www.imrf.org.

## Additional Awards and Acknowledgments

#### **Awards**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to IMRF for its Comprehensive Annual Financial Report for the year ended December 31, 2015. IMRF has received a Certificate of Achievement from the GFOA for the last 36 consecutive years (fiscal years 1980-2016).

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized Comprehensive Annual Financial Report, whose contents conform to program standards. Such a report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe our current report continues to conform to the Certificate of Achievement program requirements and we will submit it to the GFOA. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports.

IMRF also received a Certificate of Achievement for Excellence in Financial Reporting for its Popular Annual Financial Report for the year ended December 31, 2015.

IMRF received the GFOA Distinguished Budget Presentation Award for its 2016 Budget Document. The Government Finance Officers Association of the United States and Canada (GFOA) awarded the Distinguished Budget Presentation Award for the second time to IMRF. The award is for a one year period. IMRF will apply again for this prestigious award for the 2017 Budget Document.

In 2016, PLANSPONSOR, a national publication dedicated to retirement and benefit programs, named IMRF a "Standout" as part of its 2016 "Awards for Excellence" program. This is IMRF's second consecutive nomination for a PLANSPONSOR award.

In 2016, in recognition of meeting professional standards for plan administration and funding, as set forth in the Public Pension Standards, IMRF was awarded for plan funding and administration by the Public Pension Coordinating Council, a confederation of the National Association of Retirement Administrators, the National Conference on Public Employee Retirement Systems, and the National Council on Teacher Retirement.

### Acknowledgements

The production of this report reflects the combined effort of the IMRF Staff under the leadership of the Board of Trustees and the Executive Director, Louis W. Kosiba. The Finance department, under the direction of Mark Nannini, compiled the report. We believe this report provides complete and reliable information for making management decisions, for determining compliance with legal provisions, and for determining responsible stewardship for the assets contributed by our members and their employers.

We make this report available to the Authorized Agents of all participating units of government. The Authorized Agents form the link between IMRF and its membership. Their cooperation, for which we are thankful, contributes significantly to the success of IMRF. We hope they will find this report both informative and helpful.

Respectfully submitted,

LOUIS W. KOSIBA

Tambu Kariba

Executive Director

MARK F. NANNINI

Chief Financial Officer

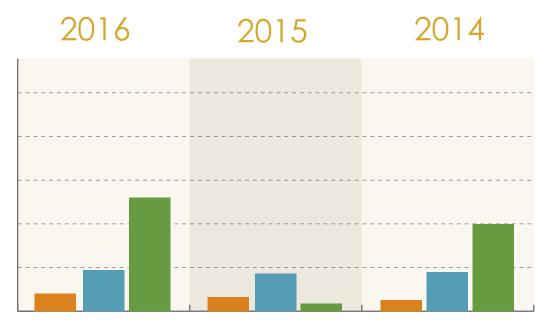
## 2016 INVESTMENT RESULTS



BILLION IN NET INVESTMENT INCOME

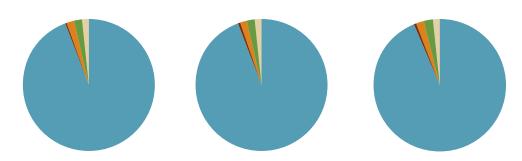
NET INVESTMENT RATE OF RETURN

## REVENUES BY SOURCE



	2016	2015	2014
Members	\$ 380,385,015	\$ 368,005,271	\$ 351,089,445
Employers	933,937,321	900,476,884	923,382,825
Investments	2,664,877,114	201,191,259	2,001,440,028
TOTAL	\$ 3,979,199,450	\$ 1,469,673,414	\$ 3,275,912,298

## **EXPENSES BY TYPE**



	2016	2015	2014
Annuities	\$ 1,862,661,433	\$ 1,720,618,375	\$ 1,587,334,029
<b>Disability Benefits</b>	9,707,497	9,794,297	10,902,507
<b>Death Benefits</b>	29,770,969	27,771,686	28,584,714
Refunds	37,690,098	36,748,509	39,191,090
<b>Administrative Expenses</b>	37,550,066	28,707,981	26,431,652
TOTAL	\$ 1,977,380,063	\$ 1,823,640,848	\$ 1,692,443,992

## FINANCIAL

Independent Auditors' Report 18

Management's Discussion and Analysis 20

## **BASIC FINANCIAL STATEMENTS**

Statements of Fiduciary Net Position 24

Statements of Changes in Fiduciary Net Position 25

Notes to Basic **26** Financial Statements\*

\*The Notes are an integral part of the Basic Financial Statements.

## SUPPLEMENTAL INFORMATION

Required Supplementary 50 Information

Supplementary Information 50







RSM US LLP

#### **Independent Auditor's Report**

The Board of Trustees
Illinois Municipal Retirement Fund

#### **Report on the Financial Statements**

We have audited the accompanying Statements of Fiduciary Net Position of the Illinois Municipal Retirement Fund (the Fund), as of December 31, 2016 and 2015, and the related Statements of Changes in Fiduciary Net Position for the years then ended, and the related notes to the basic financial statements as listed in the table of contents.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Illinois Municipal Retirement Fund as of December 31, 2016 and 2015, and the changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

THE POWER OF BEING UNDERSTOOD AUDIT | TAX | CONSULTING

#### Other Matters

Required Supplementary Information:

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 20 through 23 and the schedules of money-weighted rate of returns on page 50 be presented to supplement the financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Other Information:

Our audit for the year ended December 31, 2016 was conducted for the purpose of forming an opinion on the Fund's financial statements. The other supplementary information consisting of Supporting Schedules in the financial section, and the accompanying introductory, investments, actuarial, and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplementary information for the years ended December 31, 2016 and 2015 is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The other supplementary information has been subjected to the auditing procedures applied in the audit of the financial statements for the years ended December 31, 2016 and 2015 and certain additional procedures, including comparing and reconciling such information directly to underlying accounting and other records used to prepare the financial statements, or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated in all material respects, in relation to the financial statements as a whole for the years ended December 31, 2016 and 2015.

The introductory, investments, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

RSM US LLP

Schaumburg, Illinois May 31, 2017

## Management's Discussion and Analysis

The following Management's Discussion and Analysis (MD&A) of the Illinois Municipal Retirement Fund's (IMRF) financial performance provides an introduction to the financial statements of IMRF for the years ended December 31, 2016 and 2015. Since the MD&A is designed to focus on current activities, resulting changes and current known facts, please read it in conjunction with the transmittal letter (pages 7-13), the financial statements and notes, required supplementary information, and supplementary information.

### Required Financial Statements

IMRF, an agent multiple-employer public employee retirement system, prepares its financial statements on an accrual basis in accordance with Generally Accepted Accounting Principles promulgated by the Governmental Accounting Standards Board. The Statement of Fiduciary Net Position includes all of IMRF's assets and liabilities and provides information about the nature and amount of investments available to satisfy the pension benefits of the Plan. All additions to and deductions from the net assets held in trust for pension benefits are accounted for in the Statement of Changes in Fiduciary Net Position. This statement measures IMRF's success over the past year in increasing the fiduciary net position available for pension benefits.

### Financial Analysis of IMRF

In 2016, contributions of \$1,314 million and investment income of \$2,665 million exceeded the deductions to the fiduciary net position of \$1,977 million by \$2,002 million. This net increase brought the Plan's fiduciary net position to \$36.5 billion.

### Fiduciary Net Position

To begin the financial analysis, summarized comparisons of IMRF's Fiduciary Net Position for 2016 versus 2015 and 2015 versus 2014 are presented below.

## Condensed Statements of Fiduciary Net Position (in millions)

	2016	2015	Dollar Change	Percent Change
Cash and cash equivalents	\$ 1	\$ 2	\$ (1)	(50)%
Receivables and prepaids	486	426	60	14
Investments	36,364	34,350	2,014	6
Invested securities lending cash collateral	361	948	(587)	(62)
Capital assets, net	12	22	(10)	(46)
Total assets	37,224	35,748	1,476	4
Liabilities	709	1,235	(526)	(43)
Fiduciary net position	\$ 36,515	\$ 34,513	\$ 2,002	6%

As the table shows, fiduciary net position increased by \$2,002 million (6 percent) in 2016.

This increase reflects the investment returns in 2016. The increase in receivables and prepaids in 2016 is largely due to the increase in the receivable from brokers for unsettled trades at year-end due to a larger number of trades outstanding at year-end 2016 compared to 2015. The decrease in liabilities in 2016 is due primarily to the decrease in the securities lending cash collateral.

The following table presents the investment allocation as of year-end 2016 and 2015 as compared to IMRF's target allocation.

	2016	Target	2015
Domestic equity	43.4%	38.0%	41.7%
International equity	18.7	17.0	19.7
Fixed income	28.2	27.0	28.3
Real estate	5.5	8.0	5.2
Alternative	3.8	9.0	4.5
Short-term	0.4	1.0	0.6

The variance in the real estate allocation is due to the fact that IMRF is in the process of recapitalizing its real estate portfolio and actual investments trail commitments. IMRF is also looking to increase its allocation to alternative investment strategies. The current target allocations were reconfirmed through various Investment Committee meetings in 2016. IMRF continuously monitors its actual investment allocations in relation to its targets and rebalances as appropriate.

## Condensed Summary of Fiduciary Net Position (in millions)

	2015	2014	Dollar Change	Percent Change
Cash and cash equivalents	\$ 2	\$ 15	\$ (13)	87%
Receivables and prepaids	426	627	(201)	(32)
Investments	34,350	34,690	(340)	(1)
Invested securities lending cash collateral	948	3,076	(2,128)	(69)
Capital assets, net	22	17	5	29
Total assets	35,748	38,425	(2,677)	(7)
Liabilities	1,235	3,558	(2,323)	(65)
Fiduciary net position	\$ 34,513	\$ 34,867	(\$354)	(1)%

As the table shows, fiduciary net position decreased by \$354 million (1 percent) in 2015. This decrease reflects the nominal investment returns in 2015.

The decrease in receivables and prepaids in 2015 is largely due to the decrease in the receivable from brokers for unsettled trades at year-end due to a fewer number of trades outstanding at year-end 2015 compared to 2014. The decrease in invested securities lending cash collateral is based on the amount of securities on loan at a point in time and fluctuates year to year. The decrease in liabilities in 2015 is due primarily to the decrease in the payables to brokers for unsettled trades at year-end 2014.

## Changes in Fiduciary Net Position

Summarized comparisons of IMRF's Changes in Fiduciary Net Position for 2016 versus 2015 are presented below.

## Condensed Summary of Changes in Fiduciary Net Position (in millions)

	2016	2015	Dollar Change	Percent Change		
Additions	Additions					
Member contributions	\$ 380	\$ 368	\$ 12	3%		
Employer contributions	934	901	33	4		
Net investment income	2,665	201	2,464	1,226		
Total additions	3,979	1,470	2,509	171		
Deductions						
Benefits	1,902	1,758	144	8		
Refunds	37	37	-	-		
Administrative expenses	38	29	9	31		
Total deductions	1,977	1,824	153	8		
Net increase in fiduciary net position	\$ 2,002	\$ (354)	\$ 2,356	NM		

NM - Not Meaningful

#### Additions

Additions needed to fund benefits are accumulated through contributions and returns on invested funds. Contributions for 2016 totaled \$1,314 million which was 3.6 percent more than 2015. The increase reflects an increase in employer contribution rates as well as an increase in pensionable wages. The member contribution rate remained at 4.5 percent of earnings for Regular members and 7.5 percent for Sheriff's Law Enforcement Personnel (SLEP) and the optional Elected County Officials (ECO) members. For rate-setting purpose there is a two-year lag between the date that data is used to compute employer contribution rates and the effective date of those rates.

Investment returns for 2016 were 7.8 percent, significantly higher than the 2015 return. The \$2,665 million investment gain in 2016 represents a \$2,464 million change from the \$201 million gain in 2015. IMRF's 2016 total investment portfolio return was up due to strong markets throughout 2016.

In 2016, IMRF had net appreciation in the value of investments of \$2,038 million, a \$2,372 million change from the \$(334) million of depreciation recorded in 2015. Interest, dividends, and equity fund income totaled \$730 million, an increase from the \$640 million in 2015. Securities lending income net of related expenses was \$10.2 million for 2016, a decrease of \$2.4 million from 2015. Direct investment expenses decreased to \$112.5 million in 2016 from \$117.8 million in 2015.

The total rate of return for the portfolio in 2016 was 7.8 percent compared to 0.2 percent in 2015. IMRF's U.S. stock portfolio returned 12.4 percent compared to 21.3 percent for the Russell 2000 index. The fixed income portfolio returned 4.7 percent compared to 2.7 percent for the Barclays Aggregate Bond Index. Our international stock portfolio returned 3.2 percent compared to 4.50 percent for the MSCI All-Country World Free ex-US Index. The real estate portfolio returned 9.0 percent compared to 7.8 percent for the NCREIF Property Index. The alternative investment portfolio returned 5.1 percent.

#### **Deductions**

The expenses paid by IMRF include benefit payments, refunds, and administrative expenses. Expenses for 2016 totaled \$1,977 million, an increase of \$153 million over 2015. The increase in benefit payments to members and beneficiaries resulted primarily from growth in the number of annuitants to 123,206 in 2016 from 118,038 in 2015, as well as an increase in the amount of the average benefit.

## Condensed Summary of Changes in Fiduciary Net Position (in millions)

	2015	2014	Dollar Change	Percent Change		
Additions	Additions					
Member contributions	\$ 368	\$ 351	\$ 17	5%		
Employer contributions	901	924	(23)	(3)		
Net investment gain (loss)	201	2,001	(1,800)	(90)		
Total additions	1,470	3,276	(1,806)	(55)		
Deductions	Deductions					
Benefits	1,758	1,627	131	8		
Refunds	37	39	(2)	(5)		
Administrative expenses	29	27	2	7		
Total deductions	1,824	1,693	131	8		
Net increase in fiduciary net position	\$ (354)	\$ 1,583	\$ (1,937)	(122)%		

#### Additions

Additions needed to fund benefits are accumulated through contributions and returns on invested funds. Contributions for 2015 totaled \$1,269 million which was 0.4 percent less than 2014. The decrease reflects a reduction in employer contribution rates. The member contribution rate remained at 4.5 percent of earnings for Regular members and 7.5 percent for Sheriff's Law Enforcement Personnel (SLEP) and the optional Elected County Officials (ECO) members. For rate-setting purposes there is a two-year lag between the date that data is used to compute employer contribution rates and the effective date of those rates.

Investment returns for 2015 were 0.2 percent, significantly less than the 5.8 in 2014. The \$201 million investment gain in 2015 represents a \$1,800 million change from the \$2,001 gain in 2014. IMRF's 2015 total investment portfolio return was down largely due to an uncertainty of the markets based on international events, which led to sell-off of equities, a negative euro market, and lower spending in the United States.

In 2015, IMRF had net appreciation in the value of investments of \$(334) million, a \$1,810 million change from the \$1,476 million of appreciation recorded in 2014. Interest, dividends and equity fund income totaled \$618 million in 2014. Securities lending income net of related expenses was \$12.6 million for 2015, a decrease of \$4.2 million from 2014. Direct investment expenses increased to \$117.8 million in 2015 from \$109.0 million in 2014 and reflect the increase in the number of money managers and an increase in the amount of the investment portfolio managed by active managers.

The total rate of return for the portfolio in 2015 was 0.2 percent compared to 5.8 percent in 2014. IMRF's U.S. stock portfolio returned (0.2) percent compared to 0.5 percent for the Russell 3000 index. The fixed income portfolio returned (0) percent compared to 0.6 percent for the Barclays Aggregate Bond Index. Our international stock portfolio returned (2.2) percent compared to (5.7) percent for the MSCI All-Country World Free ex-US Index. The real estate portfolio returned 12.0 percent compared to 14.0 percent for the NCREIF Index. The alternative investment portfolio returned 6.0 percent.

When comparing returns it is important to remember that as a pension fund, IMRF's investment program has a very long time horizon. See the "Investments" section for details of some of the longer term results. IMRF's money-weighted rate of return of the periods ending:

Period	Return
December 31, 2016	7.84%
December 31, 2015	0.58%
December 31, 2014	6.08%

#### **Deductions**

The expenses paid by IMRF include benefit payments, refunds, and administrative expenses. Expenses for 2015 totaled \$1.824 million, an increase of \$131 million over 2014. The increase in benefit payments to members and beneficiaries resulted primarily from growth in the number of annuitants to 118,038 in 2015 from 112,762 in 2014 as well as an increase in the amount of the average benefit.

## Statements of Fiduciary Net Position

	Years End	ded December 31
	2016	2015
Assets		
Cash and cash equivalents	\$ 738,052	\$ 1,644,295
Receivables and prepaid expenses		
Contributions	94,694,336	83,001,451
Investment income	78,827,907	75,851,921
Receivables from brokers for unsettled trades	170,199,183	136,324,397
Prepaid expenses	141,675,535	130,917,173
Total receivables and prepaid expenses	485,396,961	426,094,942
Investments, at fair value		
Fixed income	10,005,826,815	9,500,502,975
Stocks	22,224,091,718	20,722,640,379
Short-term investments	720,783,465	662,109,291
Real estate	2,015,128,558	1,804,876,706
Alternative investments	1,398,465,324	1,659,780,748
Total investments	36,364,295,880	34,349,910,099
Invested securities lending cash collateral	361,207,072	948,235,763
Capital assets		
Equipment, at cost	24,628,992	32,062,828
Accumulated depreciation	(12,808,873)	(10,151,464)
Total capital assets	11,820,119	21,911,364
Total assets	37,223,458,084	35,747,796,463
Liabilities		
Accrued expenses and benefits payable	26,276,096	28,798,886
Securities lending cash collateral	361,207,072	948,235,763
Payables to brokers for unsettled trades	321,077,117	257,683,403
Total liabilities	708,560,285	1,234,718,052
Net position restricted for pensions	\$ 36,514,897,799	\$ 34,513,078,411

The accompanying notes are an integral part of the financial statements.

## Statements of Changes in Fiduciary Net Position

	Years Ended December 31			
	2016	2015		
Additions				
Contributions				
Members for retirement coverage	\$ 380,385,015	\$ 368,005,271		
Employers for benefit plan coverage	933,937,321	900,476,884		
Total contributions	1,314,322,336	1,268,482,155		
Investment income				
From investing activities				
Interest	290,275,544	250,272,745		
Dividends	291,370,596	261,530,797		
Equity fund income, net	147,963,319	128,479,109		
Net (depreciation)/appreciation in fair value of investments	2,037,617,887	(334,282,004)		
Investment activity gain	2,767,227,346	306,000,647		
Less: Direct investment expense	(112,521,372)	(117,835,491)		
Net investment activity gain	2,654,705,974	188,165,156		
From security lending activity				
Securities lending income	10,922,862	13,742,603		
Securities lending management fees and borrower rebates	(764,062)	(1,180,550)		
Net security lending activity income	10,158,800	12,562,053		
Total investment gain	2,664,864,774	200,727,209		
Other	12,340	464,050		
Total additions	3,979,199,450	1,469,673,414		
Deductions				
Annuities	1,862,661,433	1,720,618,375		
Disability benefits	9,707,497	9,794,297		
Death benefits	29,770,969	27,771,686		
Refunds	37,690,097	36,748,509		
Administrative expenses	37,550,066	28,707,981		
Total deductions	1,977,380,062	1,823,640,848		
Net increase/(decrease)	2,001,819,388	(353,967,434)		
Net position restricted for pensions				
Beginning of year	34,513,078,411	34,867,045,845		
End of year	\$ 36,514,897,799	\$ 34,513,078,411		

### Notes to Financial Statements (December 31, 2016 and 2015)

### A. Plan Description

The Illinois Municipal Retirement Fund (IMRF or the "Fund") is the administrator of an agent multiple-employer public employee retirement system. The Illinois State Legislature established IMRF to provide employees of local governments and school districts a sound and efficient retirement system. Members, employers, and annuitants elect eight trustees who govern IMRF. Four Executive Trustees are elected by employers, three Employee Trustees are elected by members, and one Annuitant Trustee is elected by annuitants. Any IMRF member who has eight years of service credit as of December 31 of the election year is eligible to be nominated to serve as a trustee. State law authorizes the Board to make investments, pay benefits, set employer contribution rates, hire staff and consultants, and perform all necessary functions to carry out the provisions of the Illinois Pension Code. Benefit and contribution provisions are established by state law and may be amended only by the Illinois General Assembly. IMRF is administered in accordance with Illinois statutes. The statutes do not provide for termination of the plan under any circumstances.

IMRF is separate and apart from the Illinois state government and is not included in the state's financial statements. However, the Illinois Pension Code requires the Auditor General to approve appointment of independent public accountants as the external auditors.

#### 1. Employers

	2016	2015
Participating employers	2,987	2,972

The Illinois Pension Code specifies the units of government required to participate in IMRF and the units that may elect to join. Participation by the following units of government is mandatory:

- All counties except Cook,
- All school districts except Chicago and,
- All cities, villages and incorporated towns with a population over 5,000, other than Chicago, which do not provide Social Security or equivalent coverage for their employees before they reach a population of 5,000.

Other units of government with general taxing powers, such as townships and special districts, may elect to join. Participating instrumentalities, which include units of government without general taxing powers and not-for-profit organizations, associations, or cooperatives authorized by state statute, may participate. They must meet financial stability requirements. Units that elect to join the system may not under any circumstances terminate their participating employer status as long as they are in existence.

#### 2. Members

Inactive members	2016	2015
Retirees and beneficiaries currently receiving benefits	123,206	118,038
Terminated members entitled to benefits but not yet receiving them	13,366	13,054
Terminated members—non-vested	99,238	108,610
Total inactive members	235,810	239,702
Active members		
Non-vested	83,219	81,928
Vested	91,800	92,170
Total active members	175,019	174,098
Grand total	410,829	413,800

Employers must enroll employees in IMRF if the positions meet the qualifications for IMRF membership.

There are some exceptions. City hospital employees and elected officials have the option to participate. IMRF does not cover individuals in certificated teaching positions covered by the Illinois Teachers' Retirement System. Also, IMRF does not generally cover individuals performing police or fire protection duties for employers with local police and fire pension funds. Certain police chiefs may choose to participate as Sheriff's Law Enforcement Personnel (SLEP) members.

#### 3. Contributions

The member contribution rates–4.5 percent for Regular members, 7.5 percent for SLEP members and Elected County Officials (ECO) plan members–are set by statute. The statutes require each participating employer to contribute the amount necessary, in addition to member contributions, to finance the retirement coverage of its own employees. Employer contributions for disability benefits, death benefits, and the supplemental retirement benefits are pooled. Contribution rates for disability and death benefits are set by the IMRF Board of Trustees, while the supplemental retirement benefits rate is set by statute. Costs of administering the plan are financed by investment income. Contributions are based on employer payrolls and are due on the tenth of the month, following the month of payment pursuant to the authority vested in the IMRF Board by the Illinois Pension Code.

#### 4. Benefit Provisions

Benefits are established by statute and may only be changed by the Illinois General Assembly. The benefit provisions in effect on the member's date of participation determine a member's minimum benefit while the benefit provisions in effect on the member's date of termination determine a member's maximum benefit. The following is a summary of the IMRF benefit provisions as of December 31, 2016 and 2015. The ECO plan was created by statute in 1997 and was revised in 2000. In 2010 the Illinois General Assembly passed legislation which became Public Acts 96-0889 and 96-1495. These Acts created a second tier within the Regular, SLEP, and ECO plans for members joining IMRF after December 31, 2010, with no prior qualifying service. On August 8, 2011, Public Act 97-0273 closed the ECO plan to new participants. A more extensive description of the plan can be found in the "Actuarial" section (updated December 31, 2016).

Plan	Regular Tier 1	Regular Tier 2	SLEP Tier 1	SLEP Tier 2	Original ECO	Revised ECO Tier 1	Revised ECO Tier 2
Vesting	8 years	10 years	20 years	10 years	8 years	8 years in each elected position	8 years in each elected position; 10 years in total
Minimum Age For Unreduced Benefit	35+ years of service: 55, otherwise 60	35+ years of service: 62, otherwise 67	50 with 20+ years of service	55 with 10+ years of service	Sheriffs with 20 years of SLEP service: 50, otherwise 55	Sheriffs with 20 years of SLEP service: 50, otherwise 55	Sheriffs with 10 years of SLEP service: 62, otherwise 67
Final Rate Of Earnings	Highest consecutive 48 months in the last 10 years	Highest consecutive 96 months in the last 10 years; pensionable earnings currently capped at \$111,571.63 for 2016 increasing annually by 3% or 1/2 of CPI, whichever is less	Highest consecutive 48 months in the last 10 years	Highest consecutive 96 months in the last 10 years; pensionable earnings currently capped at \$111,571.63 for 2016 increasing annually by 3% or 1/2 of CPI, whichever is less	Annual salary on the last day of ECO participation	Highest consecutive 48 months in the last 10 years for each elected position	Highest consecutive 96 months in the last 10 years; pensionable earnings currently capped at \$111,571.63 for 2016 increasing annually by 3% or 1/2 of CPI, whichever is less
Survivor Benefits	Annuity for eligible spouse	Annuity for eligible spouse	Annuity for eligible spouse	Annuity for eligible spouse	Annuity for eligible spouse and unmarried children under 18	Annuity for eligible spouse and unmarried children under 18	Annuity for eligible spouse and unmarried children under 18
Post- Retirement Increase	3% of original amount	3% or 1/2 of CPI, whichever is less of original amount	3% of original amount	3% or 1/2 of CPI, whichever is less of original amount	3% of original amount	3% of original amount	3% or 1/2 of CPI, whichever is less of original amount
Early Retirement	At age 55, discount based on age and service	At age 62, discount based on age and service	None	At age 50, discount based on age and service	None	None	At age 62, discount based on age and service

#### Refunds

Members who terminate their IMRF participation may withdraw their contributions and forfeit future retirement benefits.

#### Early Retirement

IMRF employers may offer an Early Retirement Incentive (ERI) for active members who have 20 or more years of service and are age 50 (57 for Tier 2 members) or older. The program is optional with employers and may not be offered until the liability for any previous ERI is paid. An employer may not adopt an ERI more frequently than once every five years after the close of a prior ERI.

#### Supplemental Retirement Benefit

Retirees and surviving spouses who have been receiving benefits for at least one year receive a supplemental retirement benefit in July. The total supplemental benefit pool in each year is equal to 0.62 percent of the participating payroll for the previous year. An individual receives a *pro-rata* share of the total pool based upon the ratio of his or her individual benefits to the total benefits paid to all IMRF recipients.

#### **Death Benefits**

An eligible spouse of a deceased retired member receives a one-time death benefit of \$3,000 plus a monthly pension equal to one-half (66-2/3 percent for ECO retirees and Tier 2 members) of the member's pension. The beneficiaries of a participating member who had at least one year of service receive a lump sum death benefit equal to one year's earnings (limited to the pensionable earnings cap for Tier 2 members) plus the member's contributions with interest. Death benefits paid upon the death of an inactive member vary depending on the member's age and service.

#### Disability

Members who have at least one year of service and meet the disability medical requirements will receive a benefit of up to 50 percent of the average monthly earnings in the 12 months preceding disability. Disabled ECO members receive a disability benefit equal to the benefit they would receive upon retirement. IMRF reduces the benefit by Social Security or Workers' Compensation awards. Members paid disability continue to receive pension service credit and death benefit protection.

## B. Summary of Significant Accounting Policies

#### 1. Reporting Entity

As defined by generally accepted accounting principles established by the Governmental Accounting Standards Board (GASB), the financial reporting entity consists of a primary government, as well as its component units, which are legally separate organizations for which the elected officials of the primary government are financially accountable. Financial accountability is defined as:

- (1) The primary government is financially accountable if it appoints a voting majority of the organization's governing body and (a) it is able to impose its will on that organization or (b) there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government.
- (2) The primary government is financially accountable if an organization is fiscally dependent on and there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government.

Based upon these criteria, IMRF has no component units and IMRF is not a component unit of any other entity.

#### 2. Basis of Accounting

IMRF prepares its financial statements using the accrual basis of accounting. It recognizes member and employer contributions as revenues in the month member earnings are paid in accordance with the provisions of the Illinois Pension Code. Benefits and refunds are recognized as expenses when payable. Expenses are recorded when the corresponding liabilities are incurred regardless of when payment is made.

#### 3. Use of Estimates

The preparation of IMRF's financial statements in conformity with U.S. generally accepted accounting principles requires management to make significant estimates and assumptions that affect the reported amounts and fiduciary net position at the date of the financial statements and the actuarial information included in the required supplementary information as of the benefit information date, the changes in IMRF fiduciary net position during the reporting period and, when applicable, disclosures of the contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

#### 4. Risks and Uncertainties

IMRF invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, and credit risk. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the value of investment securities will occur in the near term, and such changes could materially affect the amounts reported in the Statement of Fiduciary Net Position.

#### 5. Income Taxes

IMRF is exempt from federal and state income taxes and has received a favorable determination from the Internal Revenue Service under Code section 401(a).

#### 6. Method Used to Value Investments

IMRF reports investments at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value for stocks is determined by using the closing price listed on the national securities exchanges as of December 31. Fair value for fixed income securities is determined principally by using quoted market prices provided by independent pricing services. For commingled funds, the net asset value is determined and certified by the commingled fund manager as of December 31. Alternative investments, which include private equity and absolute return funds, are valued based on amounts established by fund managers, which are subject to annual audit. Fair values for directly owned real estate investments are determined by appraisals. Fair value for the majority of derivative instruments is determined principally by using quoted market prices provided by independent pricing services. Remaining derivative instruments are priced by The Northern Trust Company by obtaining prices from a variety of internal and external sources.

#### 7. Deferred Inflows/Outflows of Resources

The Statement of Fiduciary Net Position, in addition to assets, will on occasion report a separate section for the deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and as such, will not be recognized as an outflow of resources (expense) until then. In addition to liabilities, the Statement of Fiduciary Net Position will on occasion report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and as such, will not be recognized as an inflow of resources (revenue) until that time. IMRF has not reported either item this year.

### C. New Accounting Pronouncements

In June 2015, GASB issued Statement No. 74, "Financial Reporting for Post-employment Benefit Plans Other Than Pension Plans." The objective of this Statement is to improve the usefulness of information about post-employment benefits other than pensions (other post-employment benefits or OPEB) included in the general purpose external financial reports of state and local governmental OPEB plans for making decisions and assessing accountability. IMRF, as a plan, does not provide Post-employment Benefits other than pensions to its annuitants; therefore there is no impact on its financial statements.

In June 2015, GASB issued Statement No. 75, "Accounting and Financial Reporting for Post-employment Benefit Other Than Pension Plans." The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for post-employment benefits other than pensions (other post-employment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. IMRF will adopt GASB Statement No. 75 for its December 31, 2018, financial statements.

In August 2015, GASB issued Statement No. 77, "Tax Abatement Disclosures." Financial statements prepared by state and local governments in conformity with generally accepted accounting principles (GAAP) provide citizens and taxpayers, legislative and oversight bodies, municipal bond analysts, and others with information they need to evaluate the financial health of governments, make decisions, and assess accountability. This information is intended, among other things, to assist these users of financial statements in assessing (1) whether a government's current-year revenues were sufficient to pay for current-year services (known as interperiod equity), (2) whether a government complied with finance-related legal and contractual obligations, (3) where a government's financial resources come from and how it uses them, and (4) a government's financial position and economic condition and how they have changed over time. IMRF does not fall within the scope of Statement No. 77; therefore there is no impact to its financial statements.

In March 2016, GASB issued Statement No. 82, "Pension Issues." The objective of this Statement is to address certain issues that have been raised with respect to Statements No. 67, "Financial Reporting for Pension Plans," No. 68, "Accounting and Financial Reporting for Pensions," and No. 73, "Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68." Specifically, this Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. IMRF has adopted GASB Statement No. 82 for its December 31, 2016, financial statements.

In November 2016, GASB issued Statement No. 83, "Certain Asset Retirement Obligations." The objective of this Statement is to addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this Statement. IMRF does not fall within the scope of Statement No. 83; therefore there is no impact on its financial statements.

In January 2017, GASB issued Statement No. 84, "Fiduciary Activities." The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. IMRF does not fall within the scope of Statement No. 84; therefore there is no impact on its financial statements.

In March 2017, GASB issued Statement No. 85, "Omnibus 2017." The objective of this Statement is to address practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and post-employment benefits (pensions and other post-employment benefits [OPEB]). Where applicable, IMRF will adopt GASB Statement No. 85 for its December 31, 2018, financial statements.

In May 2017, GASB issued Statement No. 86, "Certain Debt Extinguishment Issues." The objective of this Statement is to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources (resources other than the proceeds of refunding debt) are placed in an irrevocable trust for the sole purpose of extinguishing debt. IMRF does not fall within the scope of Statement No. 86; therefore there is no impact on its financial statements.

### D. Deposits and Investment Risk Disclosures

#### 1. Deposits

Custodial credit risk for deposits is the risk that, in the event of a financial institution failure, IMRF's deposits may not be returned. All non-investment related bank balances at year-end are insured or collateralized with securities held by the Illinois Municipal Retirement Fund. Cash held in the investment-related bank account is neither insured nor collateralized for amounts in excess of \$250,000. These deposits are not required to be collateralized by statute and there is no related deposit policy for custodial risk. Cash is swept daily into an investment account. Withdrawals are made daily to fund necessary business expenses. The timing of the withdrawals may create a negative cash balance. This is due to the payment on the last business day in December of each year, the following years' January 1st benefit payments. These payments are recorded as a prepaid as of December 31st in the financial statements.

These assets are under the custody of The Northern Trust Company. The Northern Trust Company has an AA Long Term Deposit/Debt rating by Standard & Poor and an A1 rating by Moody.

Carrying amounts at December 31	2016	2015
Cash and cash equivalents	\$ 738,052	\$ 1,644,295
Bank balances at December 31		
Bank balances	\$ 242,735	\$ 126,674
Amount exposed to custodial credit risk		
Cash balance held with investment manager exposed to custodial credit risk	\$ 1,017,799	\$ 845,107

#### 2. Investment Policies, Asset Allocation, and Money Weighted Rate of Return

The Illinois Pension Code prescribes the "Prudent Man Rule" as IMRF's investment authority, effective August 25, 1982. This rule requires IMRF to make investments with the care, skill, prudence and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an entity of like character with like aims. Within the "prudent man" framework, the Board of Trustees adopts investment guidelines for IMRF Investment Managers, which are included within their respective Investment Management Agreements.

IMRF's policy in regard to the allocation of invested assets is established and may be amended by the Board. It is the policy of the Board to pursue an investment strategy that reduces risk through the prudent diversification of the portfolio across a broad selection of distinct asset classes. The following was the Board's adopted asset allocation as of December 31, 2016:

Asset Class	Target
U.S. equities	38.0%
Foreign equities	17.0
Fixed income	27.0
Alternative	9.0
Real estate	8.0
Short-term	1.0

For the year ended December 31, 2016, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses, was 7.84 percent. For the year ended December 31, 2015, it was 0.58 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

The "Investments" section contains a summary of these guidelines. By statute, all investments are held in the name of the Illinois Municipal Retirement Fund or in the name of a nominee created for the express purpose of securities registration.

#### 3. Investment Summary

The following table presents a summary of the Fund's investments by type at December 31, 2016 and 2015:

	2016	2015
U.S. government & agency fixed income	\$ 3,214,724,905	\$ 3,058,217,861
U.S. corporate fixed income	2,811,204,924	2,604,807,700
U.S. fixed income funds	2,948,622,934	2,878,562,109
Foreign fixed income	1,031,274,052	958,915,305
U.S. equities	10,607,507,564	9,916,630,799
U.S. equity funds	5,183,971,189	4,500,564,550
Foreign equities	3,781,377,558	3,584,187,301
Foreign equity funds	2,651,235,407	2,721,257,729
Foreign currency forward contracts	2,874,177	17,124
Pooled short-term investment funds	709,591,460	656,985,100
Real estate	2,015,128,558	1,804,876,706
Private equity	1,375,282,224	1,171,536,786
Absolute return funds	23,183,100	488,243,962
Swaps	2,915,515	92,572
Options	(552,414)	(684,261)
Other	5,954,727	5,698,756
Total investments at fair value	\$ 36,364,295,880	\$ 34,349,910,099

Short-term securities include commercial paper or notes having a maturity of less than 90 days. Pooled short-term investment funds are commingled funds managed by The Northern Trust. Under the terms of the investment agreement for these funds, The Northern Trust may invest in a variety of short-term investment securities. Alternative investments include commingled funds and separate accounts that invest in private equity and absolute return funds.

There are no individual investments held by IMRF that represent five percent or more of the Fund's fiduciary net position or the investment portfolio at year-end. As of December 31, 2016, IMRF had \$1,508,847,244 invested in the MFB NT Collective Aggregate Bond Index Fund, \$1,393,601,514 in the BlackRock US Debt Index Fund, \$2,944,696,020 in the NT Collective U.S. Marketcap Equity Index Fund, and \$1,982,765,302 in the NT Collective EAFE Index Fund. As of December 31, 2015, IMRF had \$1,470,119,311 invested in the MFB NT Collective Aggregate Bond Index Fund, \$1,356,293,905 in the BlackRock US Debt Index Fund, \$2,611,063,592 in the NT Collective U.S. Marketcap Equity Index Fund, and \$2,136,756,667 in the NT Collective EAFE Index Fund.

#### 4. Custodial Credit Risk for Investments

The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, IMRF will not be able to recover the value of investments or collateral securities that are in the possession of an outside party. As of December 31, the following investments were uninsured and unregistered, with securities held by the counterparty or by its trust department or agent, but not in the Fund's name:

	2016	2015
Investments in foreign currency	\$ 9,228,814	\$ 4,717,141

#### 5. Concentration of Credit Risk Debt Securities

The debt security portfolios are managed by professional investment management firms. These investment management firms are required to maintain diversified portfolios. Each investment manager must comply with risk management guidelines individually assigned to them as part of their Investment Management Agreement.

The total debt securities portfolio is managed using the following general guidelines adopted by the IMRF Board of Trustees:

- A. Bonds, notes, or other obligations of indebtedness issued or guaranteed by the U.S. government, its agencies, or instrumentalities are permissible investments and may be held without restriction.
- B. The average credit quality of the total portfolio must be investment grade.
- C. Debt obligations of any single U.S. corporation shall generally be limited to a maximum of 5 percent of the total portfolio at market value.
- D. Generally, no more than 30 percent of a manager's assets at market value may be invested in securities rated below investment grade at the time of purchase. Investment managers using high yield disciplines will not be subject to this restriction.
- E. Debt obligations of any U.S. industry shall generally be limited to a maximum of 25 percent of the total portfolio at market value.
- F. Bonds or other debt obligations of foreign countries and corporations payable in U.S. and in non-U.S. funds are authorized but, in general, will not exceed 15 percent of the portfolio.

#### **Quality Rating**

Corporate and International	2016	2015
AAA	\$ 219,384,059	\$ 248,935,637
AA	280,880,549	270,740,212
A	589,913,018	572,425,906
BBB	1,251,885,555	1,124,625,857
ВВ	603,274,996	591,892,908
В	341,125,979	304,186,833
CCC	73,845,644	62,061,525
CC	2,264,383	2,656,249
С	186	55,099
D	9,139,499	7,193,556
Not Rated	60,363,592	52,920,374
Government and Agencies		
Agencies	2,045,358,503	1,540,023,842
AAA	673,646,088	390,185,360
AA	573,885,282	1,133,790,422
Α	21,395,612	12,586,977
BBB	2,399,204	1,445,874
ВВ	-	81,058
В	-	-
Not Rated	538,209	13,938,390
Fixed Income Funds		
Index	3,256,526,457	3,170,756,896
Total	\$ 10,005,826,815	\$ 9,500,502,975

The "agencies" caption in the above table does not have a specific credit quality rating since they were not covered by the rating vendors. Typically these securities have at least an AA credit quality rating. The U.S. Fixed Income Fund had an average credit quality rating of AA for 2016 and AA for 2015.

#### **6. Interest Rate Risk**

IMRF manages its exposure to fair value losses arising from interest rate risk by diversifying the debt securities portfolio and maintaining the debt securities portfolio at an effective duration range between 80 and 120 percent of the benchmark index.

Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates. It uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price. The effective duration measures the sensitivity of market price to parallel shifts in the yield curve. IMRF benchmarks its debt security portfolio to the Barclays Aggregate Bond Index. At December 31, 2016 and 2015, the effective duration of the Barclays Aggregate Bond Index was 5.82 and 5.29, respectively. At the same points in time, the effective duration of IMRF debt securities portfolio was 3.78 and 5.26, respectively.

Investment	2016 Fair Value	Effective Weighted Duration Rate	2015 Fair Value	Effective Weighted Duration Rate
U.S. Corporate	\$ 2,811,204,924	4.77	\$ 2,604,807,700	5.22
U.S. Government & Agencies	3,214,724,905	6.39	3,058,217,861	5.72
U.S. Fixed Income Funds	2,948,622,934	0.04	2,878,562,109	5.33
International	723,370,529	5.14	666,720,518	5.10
International Fixed Income Fund	307,903,523	0.33	292,194,787	0.32
Total	\$ 10,005,826,815	3.78	\$ 9,500,502,975	5.26

#### 7. Foreign Currency Risk

The international portfolio is constructed on the principles of diversification, quality, growth, and value. Country exposure is limited to 25 percent, or two times the benchmark weighting at fair value. Risk of loss arises from changes in currency exchange rates. International managers may also engage in transactions to hedge currency at their discretion. Currency trading may not be used for speculative purposes. The following represents IMRF's holdings by currency in international equity and fixed income holdings:

	2016	2015
Foreign Equities		
Australian dollar	\$ 85,212,504	\$ 65,182,896
Brazilian real	82,858,540	44,456,799
British pound sterling	543,334,144	569,131,674
Canadian dollar	141,351,946	83,627,738
Chilean peso	11,153,159	13,433,253
Colombian peso	7,806,236	172,727
Croatian kuna	119,049	103,097
Czech koruna	6,590,763	5,143,958
Danish krone	26,743,028	59,515,287
Egyptian pound	-	244,484
Euro	1,000,633,943	950,689,381
Hong Kong dollar	194,299,371	193,088,091
Hungarian forint	4,083,522	2,125,359
Indian rupee	78,407,521	55,584,310
Indonesian rupiah	19,243,123	9,385,309
Japanese yen	655,829,983	681,434,737
Malaysian ringgit	6,882,886	6,501,553
Mexican peso	27,361,793	19,209,776
New Israeli shekel	7,482,784	11,203,401
New Taiwan dollar	71,651,768	62,584,900
New Zealand dollar	1,226,071	1,735,958
Norwegian krone	40,087,197	30,501,996
Philippine peso	3,448,081	5,379,458
Polish zloty	4,609,791	6,444,798
Qatari riyal	2,709,632	1,685,137
Singapore dollar	44,008,308	48,261,878
South African rand	39,701,259	34,204,427
South Korean won	119,738,970	105,565,018
Swedish krona	116,495,648	89,497,628
Swiss franc	217,495,107	247,564,013
Thai baht	19,734,634	8,137,376
Turkish lira	23,060,826	18,532,422
United Arab Emirates dirham	4,364,621	2,793,311
United States dollar	2,824,886,757	2,872,322,880
Total Foreign Equities	6,432,612,965	6,305,445,030

	2016	2015
Foreign Fixed Income		
Argentine peso	\$ 5,546,548	\$ 341,407
Brazilian real	22,886,040	13,275,363
Colombian peso	1,641,520	6,647,571
Euro	8,485,519	-
Hungarian forint	3,893,522	2,036,839
Indonesian rupiah	11,631,851	7,856,997
Malaysian ringgit	4,532,311	5,574,432
Mexican peso	4,505,477	29,727,921
New Zealand dollar	22,214,673	-
Peruvian nuevo sol	2,554,552	346
Polish zloty	8,104,609	9,943,570
Russian ruble	16,617,825	3,950,711
South African rand	2,686,057	2,089,709
Thai baht	3,134,384	2,936,930
Turkish lira	7,907,855	6,505,701
United States dollar	904,931,309	868,027,808
Total Foreign Fixed Income	1,031,274,052	958,915,305
Total	\$ 7,463,887,017	\$ 7,264,360,335

#### E. Securities Lending Program

The IMRF securities lending program is authorized by the IMRF Board of Trustees. IMRF lends securities (both equity and fixed income) to securities firms on a temporary basis through its agent, The Northern Trust. There are no restrictions on the amount of securities that may be lent. IMRF receives fees for all loans and retains the right to all interest and dividend payments while the securities are on loan. All securities are loaned versus collateral that may include cash, U.S. government securities, and irrevocable letters of credit. U.S. securities are loaned versus collateral valued, subject to de-minimus rules, at 102 percent of the market value of the securities plus any accrued interest (105 percent for non-U.S. securities). As the market value of the securities loaned changes, the borrower must adjust the collateral accordingly. IMRF or the borrower has the right to close the loan at any time. The average term of overall loans was 68 days as of December 31, 2016, and 54 days as of December 31, 2015. When the loan closes, the borrower returns the securities loaned to IMRF, and IMRF returns the associated collateral to the borrower. IMRF cannot pledge or sell the non-cash collateral unless the borrower fails to return the securities borrowed.

The Northern Trust pools all collateral received from securities lending transactions and invests any cash collateral. IMRF holds a prorated share of the collateral provided by the borrowers of its securities. The cash collateral is shown on IMRF's financial statements. Cash collateral is invested in a short-term investment pool, which had an interest sensitivity of 28 days as of December 31, 2016, and 29 days as of December 31, 2015. Cash collateral may also be invested separately in "term loans," in which case the investments match the term of the loan. These loans can be terminated on demand by either lender or borrower.

Indemnification pertains to the situation in which a client's securities are not returned due to the insolvency of a borrower and The Northern Trust has failed to live up to its contractual responsibilities relating to the lending of those securities. The Northern Trust's responsibilities include performing appropriate borrower and collateral investment credit analyses, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations concerning securities lending. During 2016 and 2015, there were no violations of legal or contractual provisions and no borrower or lending agent default losses to the securities lending agent. There are no dividends or coupon payments owing on the securities lent. IMRF had no credit risk as a result of its securities lending program as the collateral held exceeded the market value of the securities lent.

Securities lent are included in the Statements of Fiduciary Net Position. The market value of collateral received includes cash collateral of \$361,207,072 and \$948,235,763 at December 31, 2016 and 2015, respectively.

Loans outstanding as of	December 31, 2016	December 31, 2015
Market value of securities loaned	\$ 1,015,932,470	\$ 1,446,093,436
Market value of collateral received	\$ 1,043,593,684	\$ 1,484,317,392

#### F. Derivatives

IMRF's investment managers may enter into derivative transactions as permitted by their guidelines. A derivative financial instrument is an investment whose payoff depends upon the value of an underlying asset such as bond or stock prices, a market index, or commodity prices. Derivative financial instruments involve, to varying degrees, credit risk and market risk. Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to terms. IMRF's investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. Market risk is the possibility that a change in interest or currency rates will cause the value of a financial instrument to decrease or become more costly to settle. The market risk associated with derivatives, the prices of which are constantly fluctuating, is regulated by imposing strict limits as to the types, amounts, and degree of risk that investment managers may undertake. Senior investment management approves these limits and the risk positions of the investment managers are reviewed on a periodic basis to monitor compliance with the limits. IMRF does not purchase derivatives with borrowed funds.

During the year, IMRF's derivative investments included foreign currency forward contracts, financial futures, options, and swaps. Foreign currency forward contracts are used to hedge against the currency risk in IMRF's foreign stock and fixed income security portfolios. The remaining derivative financial instruments are used to improve yield, adjust the duration of the fixed income portfolio, or to hedge changes in interest rates.

Foreign currency forward contracts are agreements to buy or sell a specific amount of a specific currency at a specified delivery or maturity date for an agreed upon price. As the fair value of the underlying currency varies from the original contract price, IMRF records an unrealized gain or loss. The counterparties to the foreign currency forward contracts are banks which are rated A or above by rating agencies. The fair value of forward currency contracts outstanding at December 31, 2016 and 2015 is as follows:

Fair Value as of	December 31, 2016	December 31, 2015
Pending Foreign Exchange Purchases		
Australian dollar	\$ \$17,341,852	\$ 48,230,319
Brazilian real	1,881	15,140
British pound sterling	20,526,790	23,661,981
Canadian dollar	13,444,824	25,906,259
Chilean peso	951,111	-
Colombian peso	2,929,104	423,443
Danish krone	12,781,940	23,250,623
Euro	35,404,909	31,459,822
Hong Kong dollar	687,223	118,302
Hungarian forint	884,952	-
Indian rupee	1,865,119	-
Indonesian rupiah	10,972,317	1,521,455
Japanese yen	9,305,933	2,629,546
Malaysian ringgit	3,620,688	-
Mexican peso	12,730,338	11,482,776
New Israeli shekel	1,302,289	50,327
New Romanian leu	2,684,922	-
New Taiwan dollar	1,865,251	-
New Zealand dollar	22,470,166	9,141,092
Norwegian krone	-	152,055
Peruvian nuevo sol	1,944,590	-
Polish zloty	4,177,129	301,177
Russian ruble	297,747	980,729
Singapore dollar	289,610	233,866
South African rand	2,550,313	3,521,550
South Korean won	-	54,610
Swedish krona	257,959	3,591,346
Swiss franc	7,970,403	456,188
Thai baht	3,552,317	246,606
Turkish lira	1,580,146	-
United States dollar	276,174,813	244,636,992
Total Purchases	\$ 470,566,636	\$ 432,066,204

Fair Value as of	December 31, 2016 December 31, 20	
Pending Foreign Exchange Sales		
Argentine peso	\$ (3,371,706)	\$ -
Australian dollar	(5,471,715)	-
Brazilian real	(1,572,752)	(5,718,288)
British pound sterling	(23,413,028)	(63,807)
Canadian dollar	(21,091,284)	(3,807,243)
Chilean peso	(850,196)	-
Chinese Yuan renminbi	(17,661,790)	(16,974,978)
Colombian peso	-	(2,128,430)
Danish krone	-	(866,992)
Euro	(69,816,138)	(113,671,495)
Hong Kong dollar	(3,957,306)	(3,008,515)
Hungarian forint	(2,809,392)	-
Indian rupee	(3,672,251)	-
Indonesian rupiah	(3,135,280)	(1,683,399)
Japanese yen	(49,503,819)	(32,628,717)
Mexican peso	(9,275,084)	(6,801,319)
New Israeli shekel	(3,718,265)	(3,111,520)
New Romanian leu	(1,765,173)	(879,403)
New Taiwan dollar	(5,544,008)	(3,329,750)
New Zealand dollar	(842,342)	-
Norwegian krone	(3,511,657)	(1,179,997)
Peruvian nuevo sol	-	(446,587)
Philippine peso	(3,660,645)	-
Polish zloty	(898,179)	(1,810,861)
Russian ruble	-	(749,985)
Singapore dollar	(2,183,284)	(105,641)
South African rand	-	(2,032,498)
South Korean won	(3,640,678)	-
Swedish krona	(23,292,342)	(23,751,326)
Swiss franc	-	(17,035,683)
Thai baht	(3,035,677)	-
Turkish lira	(690,782) (1,163,293)	
United States dollar	(199,307,686)	(189,099,353)
Total Sales	(467,692,459)	(432,049,080)
Net Unrealized Gain	\$ 2,874,177	\$ 17,124

Financial futures are similar to forward contracts, except futures contracts are standardized and traded on organized exchanges. As the market value of the underlying hedging assets vary from the original contract price, a gain or loss is recognized and is settled through the clearinghouse. Financial futures represent an off-balance sheet obligation as there are no balance sheet assets or liabilities associated with those contracts. The contractual amounts of future contracts outstanding at December 31, 2016, and 2015 are as follows:

Fair Value as of	December 31, 2016		December	31, 2015	Change
	Amount	Number of Contracts	Amount	Number of Contracts	Amount
Fixed income derivative futures sold	\$109,580,058	661	\$146,046,160	1,053	\$ (36,466,102)
Fixed income derivatives futures purchased	344,394,923	2,604	257,204,242	1,597	87,190,681
Fixed income futures sold	344,394,923	2,604	257,204,242	1,597	87,190,681
Fixed income futures purchased	109,580,058	661	146,046,160	1,053	(36,466,102)
Equity derivatives futures purchased	\$46,401,150	415	\$32,057,550	315	\$14,343,600
Equity derivatives offsets futures sold	46,401,150	-	32,057,550	-	14,343,600
Cash and cash equivalent derivatives futures sold	\$240,496,600	987	\$406,566,650	1,657	\$(166,070,050)
Cash and cash equivalent futures purchased	240,496,600	987	406,566,650	1,657	(166,070,050)
Cash and cash equivalent derivatives futures purchased	-	-	44,379,000	180	(44,379,000)
Cash and cash equivalent derivatives offsets futures sold	-	-	44,379,000	180	(44,379,000)

Contractual amounts, which represent the fair value of the underlying assets of the derivative contracts, are often used to express the volume of these positions. Such amounts do not reflect the extent to which positions may offset one another or the potential risk, which is generally a lesser amount.

Financial options are agreements that give one party the right, but not the obligation, to buy or sell a specific amount of an asset for a specified price, called the strike price, on or before a specified expiration date. As a writer of financial options, IMRF receives a premium at the outset of the agreement and bears the risk of an unfavorable change in the price of the assets underlying the option. Gains and losses on options are determined based on fair values and are recorded in the Statements of Changes in Fiduciary Net Position. The fair value (liability) of financial options outstanding at year-end December 31, 2016 and 2015 is as follows:

Fair Value as of	December 31, 2016		December 31, 2015		Change
	Amount	Notional Value	Amount	Notional Value	Amount
Financial put options	\$ (435,448)	\$ 132,010,050	\$ (126,717)	\$ 63,692,996	\$ 68,317,054
Financial call options	(116,966)	76,920,991	(557,544)	77,901,563	(980,572)

Interest rate swaps are agreements between two or more parties to exchange sets of cash flows over a period of time. In the most common type of interest rate swap arrangement, one party agrees to pay fixed interest payments on designated dates to a counterparty who, in turn, agrees to make return interest payments that float with some reference rate. In addition to interest rate swaps, one of IMRF's investment managers utilizes credit default swaps

which add liquidity to individual credits and protect specific positions. Gains and losses on swaps are determined based on fair values and are recorded in the Statements of Changes in Fiduciary Net Position. The fair value (liability) of swaps outstanding at December 31, 2016 and 2015 is as follows:

Fair Value as of	December 31, 2016	December 31, 2015	Change
Swaps, gain/(loss)	\$ 2,915,515	\$ 92,572	\$ 2,822,943

	Change in Fair Value			
Type of Swap	Notional Value	Counterpar Notional Value Fair Value Credit Ratin		Amount
Credit Default Swap	\$ 4,603,297	\$ 16,133	А	\$ (227,647)
Credit Default Swap	4,603,297	(54,667)	А	92,429
Credit Default Swap	3,334,683	1,139	BBB	1,139
Credit Default Swap	3,334,683	-	BBB	-
Credit Default Swap	4,560,000	-	NR*	-
Credit Default Swap	4,560,000	(288,993)	NR*	(288,993)
Inflation Swap	9,620,000	18,905	А	18,905
Inflation Swap	9,620,000	(35,865)	Α	(35,865)
Interest Rate Swap	270,592,000	2,437,709	А	2,009,464
Interest Rate Swap	270,592,000	(913,406)	А	(481,048)
Interest Rate Swap	35,840,000	1,734,559	NR*	1,734,559
Interest Rate Swap	35,840,000	-	NR*	-
Total	\$ 657,099,960	\$ 2,915,515		\$ 2,822,943

As of December 31, 2015						
Type of Swap	Notional Value	Fair Value	Counterparty Credit Rating			
Credit Default Swap	\$ 14,498,189	\$ 243,780	А			
Credit Default Swap	11,835,000	(147,096)	А			
Credit Default Swap	-	-	BBB			
Credit Default Swap	-	-	BBB			
Credit Default Swap	-	-	NR*			
Credit Default Swap	-	-	NR*			
Inflation Swap	-	-	Α			
Inflation Swap	-	-	Α			
Interest Rate Swap	134,226,000	428,246	Α			
Interest Rate Swap	29,232,000	(432,358)	А			
Interest Rate Swap	-	-	NR*			
Interest Rate Swap	-	-	NR*			
Total	\$ 189,791,189	\$ 92,572				
		·	·			

 $NR* = Not \ rated.$ 

#### G. Future Investment Commitments

At December 31, 2016 and 2015, IMRF had future commitments for additional contributions to real estate and alternative investment managers totaling \$1,774,752,899 and \$1,482,903,571, respectively.

#### H. Post-employment Benefits Other Than Pensions

#### 1. Plan Description

IMRF, as an employer, administers a single-employer defined benefit healthcare plan ("Retiree Health Plan") under the provisions of ILCS Chapter 215, Article 5, Section 367j. As required by the statutes, the Retiree Health Plan provides lifetime health and dental care insurance for eligible retirees and their spouses through IMRF's group health insurance plan, which covers both active and retired members. Currently 17 retirees are in the plan and 190 active employees could be eligible at retirement. Benefit subsidy provisions have been established by IMRF's Board of Trustees that cover a percentage of the retiree's insurance premiums from the date of retirement to the date the retiree becomes eligible for Medicare. The amount of the subsidy varies based upon the retiree's years of service with IMRF. These benefit subsidy provisions can be modified or terminated at the sole discretion of the IMRF Board. Except for any eligible subsidy, retirees must pay the entire blended insurance premium for their coverage.

#### 2. Funding Policy

The contribution requirements of plan members and IMRF are established by IMRF's Board of Trustees within the provisions of the Illinois statutes. The required contribution is based on projected pay-as-you-go financing requirements. For 2016 and 2015, IMRF contributed \$2,293,831 and \$2,160,990, respectively, to the plan for current premiums, including a \$41,194 subsidy in 2016 and a \$44,828 subsidy in 2015 for retiree health and dental care premiums (79.6 percent and 78.9 percent of total premiums for each year). Plan members receiving benefits contributed \$589,136 in 2016 and \$577,094 in 2015, or 20.4 percent and 21.1 percent of the total premiums for each year, through their required contributions of between \$111 and \$395 per month, based upon their coverage.

#### 3. Annual OPEB Cost and Net OPEB Obligation

IMRF's annual other post-employment benefit (OPEB) expense is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed 30 years. The following table shows the components of IMRF's annual OPEB cost, the amount actually contributed to the plan, and changes in IMRF's net OPEB obligation to the Retiree Health Plan:

	2016	2015	2014
Annual required contribution	\$177,296	\$166,811	\$169,667
Interest on net OPEB obligation	73,415	68,265	63,365
Adjustment to annual required contribution	(52,478)	(48,796)	(45,294)
Annual OPEB expense	198,233	186,280	187,738
Contributions made	(114,258)	(117,607)	(122,410)
Increase in net OPEB obligation	83,975	68,673	65,328
Net OPEB obligation - beginning of year	978,870	910,197	844,869
Net OPEB obligation - end of year	\$1,062,845	\$978,870	\$910,197

In 2016, 2015, and 2014, IMRF contributed 64 percent, 71 percent, and 72 percent, respectively, of the annual required OPEB contribution to the plan.

#### 4. Actuarial Valuation Information

Actuarial Valuation December 31	Actuarial Accrued Liability (AAL)	Actuarial Assets	Actuarial Assets as a Percentage of AAL	Total Unfunded Actuarial Accrued Liability (UAAL) (a)	Actuarial Covered Payroll (b)	UAAL as a Percentage of Covered Payroll (a/b)
2016	\$ 1,772,578	\$ -	-%	\$1,772,578	\$ 15,028,706	11.8%
2015	1,861,671	-	-	1,861,671	14,532,459	12.8
2014	1,756,356	-	-	1,756,356	13,561,831	13.0

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The Retiree Health Plan was established as a pay-as-you-go plan and IMRF does not intend to pre-fund the plan at this time.

#### 5. Actuarial Methods and Assumptions

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan member to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities consistent with the long-term perspective of the calculations.

In the December 31, 2016, actuarial valuation, the individual entry age actuarial cost method was used. The actuarial assumptions included a 7.5 percent investment rate of return which is based upon the employer's assumed return on its assets and an annual healthcare cost trend rate of 9 percent initially, reduced by decrements to an ultimate rate of 3.5 percent after nine years. Both rates include a 3.5 percent inflation assumption. The unfunded actuarial accrued liability is being amortized as a level percentage of projected payroll over an open 30-year period.

#### I. Fair Value Measurement

IMRF categorizes investments measured at fair value within the fair value hierarchy established by generally accepted accounting principles (GAAP). The hierarchy prioritizes valuation inputs used to measure the fair value of the asset or liability into three broad categories.

The inputs or methodology used for valuing the securities is not an indication of the risk associated with investing in those respective securities.

The three hierarchy categories are as follows:

- Level 1: Investments reflect prices quoted in active markets for identical assets.
- Level 2: Investments reflect prices that are based on a similar observable asset either directly or indirectly in an active market, and inputs in markets are not considered to be active for identical or similar assets.
- Level 3: Investments reflect prices based on unobservable inputs may include situations where there is minimal, if any, market activity for the investment.

If the fair value is measured using inputs from different levels in the fair value hierarchy, the measurement is categorized based on the lowest priority level input that is significant to the valuation. The Fund's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgement and considers factors specific to the investment. Investments measured at fair value using the net asset value (NAV) per share (or equivalent) as a practical expedient to fair value are not classified in the fair value hierarchy; however, separate disclosures for these investments are required.

Short term investments consisting of money market funds, certificates of deposit, and highly liquid cash equivalents are reported at amortized cost which approximates fair value. These investments are not categorized in the fair value hierarchy.

Fixed income and equity investments classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets, to the extent that these securities are actively traded.

Fixed income and equity investments classified in Level 2 of the fair value hierarchy are normally valued based on price data obtained from observed transactions and market price quotations from broker dealers and/or pricing sources. Valuation estimates for service providers' internal models use observable inputs such as interest rates, yield curves, credit/risk spreads, and default rates. Matrix pricing techniques value securities based on their relationship to benchmark quoted prices. Exchange traded and over-the-counter investment derivatives are valued by independent pricing service providers, where the value is derived from underlying asset prices, reference rates, indices, or other observable inputs.

Fixed income and equity investments classified in Level 3 of the fair value hierarchy are valued using significant unobservable inputs, proprietary information, inputs that cannot be corroborated by observable market data and/or due to limited trading volume.

The following tables summarizes the valuation of IMRF's investments by the fair value hierarchy levels and investments measured at NAV as of December 31, 2016, and December 31, 2015.

As of December 31, 2016					
Fair Value Measurements Using					
	Fair Value	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Investments Measured at NAV
U.S. government & agency fixed income	\$ 3,214,724,905	\$ 1,319,964,076	\$ 1,820,995,083	\$ 73,765,746	\$ -
U.S. corporate fixed income	2,811,204,924	-	2,726,669,177	84,535,747	-
U.S. fixed income funds	2,948,622,934	-	1,508,847,244	-	1,439,775,690
Foreign fixed income	1,031,274,052	-	708,342,363	15,028,166	307,903,523
Fixed Income Total	10,005,826,815	1,319,964,076	6,764,853,867	173,329,659	1,747,679,213
U.S. equities	10,607,507,564	10,607,180,441	-	327,123	-
U.S. equity funds	5,183,971,189	3,338,558	2,944,696,020	-	2,235,936,611
Foreign equities	3,781,377,558	3,768,256,498	12,975,209	145,851	-
Foreign equity funds	2,651,235,407	59,787,640	1,982,765,302	-	608,682,465
Equity Total	22,224,091,718	14,438,563,137	4,940,436,531	472,974	2,844,619,076
Real Estate Total	2,015,128,558	-	-	-	2,015,128,558
Private Equity Total	1,375,282,224	-	-	-	1,375,282,224
Absolute Return Funds Total	23,183,100	-	-	-	23,183,100
Options Total	(552,414)	(262,806)	(289,608)	-	-
Swaps Total	2,915,515	-	2,915,515	-	-
Investments measured at fair value	\$ 35,645,875,516	\$ 15,758,264,407	\$ 11,707,916,305	\$ 173,802,633	\$ 8,005,892,171
Investments measured at amortized cost	718,420,364				
Total	\$ 36,364,295,880				

Total	\$ 50/50 <del>1</del> /255/000					
		As of Decem	ber 31, 2015			
Fair Value Measurements Using						
	Fair Value	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Investments Measured at NAV	
U.S. government & agency fixed income	\$ 3,058,217,861	\$ 1,165,490,500	\$ 1,811,892,229	\$ 80,835,132	\$ -	
U.S. corporate fixed income	2,604,807,700	-	2,526,854,943	77,952,757	-	
U.S. fixed income funds	2,878,562,109	-	1,470,119,311	-	1,408,442,798	
Foreign fixed income	958,915,305	-	660,491,187	6,229,331	292,194,787	
Fixed Income Total	9,500,502,975	1,165,490,500	6,469,357,670	165,017,220	1,700,637,585	
U.S. equities	9,916,630,799	9,916,025,277	278,787	326,735	-	
U.S. equity funds	4,500,564,550		2,611,063,592	-	1,889,500,958	
Foreign equities	3,584,187,301	3,573,564,098	7,774,515	2,848,688	-	
Foreign equity funds	2,721,257,729	37,309,909	2,139,362,155	-	544,585,665	
Equity Total	20,722,640,379	13,526,899,284	4,758,479,049	3,175,423	2,434,086,623	
Real Estate Total	1,804,876,706	-	-	-	1,804,876,706	
Private Equity Total	1,171,536,786	-	-	-	1,171,536,786	
Absolute Return Funds Total	488,243,962	-	-	-	488,243,962	
Options Total	(684,261)	649,933	(1,334,194)	-	-	
Swaps Total	92,572	-	92,572	-	-	
Investments measured at fair value	\$ 33,687,209,119	\$ 14,693,039,717	\$ 11,226,595,097	\$ 168,192,643	\$ 7,599,381,662	
Investments measured at amortized cost	662,700,980					
Total	\$ 34,349,910,099					

Investments measured at Net Asset Value (NAV)					
Year Ended December 31, 2016	Fair Value	Unfunded Commitments	Redemption Frequency (if currently eligible)	Redemption Notice Period	
U.S. fixed income funds	\$ 1,439,775,690	\$ -	Daily	0-2 Days	
Foreign fixed income	307,903,523	-	Daily	30 Days	
Commingled Fixed Income Funds Total	1,747,679,213	-			
U.S. equity funds	2,235,936,611	-	Daily	0-15 Days	
Foreign equity funds	608,682,465	-	Daily	0-1 Day	
Commingled Equity Funds Total	2,844,619,076	-			
Commingled funds	1,631,785,183	955,343,899	Quarterly, Not Eligible	30-60 Days, N/A	
Directly owned	383,343,375	4,791,208	N/A	N/A	
Real Estate Total	2,015,128,558	960,135,107			
Timberland	74,578,652	3,841,674	N/A	N/A	
Farmland	186,051,348	85,423,292	N/A	N/A	
Comingled funds	1,114,652,224	725,352,826	Quarterly, Not Eligible	60 Days, N/A	
Private Equity Total	1,375,282,224	814,617,792			
Absolute Return Funds Total	23,183,100	-	Monthly, Quarterly	Notice in Place	
Investments measured at NAV	8,005,892,171	1,774,752,899			

Year Ended December 31, 2015	Fair Value	Unfunded Commitments	Redemption Frequency (if currently eligible)	Redemption Notice Period
U.S. fixed income funds	1,408,442,798	\$ -	Daily	0-2 Days
Foreign fixed income	292,194,787	-	Daily	30 Days
Commingled Fixed Income Funds Total	1,700,637,585	-		
U.S. equity funds	1,889,500,958	-	Daily	0-15 Days
Foreign equity funds	544,585,665	-	Daily	0-1 Day
Commingled Equity Funds Total	2,434,086,623	-		
Commingled funds	1,465,419,392	824,359,444	Quarterly, Not Eligible	30-60 Days, N/A
Directly owned	339,457,314	40,435,902	N/A	N/A
Real Estate Total	1,804,876,706	864,795,346		
Timberland	76,028,396	3,841,675	N/A	N/A
Farmland	186,698,795	95,300,000	N/A	N/A
Comingled funds	908,809,595	518,966,550	Quarterly, Not Eligible	60 Days, N/A
Private Equity Total	1,171,536,786	618,108,225		
Absolute Return Funds Total	488,243,962	-	Monthly	30 Days
Investments measured at NAV	7,599,381,662	1,482,903,571		

#### 1. Investments Measured at Net Asset Value

Commingled Fixed Income Funds. This type includes fixed income funds that are considered to be commingled in nature. The fair value of the investments in this type have been determined using the NAV per share (or equivalent) of the Plan's ownership interest in the partners' capital at the end of the period, based upon the fair value of the underlying investments.

Commingled Equity Funds. This type includes domestic equity funds and an international equity fund that are considered to be commingled in nature. The fair value of the investments in this type have been determined using the NAV per share (or equivalent) of the Plan's ownership interest in the partners' capital at the end of the period, based upon the fair value of the underlying investments.

Commingled Real Estate Funds. This type includes open-ended commingled funds, commingled close-ended funds and a commingled closed-ended fund of funds. The fair value of the investments in this type have been determined using the NAV per share (or equivalent) of the Plan's ownership interest in the partners' capital at the end of the period based upon the fair value of the underlying investments. The open-ended commingled funds are generally eligible for redemption on a quarterly basis. The closed-ended funds are not eligible for redemption. Distributions received as underlying investments within the fund are liquidated over the term of the fund, which is typically seven to 12 years.

**Directly Owned Real Estate**. This type consists of directly owned industrial properties held in a limited partnership structure. The partnership is valued at fair value based on either third party appraisals performed at least every three years, or the estimate of value as determined by the good faith of the advisor. Investments are generally long term in nature (five to ten-plus years), although liquidity can be generated by the sale of underlying properties.

**Timberland.** This type consists of directly owned timberland properties across the United States. The properties are valued at fair value based upon third party appraisals during the quarter of the anniversary of the property. Investments are generally long term in nature (ten-plus years), although liquidity can be generated by the sale of underlying properties.

**Farmland.** This type consists of owned and operated permanent crop properties and owned and leased row crop properties held in a limited partnership structure. The partnership is valued at fair value based on annual third party appraisals. Investments are generally long term in nature (five to ten-plus years), although liquidity can be generated by the sale of underlying properties.

Alternative Commingled Funds. This type consists of private equity separate accounts with underlying partnerships, private equity fund of funds, direct limited partnership investments, and a hedge fund of funds separate account with 25 underlying hedge fund investments. The fair value of the investments in this type have been determined using the NAV per share (or equivalent) of the Plan's ownership interest in the partners' capital at the end of the period based upon the fair value of the underlying investments. Private equity investments are not eligible for redemption. Distributions received as underlying investments within the fund are liquidated over the term of the partnership, which is typically seven to 12 years. The hedge fund of funds is eligible for redemption at any time, subject to the redemption constraints of the underlying investments.

#### J. Reserves

IMRF maintains several reserves as required by the Illinois Pension Code and Board policy. All reserves are fully funded with the exception of some individual employer retirement reserves. These reserves do not equal the present value of expected retirement benefits for all employers. In 2016 the present value of expected retirement benefits exceeded the retirement reserves for all employers combined by \$4,850,330,184. In 2015 the present value of expected retirement benefits exceeded the retirement reserves for all employers combined by \$4,973,495,479. These reserves are explained in the Illinois Pension Code, Section 7:202 through 208.

	2016	2015
Member Contribution Reserve		
Balance at December 31	\$ 6,716,725,619	\$ 6,485,672,750
Annuity Reserve		
Balance at December 31	\$ 21,085,519,077	\$ 19,506,345,352
Employer Reserves		
Balance at December 31		
Retirement contribution reserve	\$ 8,623,070,997	\$ 8,517,964,349
Earnings and experience reserve	56,624,023	(28,878,503)
Supplemental retirement benefit	770,429	1,512,180
Pooled death benefit reserve	19,463,926	20,033,794
Pooled disability benefit reserve	12,723,728	10,428,489
Total Employer Reserves	\$ 8,712,653,103	\$ 8,521,060,309

#### K. Other Notes

#### 1. Prepaid Expenses

Balance at December 31	2016	2015	
Prepaid administrative expenses	\$ 1,722,140	\$ 1,317,816	
January 1 benefits charged to bank account in December	139,953,395	129,599,357	
Total	\$ 141,675,535	\$ 130,917,173	

#### 2. Capital Assets

Capital assets are recorded at their cost at the time of acquisition. Depreciation and amortization are computed using the straight-line method over the estimated useful life of the related asset. The estimated useful lives are 1) furniture: ten years; 2) equipment: five to ten years; 3) internally developed software: six years; and 4) automobiles: four years.

Year ended December 31	2016	2015			
Equipment, furniture, automobiles, and internally developed software					
Beginning balance in service	\$ 12,999,865	\$ 11,918,926			
Additions	11,789,138	1,116,333			
Deletions	(160,011)	(35,394)			
Ending balance in service	24,628,992	12,999,865			
Software under development	-	19,062,963			
Total ending balance	24,628,992	32,062,828			
Accumulated depreciation and amortization					
Beginning balance	10,151,464	8,592,158			
Additions	2,817,420	1,576,511			
Deletions	(160,011)	(17,205)			
Ending balance	12,808,873	10,151,464			
Capital assets, net	\$ 11,820,119	\$ 21,911,364			

#### 3. Compensated Absences

Annual vacation leave is earned by all employees. Upon termination, employees are eligible to receive compensation for their accrued annual leave balances. At December 31, 2016, a liability existed for accumulated annual leave calculated at the employee's December 31, 2016, pay rate in the amount of \$907,484. Employees who have been continuously employed by IMRF for at least five years prior to the date of their retirement, resignation, or death will receive payment for their accumulated sick leave balance with such payment not to exceed the sum of 90 days of the employee's annual compensation. For employees who have not been employed for five continuous years, an accrued liability is calculated, assuming the likelihood that they will meet the five-year threshold in the future. At December 31, 2016, a liability existed for accumulated and accrued sick leave, calculated at the employee's December 31, 2016, pay rate in the amount of \$2,686,473. The total leave liability of \$3,593,957 and \$3,427,018 as of December 31, 2016, and 2015, respectively, is reflected on the Statement of Fiduciary Net Position in accrued expenses and benefits payable.

#### 4. Lease Agreements

The Fund leases its headquarters facility at the Drake Oak Brook Plaza under an agreement with the building's management. In 2010 the Fund entered into an agreement covering the period June 1, 2011, through October 31, 2016. The lease contained an abatement clause. The Fund amortized the abated rent, operating expenses, and real estate taxes over the period covered by the agreement. In 2012 the Fund entered into an agreement with the building's management to lease additional space at the Drake Oak Brook Plaza covering the period January 15, 2013, through October 31, 2016. This lease also contained an abatement clause. The Fund amortized the abated rent, operating expenses, and real estate taxes over the period covered by the agreement. In 2015, the Fund entered into a new agreement with the building's management to extend the lease until October 31, 2023. This lease also contains an abatement clause. The Fund will amortize the abated rent, operating expenses, and real estate taxes over the period covered by the agreement. Total rental expense for 2016 and 2015 was \$912,621 and \$935,113, respectively.

The Fund also leases office space in Springfield for its Regional Counseling Center. In 2011 the Fund entered into an agreement covering the period November 1, 2011, through October 31, 2016. In 2016 the Fund entered into a new agreement covering the period November 1, 2016, through March 31, 2024. Total rental expense for the Springfield office for 2016 and 2015 was \$34,004 and \$33,660, respectively.

The minimum commitments for the remainder of these leases are as follows:

2017	\$ 869,468
2018	1,072,571
2019	1,103,802
2020	1,135,956
2021	1,169,060
2022	1,203,391
2023	1,041,375
2024	17,215

#### 5. Risk Management

IMRF carries commercial, business, fiduciary liability, cyber-insurance, and automobile liability insurance coverage provided by private insurance carriers. These policies limit the risk of loss from torts; theft of, damage to, and destruction of assets; errors and omission; injuries to employees; and natural disasters. There have been no material insurance claims filed or paid during the last three years.

The Fund is also exposed to investment risk. This risk is limited by diversification of the portfolio, establishment and monitoring of investment policies, and guidelines and monitoring of investment performance. In addition, investment consultants and fiduciary counsel monitor the Fund's activities and advise the Board of Trustees.

#### 6. Contingencies

IMRF is a defendant in a number of lawsuits that, in management's opinion, will not have a material effect on the financial statements.

## Required Supplementary Information\*

Schedule of Money-weighted Rate of Returns

The Money-weighted Rate of Return is presented to provide information regarding IMRF's investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested.

	2016	2015	2014	2013	2012
Annual Money-weighted Rate of Return, net of investment expenses	7.84%	0.58%	6.08%	20.15%	13.81%

(Ten year trend not available)

### Supplementary Information

Schedule of Administrative Expenses	2016	2015
Personal services	\$ 20,229,624	\$ 18,141,219
Supplies	585,339	571,529
Professional services	2,355,374	2,431,116
Occupancy and utilities	2,011,936	1,962,841
Postage and delivery	1,013,368	1,160,413
Equipment service and rental	1,031,922	927,704
Expendable equipment	218,272	138,992
Miscellaneous	7,286,811	1,797,656
Depreciation	2,817,420	1,576,511
Total	\$ 37,550,066	\$ 28,707,981

Schedule of Payments for Professional Services		
Modernization consulting	\$ 790,881	\$ 153,401
Actuary	709,964	914,103
Internal auditing	101,484	87,357
External auditor	226,464	439,484
Medical consultant	120,494	146,770
Public relations consultant	83,147	90,123
Information Technology consultants	65,438	344,142
Legislative lobbying consultant	70,800	69,492
Compensation and benefit consultants	52,027	102,496
Legal services	107,216	73,646
Other consulting	13,140	9,750
Hearing officer	9,915	-
Tax consultant	4,404	352
Total	\$ 2,355,374	\$ 2,431,116

Schedule of Investment Expenses		
Investment manager fees	\$ 110,822,480	\$ 116,375,118
Master trustee fees	280,000	280,000
Investment consultants	928,455	910,060
Investment legal fees	271,604	171,992
Tax preparation fees	89,844	-
Miscellaneous	128,989	98,321
Total	\$ 112,521,372	\$ 117,835,491

A schedule of investment-related fees can be found in the Investments section.

<sup>\*</sup> Unaudited; see accompanying Independent Auditor's Report

# INVESTMENTS

11 1 V C 3 LI II C II I C CO I	Investment	Consultant's	Report	52
--------------------------------	------------	--------------	--------	----

Master Trustee's Report 54

Investment Consultants 55

Investment Policies 57

Returns by Asset Class 60

Investment Portfolio Summary 61

Asset Allocation 62

Investment Portfolio Charts 63

Ten Largest Holdings 64

Domestic Brokerage Commissions 65

International Brokerage Commissions 66

Schedule of Investment Fees 67





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March 10, 2017

The Board of Trustees
The Executive Director
Illinois Municipal Retirement Fund
2211 York Road, Suite 500
Oak Brook, IL 60523

Dear Trustees and Executive Director:

Callan Associates is pleased to report the results of the Illinois Municipal Retirement Fund (IMRF) investment program for calendar year 2016.

Last year turned out to be a turnultuous one, with two events jolting the capital markets and defying investor expectations: the U.K. Brexit vote in June and the U.S. presidential election in November. The U.S. equity market, as measured by the Russell 3000 Index, reacted positively advancing 12.7%. International equity markets, as measured by the MSCI All Country World ex-U.S. Index, rose a more muted 4.5%. Yields finished 2016 moderately higher and the Bloomberg Aggregate Index returned 2.65%.

The Illinois Municipal Retirement Fund reported assets of \$36.3 billion as of December 31, 2016. This represented an increase of approximately \$2 billion from December 31, 2015.

The Total Fund returned 7.8% net of fees in 2016, underperforming the Total Fund Benchmark by 0.1%. The Total Fund Benchmark is composed of the individual asset class benchmarks weighted in the same proportion as the target asset class allocations<sup>1</sup>. On a gross of fee basis, the Total Fund ranked in the 41<sup>st</sup> percentile of Callan's Large Public Fund Sponsor Database for the one-year period, and in the 19<sup>th</sup> and 12<sup>th</sup> percentile for the trailing five and ten year periods, respectively. The Fund's domestic equity (+12.4%) and real estate (+9.0%) posted the strongest absolute returns during 2016.

The domestic equity portfolio, with a current target allocation of 38%, returned 12.4% net of fees for the year ended December 31, 2016. This return trailed the Russell 3000 Index by 0.4%. IMRF's Domestic Equity portfolio, gross of fees, ranked at the 59<sup>th</sup> percentile compared to other public fund domestic equity portfolios.

Outside the U.S., emerging markets returned 11.2% during 2016 and substantially outperformed developed markets. Equity markets outside of the United States, represented by the All Country World ex-U.S. Index, gained 4.5%.

The IMRF international equity portfolio gained 3.2%% net of fees over the one-year period underperforming the MSCI All-Country World ex-U.S. Index by 1.3%. This asset class, which has a current target allocation of 17%, is broadly invested and includes a dedicated allocation to non-US small cap and emerging markets stocks.

In a modestly rising interest rate environment, the Fund's fixed income portfolio returned 4.7% net of fees, beating the Bloomberg Aggregate Bond Index by 2.1%. The gross of fee return of 4.9% ranked in the 38<sup>th</sup> percentile compared to peers. The fixed income portfolio has a current target allocation of 27% and was well diversified including dedicated investments in non-core fixed income strategies.

<sup>&</sup>lt;sup>1</sup> As of December 31, 2016, the Total Fund Benchmark consisted of 38% Russell 3000 Index, 27% Barclays Capital Aggregate Bond Index, 17% MSCI AC World ex-U.S. Index, 8% NFI-ODCE Value Weight Net, 9% of the Alternatives Custom Benchmark of 9%, and 1% of the Citigroup 90-Day T-Bill Index.

Illinois Municipal Retirement Fund March 10, 2017





Investment measurements and comparisons have been made using standard performance evaluation methods and results are presented in a manner consistent with the investment industry. Rates of return were determined using a time-weighted return calculation.

Sincerely,

R. Ryan Ball, CFA Senior Vice President



February 13, 2017

Board of Trustees and Executive Director Illinois Municipal Retirement Fund 2211 York Road Oak Brook, IL 60523-2374

To the Board of Trustees and the Executive Director

The Northern Trust Company as Master Trustee has provided detailed financial reports of all investments, receipts, disbursements, purchases and sales of securities and other transactions pertinent to the Fund for the period January 1, 2016, through December 31, 2016. Also, a statement of assets together with their fair market value was provided, showing the properties held as of December 31, 2016. The Northern Trust Company certifies that the statements contained therein are fairly presented and are true and accurate.

In addition to the custody of the assets, The Northern Trust Company provided and will continue to provide the following services as Master Trustee:

- Receive and hold all amounts paid to the Trust Fund by the Board of Trustees.
- Accept and deliver securities in accordance with the instructions of appointed Investment Managers.
- Collect dividends and registered interest payments.
- Collect matured or called securities and coupons.
- Securities Lending.
- Invest cash balances held from time to time in the individual investment management accounts in short term, cash equivalent securities.
- Exercise rights of ownership in accordance with pre-described jurisdiction of stock subscriptions and conversion rights.
- 8. Hold securities in the name of the Master Trust or nominee form.
- Employ agents with the consent of the Board of Trustees.
- Provide disbursement and security fail float income.
- Checking Accounts.
- On-line Trust and Banking reporting.

THE NORTHERN TRUST COMPANY

Kimberly A. Miller

Senior Vice President

#### **Investment Consultants**

#### **Master Trustee**

**The Northern Trust Company**Kim Miller, Senior Vice President

Chicago, Illinois

#### **Performance Evaluation**

**Callan Associates Inc.** 

Janet Becker-Wold, Principal

Denver, Colorado

#### **Investment Consultant**

Callan Associates Inc.

Janet Becker-Wold, Principal

Denver, Colorado

#### **Investment Managers**

**Abbott Capital Management, LLC** 

New York, New York

**ABRY Partners** 

Boston, Massachusetts

**Advent Capital Management, LLC** 

New York, New York

**AEW Capital Management, L.P.** 

Boston, Massachusetts

**Almanac Realty Investors** 

New York, New York

**Ares Management, LLC** 

London, England

**Arga Investment Management, LP** 

Stamford, Connecticut

**Ariel Investments, LLC** 

Chicago, Illinois

**Arrowstreet Capital, L.P.** 

Cambridge, Massachusetts

**Artemis Real Estate Partners** 

Chevy Chase, Maryland

**Ativo Capital Management LLC** 

Chicago, Illinois

**AUA Private Equity Partners** 

New York, New York

**Aurora Investment Management** 

Chicago, Illinois

**Babson Capital Management, LLC** 

Charlotte, North Carolina

Beecken Petty O'Keefe & Company, LLC

Chicago, Illinois

BlackRock Financial Management, Inc.

New York, New York

The Blackstone Group LP

New York, New York

**BMO Asset Management U.S.** 

Chicago, Illinois

Brandes Investment Partners, L.P.

San Diego, California

**Brown Capital Management, Inc.** 

Baltimore, Maryland

**CBRE Global Investors** 

Los Angeles, California

Channing Capital Management, LLC

Chicago, Illinois

**Concerto Asset Management, LLC** 

Charlotte, North Carolina

**Cornerstone Real Estate Advisers LLC** 

Hartford, Connecticut

**Crescent Capital Group** 

Los Angeles, California

**Crow Holdings Capital** 

Dallas, Texas

**Dimensional Fund Advisors** 

Santa Monica, California

**Dodge & Cox Investment Managers** 

San Francisco, California

**Dune Capital Management LP** 

New York, New York

**EARNEST Partners, LLC** 

Atlanta, Georgia

**EnCap Investments, L.P.** 

Houston, Texas

**Estancia Capital Partners, L.P.** 

Scottsdale, Arizona

**Fidelity Institutional Asset Management** 

Boston, Massachusetts

**Forest Investment Associates** 

Atlanta, Georgia

**Franklin Templeton Real Estate Advisors** 

New York, New York

**Frontier Capital Management Co.** 

Boston, Massachusetts

Garcia Hamilton & Associates, L.P.

Houston, Texas

**Genesis Asset Managers** 

International, Ltd.

London, England

**GIA Partners, LLC** 

New York, New York

GlobeFlex Capital, L.P.

San Diego, California

Glovista Investments, LLC

Jersey City, New Jersey

**GTIS Partners** 

New York, New York

**Hancock Natural Resource Group, Inc.** 

Boston, Massachusetts

**Holland Capital Management** 

Chicago, Illinois

**ICV Partners** 

New York, New York

#### Investment Consultants (continued)

Inflexion Private
Equity Partners, LLP
London, England

**Invesco Real Estate** 

Dallas, Texas

Investment Counselors of Maryland, LLC Baltimore, Maryland

**LaSalle Investment Management** 

Chicago, Illinois

**Lazard Asset Management** 

New York, New York

**Lightspeed Venture Partners** 

Menlo Park, California

LM Capital Group, LLC

San Diego, California

Longfellow Investment Management Co.

Boston, Massachusetts

**LSV Asset Management** 

Chicago, Illinois

MacKay Shields, LLC

New York, New York

**Mayfield Fund** 

Menlo Park, California

**Metis Global Partners** 

San Diego, California

Mondrian Investment Partners Limited

London, England

Muller & Monroe Asset Management, LLC

Chicago, Illinois

**New Century Advisors, LLC** 

Bethesda, Maryland

**New Mainstream Capital** 

New York, New York

**Northern Trust Investments, Inc.** 

Chicago, Illinois

**Oak Street Real Estate Partners** 

Chicago, Illinois

Pantheon Ventures, Inc.

San Francisco, California

**Piedmont Investment Advisors, LLC** 

Durham, North Carolina

**Progress Investment Management** 

Company

San Francisco, California

**Pugh Capital Management** 

Seattle, Washington

Ramirez Asset Management, Inc.

New York, NY

**Resolution Real Estate Advisors, LLP** 

London, England

**Rockwood Capital, LLC** 

New York, New York

**Sands Capital Management, LLC** 

Arlington, Virginia

**Security Capital Markets Group, Inc.** 

Chicago, Illinois

Standish Mellon Asset Management

Company, LLC

Boston, Massachusetts

**Starwood Capital Group** 

Greenwich, Connecticut

**Strategic Global Advisors, LLC** 

Newport Beach, California

**TA Associates Realty** 

Boston, Massachusetts

**Taplin, Canida & Habacht** 

Miami, Florida

**Templeton Investment Counsel, LLC** 

Fort Lauderdale, Florida

**The Vistria Group** 

Chicago, Illinois

**Torchlight Investors** 

New York, New York

**Valor Equity Partners** 

Chicago, Illinois

**Versant Venture Management LLC** 

Menlo Park, California

**Vista Equity Partners, LLC** 

Austin, Texas

**Wall Street Associates** 

La Jolla, California

**Western Asset Management Company** 

Pasadena, California

William Blair & Company

Chicago, Illinois

#### **Investment Policies**

The Board of Trustees, operating within the prudent man framework, has adopted the following investment objectives and guidelines. The objectives and guidelines presented here are intended to be summarizations. Specific contractual objectives and guidelines are in effect for individual investment managers.

#### A. Investment Objectives

- 1. To diversify the investment portfolio so as to optimize investment returns.
- 2. To set investment and actuarial policies that assure the adequate accumulation of assets and maintain a reasonable funded status.
- 3. To achieve rates of return greater than the current actuarial investment assumption of 7.5 percent.
- 4. To achieve rates of return consistent with expectations for each asset class used, without significantly changing the expected risk profile of the asset class or the investment portfolio.
- 5. To achieve in U.S. equities a total return that exceeds the total return of the Russell 3000 Index.
- 6. To achieve in international equities a total return that exceeds the total return of the Morgan Stanley Capital International All Country World Index Ex-US (MSCI ACWI-Ex U.S.).
- 7. To achieve in fixed income securities a total return that exceeds the total return of the Barclays Aggregate Bond Index.
- 8. To achieve in equity real estate investments a return that exceeds the National Council of Real Estate Investment Fiduciaries (NCREIF) Open-End Diversified Core gross of fees (ODCE) Index over a rolling three-year period.
- 9. To achieve in alternative investments an annualized return of nine percent.
- 10. To achieve in internally managed short-term securities relative performance better than three-month U.S. Treasury Bills.

#### B. Proxy Voting Guidelines

The Board of Trustees of the Illinois Municipal Retirement Fund (IMRF) recognizes its fiduciary responsibility to prudently manage the assets of the Fund. The assets include common stock in many different companies and, as a shareowner, the Board also owns proxy voting rights. The Board acknowledges that it not only has a right to vote proxies, but also a duty to vote them. Proxies have economic value and, therefore, the Board has the duty to prudently oversee the management of them as it does all other Fund assets.

The Board shall vote proxies in accordance with the exclusive benefit rule which requires the Board to act solely in the economic interest of the Fund's members and beneficiaries.

Generally, proxies related to corporate governance shall be voted in favor of shareholder-sponsored proposals requiring corporate boards to act in the best interests of shareholders. Proxies related to director, executive, and employee compensation shall be voted in favor of compensation plans that motivate directors, executives, and employees to achieve high performance for the long-term benefits of all shareowners. Proxies related to takeover defenses shall be voted in favor of proposals allowing shareholders to vote on poison pills and golden parachutes. Proxies related to capital structure issues shall be voted in favor of proposals requiring shareowner approval for reasonable share increases needed for business purposes. Proxies related to mergers, acquisitions, and corporate restructuring will be voted on a case-by-case basis. Proxies related to routine management issues shall generally be voted in accordance with management's view on such issues. In keeping with the Board's fiduciary duty to act solely in the economic interest of the Fund, and because empirical evidence is inconclusive about whether all social and political proposals enhance shareowner value, IMRF will abstain from voting on such proposals.

#### C. Domestic Equity Investment Guidelines

- 1. Generally, no individual security shall comprise more than five percent of the total portfolio at market value.
- 2. The total portfolio shall generally not hold more than five percent of the outstanding shares of any one company.
- 3. Holdings of any one issuer, at the time of purchase, shall generally be limited to not more than 15 percent of a manager's portfolio market value.
- 4. Sector exposure in the total portfolio shall generally not differ by more than five percentage points from the sector exposure of the Russell 3000 Index.
- 5. Domestic equity managers must invest in equity securities that are listed on principal U.S. exchanges or traded over the counter. ADRs of foreign companies are permissible.

#### D. International Equity Investment Guidelines

- 1. Generally, no individual security shall comprise more than six percent of the total portfolio at market value.
- 2. The total portfolio shall generally not hold more than five percent of the outstanding shares of any one company.
- 3. Holdings of any one issuer, at the time of purchase, shall generally be limited to a maximum of eight percent of a manager's portfolio market value.
- 4. Sector exposure in the portfolio shall not exceed the higher of 25 percent or two times the benchmark weighting at market value.
- 5. Country exposure in the portfolio shall not exceed the higher of 25 percent or two times the benchmark weighting at market value.
- 6. International equity managers shall generally invest in equity securities of companies domiciled outside of the U.S. They may be allowed to invest in U.S. domiciled companies that operate, and/or generate revenues primarily outside the U.S.
- 7. International equity managers may engage in various transactions to manage currency. Forward contracts, futures, and options may be used for currency management purposes. Currency trading may not be used for speculative purposes unless otherwise specified in individual manager guidelines.

#### E. Fixed Income Investment Guidelines

- 1. Bonds, notes, or other obligations of indebtedness issued or guaranteed by the U.S. government, its agencies, or instrumentalities may be held without restriction.
- 2. The average credit quality of the total fixed income portfolio must be investment grade.
- 3. Debt obligations of any single U.S. corporation shall generally be limited to a maximum of five percent of the total fixed income portfolio at market value.
- 4. Generally, no more than 30 percent of an investment manager's assets at market value may be invested in securities rated below investment grade at the time of purchase. Investment managers outside of core and core plus mandates are not subject to this restriction.
- 5. Bonds or other debt obligations of foreign countries and corporations payable in U.S. dollars and foreign currency are authorized, but in general will not exceed 15 percent of total fixed income portfolio.
- 6. Individual manager portfolios shall have an effective duration between 80-120 percent of the index for mandates benchmarked against the Barclays Capital Aggregate Index or the Merrill Lynch High Yield Cash Pay Index.
- 7. The use of swaps, exchange-traded financial futures, exchange-traded options on financial futures, and over-the-counter options are subject to individual manager guidelines. Managers are not permitted to utilize these transactions for speculative purposes. Leverage is not allowed except as permitted for rolling mortgage pass-through securities.
- 8. No assets shall be committed to short sale contracts.

#### F. Equity Real Estate Investment Guidelines

The primary role of the global real estate program is to provide diversification benefits to the total Fund through low correlations with other portfolio asset classes. The secondary role is to generate income and provide protection against inflation.

- 1. The maximum commitment to any private real estate manager shall be 40 percent of the total real estate portfolio value plus unfunded commitments at the time of due diligence.
- 2. IMRF will seek property type diversification at the total private real estate portfolio level and any single private real estate investment may not be fully diversified. Investments may include office, retail, industrial, multi-family, and other non-traditional categories such as hotels, self-storage, data centers, student housing, land, and other property types.
- 3. IMRF will seek geographic and economic diversification at the total private real estate portfolio level. Any given investment may not be diversified on a stand-alone basis. Although IMRF may invest in strategies where investments are located outside of the U.S., exposure to these dedicated strategies is limited to 20 percent of the total real estate portfolio value plus unfunded commitments at the time of due diligence.
- 4. IMRF's long-term strategic target to core real estate investments is 60 percent with a minimum of 50 percent.
- 5. Modest amounts of leverage may be used as a means of enhancing the overall risk adjusted returns. Leverage at the total real estate portfolio level will be kept below 50 percent loan to value.
- 6. Publicly traded real estate securities will not exceed 20 percent of the total real estate portfolio plus unfunded commitments at the time of due diligence.
- 7. The majority of real estate investments will consist of equity ownership in commercial real estate. Managers whose sole strategy is to invest in non-equity or debt strategies will not exceed 25 percent of the total real estate portfolio plus unfunded commitments at the time of due diligence.

#### G. Alternative Investment Guidelines

The Alternative Investment Portfolio will consist of venture capital, buyout, mezzanine, special situation, timber, agriculture, and absolute return investments. The investments will be made to generate long-term returns in a diversified manner. The investments will generally be made through limited partnership structures in which IMRF commits a fixed amount that the General Partner will invest over several years. The partnership structure may cover periods of 10 years or more. IMRF understands and recognizes that the alternative asset class will not be structured in a way to provide short-term cash flow needs for the Fund.

Exposure to dedicated non-U.S. strategies will be limited to 30 percent of the total alternative investments portfolio value plus unfunded commitments at the time of due diligence.

The maximum commitment to any direct alternative manager shall be 40 percent of the total alternative investments portfolio value plus unfunded commitments at the time of due diligence.

#### H. Short-term Investment Guidelines

Permissible short-term investments are U.S. Treasury Bills and Notes, high-grade commercial paper, repurchase agreements, banker's acceptances, and certificates of deposit. Commercial paper investments shall be made in instruments rated "A-2" or "P-2" or better, as defined by a recognized rating service. Comparable ratings are required for banker's acceptances and certificates of deposit. No more than \$50 million of current market value shall be invested in the securities of any one issuer, with the exception of the U.S. government and its agencies. Idle cash balances swept by the custodian bank shall be invested in a constant \$1 Net Asset Value vehicle. The objective is to generate current income that is consistent with preservation of capital and maintenance of liquidity.

## Returns by Asset Class (Periods ending December 31st)

							Annualized	
	2016	2015	2014	2013	2012	3 Yrs	5 Yrs	10 Yrs
Total Fund Time - Weighted Returns								
IMRF - Gross of Fees	8.00%	0.44%	6.01%	20.26%	13.77%	4.84%	9.54%	6.14%
IMRF - Net of Fees	7.77%	0.20%	5.76%	19.99%	13.51%	4.60%	9.29%	5.91%
CPI (Inflation)	2.07%	0.73%	0.76%	1.50%	1.74%	1.18%	1.36%	1.81%
Equities - U.S.								
IMRF - Gross of Fees	12.62%	0.02%	9.81%	37.64%	17.39%	7.35%	14.86%	7.38%
IMRF - Net of Fees	12.35%	(0.24)%	9.54%	37.33%	17.09%	7.08%	14.57%	7.12%
Dow Jones U.S. Total Stock Market Index	12.74%	0.48%	12.55%	33.57%	16.43%	8.43%	14.67%	7.07%
Russell 2000	21.31%	(4.41)%	4.89%	38.82%	16.35%	6.74%	14.46%	7.07%
Equities - International								
IMRF - Gross of Fees	3.54%	(1.90)%	(2.79)%	20.24%	19.11%	(0.42)%	7.18%	1.88%
IMRF - Net of Fees	3.21%	(2.21)%	(3.10)%	19.86%	18.70%	(0.75)%	6.83%	1.56%
MSCI ACWI Ex-U.S.	4.50%	(5.66)%	(3.87)%	15.29%	16.83%	(1.78)%	5.00%	0.96%
MSCI EAFE	1.00%	(0.81)%	(4.90)%	22.78%	17.32%	(1.60)%	6.53%	0.75%
Fixed Income								
IMRF - Gross of Fees	4.85%	0.09%	5.93%	(0.59)%	7.41%	3.65%	3.52%	5.20%
IMRF - Net of Fees	4.71%	(0.04)%	5.78%	(0.75)%	7.22%	3.51%	3.37%	5.06%
Barclays Aggregate	2.65%	0.55%	5.97%	(2.02)%	4.21%	3.03%	2.23%	4.34%
Barclays Government/ Credit	3.05%	0.15%	6.01%	(2.35)%	4.82%	3.04%	2.29%	4.40%
Merrill Lynch High Yield	17.34%	(4.55)%	2.45%	7.38%	15.43%	4.69%	7.30%	7.27%
Real Estate								
IMRF - Net of Fees	8.97%	11.99%	12.66%	10.60%	12.28%	11.47%	11.61%	5.11%
Real Estate Benchmark	7.79%	13.95%	11.46%	14.96%	11.54%	11.04%	11.51%	7.74%
Alternative Investments								
IMRF - Gross of Fees	5.43%	6.34%	9.04%	13.61%	4.74%	7.89%	8.38%	6.46%
IMRF - Net of Fees	5.11%	5.95%	8.47%	13.33%	4.44%	7.49%	8.05%	6.15%
Cash & Cash Equivalents								
IMRF	0.63%	0.29%	0.17%	0.11%	0.23%	0.37%	0.29%	(1.64)%

These investment results are calculated and presented using standard performance evaluation methods in a manner consistent with the investment industry in general and public pension funds in particular. Rates of return were determined using a modified time-weighted return calculation.

Source: Callan Associates Portfolio Evaluation Program.

# Schedule I Investment Portfolio Summary (In millions of dollars)

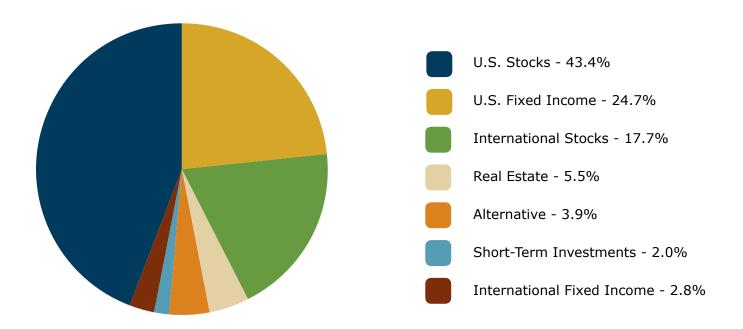
	As of Dece	mber 31, 2016	As of Dece	As of December 31, 2015		
	Fair Value	Percent of Total Fair Value	Fair Value	Percent of Total Fair Value		
Fixed Income						
Government & Agencies	\$ 3,214.7	8.9%	\$ 3,058.2	8.9%		
Corporate	2,811.2	7.7%	2,604.8	7.6%		
Index Funds	2,948.6	8.1%	2,878.6	8.4%		
Foreign	1,031.3	2.8%	958.9	2.8%		
Total Fixed Income	10,005.8	27.5%	9,500.5	27.7%		
Stocks						
U.S. Common & Preferred	10,607.5	29.2%	9,916.6	28.9%		
U.S. Stock Funds	5,184.0	14.2%	4,500.6	13.1%		
Foreign Common & Preferred	3,781.4	10.4%	3,584.2	10.4%		
Foreign Stock Funds	2,651.2	7.3%	2,721.2	7.9%		
Total Stocks	22,224.1	61.1%	20,722.6	60.3%		
Real Estate						
Commingled Funds	1,631.8	4.5%	1,465.4	4.2%		
Directly Owned	383.3	1.0%	339.5	1.0%		
Total Real Estate	2,015.1	5.5%	1,804.9	5.2%		
Alternative Investments						
Commingled Funds	1,137.9	3.2%	1,397.1	4.1%		
Timber & Agricultural	260.6	0.7%	262.7	0.8%		
Total Alternative Investments	1,398.5	3.9%	1,659.8	4.9%		
Short-Term Investments	720.8	2.0%	662.1	1.9%		
Total Portfolio	\$ 36,364.3	100.0%	\$ 34,349.9	100.0%		

## Schedule II Asset Allocation (Last five years)

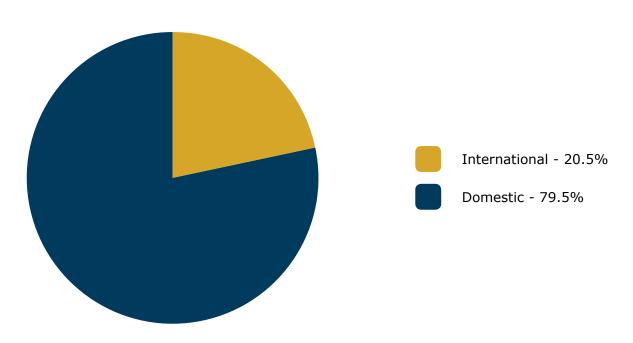
	Fair Value as a Percent of Portfolio				
	2016	2015	2014	2013	2012
Fixed Income					
U.S. Government & Agencies	8.9%	8.9%	8.2%	7.6%	12.3%
Corporate	7.7%	7.6%	7.2%	8.6%	10.3%
Index Fund	8.1%	8.4%	8.1%	8.0%	5.0%
Foreign	2.8%	2.8%	2.6%	1.8%	2.5%
	27.5%	27.7%	26.1%	26.0%	30.1%
Stocks					
U.S. Common & Preferred	29.2%	28.9%	30.8%	31.4%	28.2%
U.S. Stock Funds	14.2%	13.1%	13.3%	13.6%	11.9%
Foreign Common & Preferred	10.4%	10.4%	10.7%	10.7%	11.5%
Foreign Stock Funds	7.3%	7.9%	8.4%	8.9%	8.7%
	61.1%	60.3%	63.2%	64.6%	60.3%
Real Estate					
Commingled Funds	4.5%	4.2%	3.5%	2.5%	2.0%
Directly Owned	1.0%	1.0%	0.8%	0.8%	0.8%
	5.5%	5.2%	4.3%	3.3%	2.8%
Alternative Investments					
Commingled Funds	3.2%	4.1%	3.8%	3.0%	3.8%
Timber & Agricultural	0.7%	0.8%	0.7%	0.7%	0.7%
	3.9%	4.9%	4.5%	3.7%	4.5%
Short-Term Investments	2.0%	1.9%	1.9%	2.4%	2.3%
Total Portfolio	100.0%	100.0%	100.0%	100.0%	100.0%

# INVESTMENT PORTFOLIO (As of December 31, 2016)

# ALLOCATION BY ASSET CLASS



# TOTAL INVESTMENTS BY REGION



# Ten Largest Fixed Income Investment Holdings As of December 31, 2016

(Excludes commingled funds and short-term investments)

	Market Value	Percent of Total Invested Market
U.S. Treasury Bonds 2.875% Due 8/15/2045	\$132,937,624	0.37%
U.S. Treasury Notes 2.00% Due 02/15/2023	78,844,761	0.22%
U.S. Treasury Notes 2.375% Due 02/15/2023	56,953,495	0.16%
U.S. Treasury Notes 2.125% Due 05/15/2025	54,412,218	0.15%
U.S. Treasury Notes 2.225% Due 11/15/2024	52,128,324	0.14%
U.S. Treasury Bonds 2.75% Due 08/15/2042	49,785,223	0.14%
U.S. Treasury Notes 1.625% Due 02/15/2026	48,447,344	0.13%
Farm Credit Bond 0.846% Due 05/25/2018	46,478,460	0.13%
U.S. Treasury Notes 2.00% Due 11/15/2021	46,082,433	0.13%
U.S. Treasury Bond 3.0% Due 11/15/2045	45,094,916	0.12%
	\$ 611,164,798	1.69%

# Ten Largest Equity Investment Holdings (Excludes commingled funds)

	Market Value	Percent of Total Invested Market
Visa, Inc.	\$163,406,336	0.45%
Exxon Mobil Corp.	156,922,335	0.43%
Wells Fargo & Co.	153,398,630	0.42%
Amazon, Inc.	150,872,344	0.41%
Apple, Inc.	139,729,997	0.38%
Microsoft Corp.	138,280,701	0.38%
Bank of America Corp.	136,872,549	0.38%
Facebook, Inc.	128,705,400	0.35%
Johnson & Johnson, Inc.	128,112,137	0.35%
Cisco Systems, Inc.	127,543,661	0.35%
	\$ 1,423,844,090	3.90%

A complete listing of investments is available on IMRF's website, www.imrf.org.

# Schedule of 2016 Domestic Brokerage Commissions (In order of commission received)

Broker Name	Total Shares	Commission	Per Share
Penserra Securities	20,487,250.00	\$ 196,094.18	\$ 0.01
Goldman Sachs New York	19,450,346.00	1,856.74	0.00
Loop Capital Markets	7,842,054.00	244,228.09	0.03
Cheevers and Company Inc.	7,129,964.00	140,749.44	0.02
Knight Equity Markets LP	6,889,264.00	193,614.35	0.03
RBC Dain Rauscher	6,075,975.00	201,631.33	0.03
Investment Technology Group Inc.	5,727,943.00	104,157.37	0.02
Williams Capital Group LP	5,196,385.00	119,927.82	0.02
JP Morgan Chase Bank N.A.	4,625,000.00	-	-
Jonestrading Institutional Services	4,512,064.00	121,316.62	0.03
Cantor Fitzgerald & Co.	4,412,449.00	106,443.54	0.02
Instinet	4,229,116.00	106,780.62	0.03
M Ramsey King Securities	4,100,528.00	155,092.55	0.04
Bernstein, Sanford C. & Company	3,973,366.00	54,513.74	0.01
Credit Suisse First Boston Corporation	3,662,911.00	61,816.80	0.02
Citation Group	3,425,338.00	169,009.35	0.05
Liquidnet Inc.	3,424,452.00	77,020.27	0.02
Cap Institutional Services Inc.	3,356,105.00	130,979.18	0.04
Stifel Nicolaus and Company	3,327,020.00	108,616.34	0.03
CL King & Associates	3,244,337.00	100,853.17	0.03
Cowen LLC	3,240,083.00	115,522.72	0.04
Weeden And & Co.	2,853,274.00	46,479.39	0.02
Convergex LLC	2,810,697.00	101,360.99	0.04
State Street Brokerage Services	2,659,014.00	26,942.23	0.01
J.P. Morgan Securities LLC 57079	2,597,779.00	46,558.67	0.02
Merrill Lynch Pierce Fenner & Smith	2,518,800.00	34,790.99	0.01
Raymond James	2,508,262.00	95,229.50	0.04
Stephens Inc.	2,444,315.00	78,625.96	0.03
Blaylock and Company Inc.	2,362,400.00	66,739.60	0.03
Other Brokers	545,939,954.25	1,223,222.68	2.33
Total	695,026,445.25	\$ 4,230,174.23	\$ 3.05

# Schedule of 2016 International Brokerage Commissions (In order of commission received)

Broker Name	Total Shares	Commission	Per Share
BNY Convergex Execution Solutions	72,333,370.00	\$ 541,589.25	\$ 0.01
CLSA Limited	72,057,593.00	62,919.75	-
Celfin Cap SA Corredores De Bolsa	57,624,000.00	13,965.12	-
Instinet Pacific Limited	50,228,746.00	76,840.96	-
Goldman, Sachs and Co.	29,930,028.00	279,785.97	0.01
UBS Securities Asia Limited	29,649,492.00	76,856.83	-
Citigroup Global Markets Inc.	24,949,104.00	56,078.31	-
Merrill Lynch International Limited	23,399,390.00	98,669.42	-
Sanford C. Bernstein and Co., LLC	23,377,283.00	68,650.37	-
Instinet Europe Limited	21,193,738.00	154,092.39	0.01
ITG Hong Kong Limited	18,976,105.00	15,186.47	-
CLSA Australia Pty Ltd.	17,500,070.00	96,546.44	0.01
CLSA Singapore Pte Ltd.	14,785,523.00	88,853.31	0.01
UBS Limited	14,650,496.00	141,360.77	0.01
Jefferies LLC	14,188,194.00	213,251.26	0.02
Morgan Stanley and Co., LLC	13,209,523.00	77,678.29	0.01
Societe Generale London Branch	12,270,872.00	60,296.09	-
Investment Technology Group Ltd.	12,059,375.00	84,870.10	0.01
Macquarie Bank Limited	10,837,139.00	30,343.10	-
UBS Ag Stamford Branch	10,801,268.00	37,005.06	-
HSBC (Glbl Mrkts Equities Operation)	10,253,000.00	4,750.83	-
J.P. Morgan Securities PLC	9,354,548.00	66,450.23	0.01
North South Capital LLC	7,958,160.00	197,897.05	0.02
J.P. Morgan Securities (Asia Pacific)	7,885,767.00	10,388.71	-
Sanford C. Bernstein Ltd.	7,819,810.00	45,975.45	0.01
UBS Brasil CCTVM	7,732,780.00	57,615.01	0.01
Credit Suisse Securities (USA) LLC	7,564,276.00	45,137.73	0.01
Deutsche Bank Securities	6,993,797.00	51,558.97	0.01
J.P. Morgan Clearing Corp.	6,795,004.00	27,227.13	-
Merrill Lynch Piece Fenner & Smith	6,713,418.00	47,826.03	0.01
Other Brokers	169,684,664.96	1,504,880.11	5.38
Total	792,776,533.96	\$ 4,334,546.51	\$ 5.56

## Schedule of Investment Fees

	2016 Fees	2016 Assets under management at year end (in thousands)*	Basis Points	2015 Fees	2015 Assets under management at year end (in thousands)*	Basis Points
Investment manager fees						
Fixed income managers	\$ 13,410,705	\$ 9,458,143	14	\$ 12,209,337	\$ 8,753,386	14
Stock managers	33,788,027	15,748,132	21	38,485,309	14,280,608	27
International managers	25,348,883	7,734,258	33	28,209,239	7,910,559	36
Real estate managers	24,742,962	2,018,987	123	21,822,520	1,807,389	121
Alternative investment managers	13,531,903	1,337,459	101	15,648,713	1,557,644	100
	\$ 110,822,480	\$ 36,296,979		\$116,375,118	\$ 34,309,586	
Other investment fees	Other investment fees					
Master trustee fees	\$ 280,000			280,000		
Investment consulting fees	928,455			910,060		
Total investment fees	112,030,935			117,565,178		
Non-fee investment expenses	490,437			270,313		
Total direct investment expenses	\$ 112,521,372			\$117,835,491		
Securities lending fees						
Management fees and borrower rebates	\$ 764,062			\$ 1,180,550		

<sup>\*</sup> Assets under management includes accrued investment income and unsettled trades.





# ACTUARIAL

- 73 Summary of Actuarial Assumptions
- 74 Funded Status and Funding Progress
- 75 Schedule of Funding Progress
- 75 Schedule of Employer Contributions
- **76** Solvency Test
- 76 Participating Member Statistics
- 77 Schedule of Adds and Removals from Rolls
- **78** Contribution Rates
- 79 Actuarial Balance Sheet
- 79 Analysis of Under Funded Liability
- 80 Derivation of Experience Gain (Loss)
- 81 Summary of Benefits



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April 12, 2017

Board of Trustees Illinois Municipal Retirement Fund 2211 S. York Road, Suite 500 Oak Brook, Illinois 60523-2374

Dear Board Members:

The basic financial objective of the Illinois Municipal Retirement Fund (IMRF) is to establish and receive contributions which:

- When expressed in terms of percents of active member payroll will remain approximately level from generation to generation, and
- When combined with present assets and future investment returns will be sufficient to meet the financial obligations of IMRF to present and future retirees and beneficiaries.

The financial objective is addressed within the annual actuarial valuation of the IMRF.

The purposes of the valuation are to: 1) Measure the financial position of IMRF, and 2) Develop 2018 employer contribution rates that are sufficient to fund each participating employer's normal cost (i.e., the costs assigned by the valuation method to the year of service about to be rendered), as well as to fund unfunded actuarial accrued liabilities as a level percent of active member payroll. The valuations cannot be relied upon for any other purpose.

The most recent funding valuation was completed based upon population data, asset data, and plan provisions as of December 31, 2016, and issued on March 22, 2017. The individual member statistical data required for the valuations was furnished by your Executive Director and Staff, together with pertinent data on financial operations. Their cooperation in furnishing these materials is acknowledged with appreciation. We are not responsible for the accuracy or completeness of the data. We checked the information provided for internal and year-to-year consistency, but did not audit the data. A report containing the results of the funding valuation is produced annually.

The following schedules in the Actuarial Section and Financial Section of the CAFR were prepared based upon certain information presented in the previously mentioned funding valuation report. The actuary provided the Brief Summary of Assumptions directly. In the case of the other schedules, IMRF Staff excerpted information from various schedules in the actuarial reports and tabulated it to produce the appropriate CAFR Schedule.

Board of Trustees April 12, 2017 Page 2

#### **Actuarial Section**

Brief Summary of assumptions
Schedules of Funding Progress
Schedule of Employer Contributions
Solvency Test
Participating Member Statistics
Actuarial Balance Sheet
Analysis of Unfunded Liability
Derivation of Experience Gain (loss)

#### **Financial Section**

Schedules of Funding Status Schedule of Funding Progress Average Employer Contribution rates

The December 31, 2016 valuations were based upon assumptions that were recommended in connection with a study of experience covering the 2011-2013 period. A brief summary of the assumptions and methods is attached.

All assumption and methods comply with relevant actuarial standards of practice. The funding valuation complies with the Board's funding policy. If the funding policy is followed and all assumptions are realized exactly, contributions to the plan will stay approximately level, and the plan will gradually approach 100% funding over a very long period of years.

As of the valuation date, in the aggregate, IMRF is 88.9% funded based upon the smoothed value of assets and 88.1% funded based upon market value. Each participating employer, however, has a separate funding percent, some of which will be above the aggregate result, and others of which will be below it. Based upon the results of the December 31, 2016 valuations, we are pleased to report to the Board that the Illinois Municipal Retirement Fund is meeting its basic financial objective and continues to operate in accordance with the actuarial principles of level percent of payroll financing.

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 or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

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Board of Trustees April 12, 2017 Page 3

Readers desiring a more complete understanding of the actuarial condition of IMRF are encouraged to obtain and read the complete valuation reports. The material in the Actuarial Section and Financial Section of this CAFR contains some, but not all of, the information in the valuation reports.

Brian B. Murphy, Mark Buis, and Francois Pieterse are Members of the American Academy of Actuaries (MAAA), are independent of the plan sponsor and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Brian B. Murphy, FSA, EA, FCA, MAAA

Mark Buis, FSA, EA, FCA, MAAA

François Pieterse, ASA, FCA, MAAA

BBM/MB/FP:dj Enclosure

## Brief Summary of Actuarial Assumptions Used in 2016 Valuations (Adopted as of December 31, 2015, except as noted below)

Investment Return 7.5% per annum, compounded annually, net of expenses (effective December

31, 1991), including a wage inflation component of 3.5%.

Payroll Growth 3.50% per annum, compounded annually. Membership is assumed to remain

constant.

Retirement Rates Rates vary by age and sex. See table below for sample values.

Mortality for Actives and Annuitants

For non-disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Blue Collar Health Annuitant Mortality Table with adjustments to match current IMRF experience. For disabled retirees, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Disabled Retirees Mortality Table applying the same adjustments that were applied for non-disabled lives. For active members, an IMRF specific mortality table was used with fully generational projection scale MP-2014 (base year 2012). The IMRF specific rates were developed from the RP-2014 Employee Mortality Table with adjustments to match current IMRF experience. Among the active members, 80% of males and 70% of females were assumed to be married.

80% of males and 70% of females were assumed to be married.

Disability Graduated rates by age. See table below for sample values.

Separation and

Salary Increases Graduated rates by age and service. See table below for sample values.

Asset Valuation Method Market Related Value that reflects five-year averaging of investment gains and

losses, subject to a 20% corridor.

Liability Valuation Method For the purposes of determining contribution rates, the Entry Age Actuarial

Cost Method is applied on an aggregate basis. Gains and Losses become part

of unfunded liabilities.

	Sa	mple Prob			
	Active Mortality		Disa	ability	Pay Increase Next Year
Age	Male	Female	Male	Female	(5+ Yrs. of Service)
20	0.03%	0.01%	0.00%	0.00%	5.5%
30	0.04%	0.02%	0.01%	0.00%	5.2%
40	0.05%	0.03%	0.02%	0.01%	4.4%
50	0.13%	0.09%	0.05%	0.03%	4.0%
60	0.40%	0.19%	0.10%	0.07%	3.8%
65	0.70%	0.28%	0.11%	0.08%	3.8%

		ration											
	Regula	r (8+ Yrs.			Retirement (Tier 1)								
	Serv.)		SLEP	Reduced	Reduced Early		educed	SLEP	Service	E	CO		
Age	Male	Female	(7+ Yrs.)	Male	Female	Male	Female	(< 32 Yrs.)	(32+ Yrs.)	Male	Female		
30	4.1%	6.1%	2.2%	-	-	-	-	-	-	-	_		
35	3.2%	5.1%	1.7%	-	-	-	-	-	-	_	-		
40	2.6%	3.9%	1.5%	-	-	-	-	-	-	-	-		
45	2.2%	3.3%	1.5%	-	-	-	-	-	-	-	-		
50	1.9%	2.8%	1.5%	-	-	-	-	23.0%	35.0%	-	-		
55	-	-	-	7.25%	5.75%	33.0%	27.0%	23.0%	35.0%	25.0%	25.0%		
60	-	-	-	-	-	12.0%	10.0%	8.0%	35.0%	5.0%	5.0%		
65	-	-	-	-	-	25.0%	25.0%	23.0%	35.0%	15.0%	15.0%		
70	-	-	-	-	-	20.0%	20.0%	100.0%	100.0%	13.0%	13.0%		

## Funded Status and Funding Progress

As of December 31, 2016, the most recent actuarial valuation date, the plan on an aggregate basis was 88.9 percent funded on an actuarial basis. The actuarial accrued liability for benefits was \$41.4 billion, and the actuarial value of assets was \$36.8 billion, resulting in an unfunded actuarial accrued liability (UAAL) of \$4.6 billion. The covered payroll (annual payroll of active employees covered by the plan) was \$7.0 billion, and the ratio of the UAAL to the covered payroll was 65.4 percent.

The schedule of funding progress presents multi-year trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liability for benefits.

#### Additional information as of the latest actuarial valuation follows:

Valuation date	December 31, 2016
Actuarial cost method	Entry age normal
Amortization method	Level percent of payroll for Regular and SLEP; level dollars for ECO
Amortization period	Taxing bodies: closed, 25 years
	Entities over 120 percent funded on a market basis: varies by funding status
	Non-taxing bodies: open, 10 years
Asset valuation method	Five-year smoothed market related with a 20 percent corridor

## Actuarial assumptions:

Investment rate of return	7.5 percent
Projected salary increases	3.8 to 14.5 percent
Assumed wage inflation rate	3.5 percent
Group size growth rate	0.0 percent
Assumed payroll growth rate	3.5 percent
Post-retirement increase	Tier 1 - 3.0 percent—simple
	Tier 2 - 3.0 percent—simple or 1/2 increase in CPI, whichever is less
Mortality table	For non-disabled retirees, an IMRF-specific mortality table was used w

For non-disabled retirees, an IMRF-specific mortality table was used with two-dimensional, fully generational projection scale MP-2014 (base year 2014). The IMRF-specific rates were developed from the RP-2014 Blue Collar Health Annuitant Mortality Table with adjustments to match current IMRF projection experience. For disabled retirees, an IMRF-specific mortality table was used with two-dimensional, fully generational scale MP-2014 (base year 2014). The IMRF-specific rates were developed from the RP-2014 Disabled Retirees Mortality Table applying the same adjustments that were applied for disabled lives. For active members, an IMRF-specific mortality table was used with two-dimensional, fully generational projection scale MP-2014 (base year 2014). The IMRF-specific rates were developed from the RP-2014 Employee Mortality Table with adjustments to match current IMRF experience.

Table I Schedule of Aggregate Funding Progress (Last ten years)

	Aggregate	Actuarial Liabilities	(AAL)	Unfunded A	ctuarial Liabilities	(UAL)
Actuarial Valuation Date December 31	Total AAL Entry Age (a)	Actuarial Assets (b)	Actuarial Assets as a percent of AAL (b/a)	Total UAL (a-b)	Member Payroll (c)	UAL as a percent of Member Payroll (a-b)/c
2007	\$ 24,221,543,716	\$ 23,274,361,198	96.1%	\$ 947,182,518	\$ 5,931,443,117	16.0%
2008*	25,611,199,349	21,601,053,512	84.3	4,010,145,837	6,259,283,197	64.1
2009	27,345,113,216	22,754,803,784	83.2	4,590,309,432	6,461,696,602	71.0
2010	29,129,228,239	24,251,136,889	83.3	4,878,091,350	6,391,164,701	76.3
2011*	30,962,815,428	25,711,287,584	83.0	5,251,527,844	6,431,296,235	81.7
2012	32,603,244,099	27,491,809,785	84.3	5,111,434,314	6,496,076,569	78.7
2013	34,356,575,473	30,083,042,548	87.6	4,273,532,925	6,602,479,436	64.7
2014*	37,465,147,612	32,700,208,537	87.3	4,764,939,075	6,732,500,876	70.8
2015	39,486,573,890	34,913,127,469	88.4	4,573,446,421	6,919,337,807	66.1
2016	41,358,710,402	36,773,397,527	88.9	4,585,312,875	7,006,710,264	65.4

<sup>\*</sup> After assumption change

This data was provided by the Actuary.

Table II Schedule of Aggregate Employer Contributions (Last ten years)

Year Ended December 31	Normal Contributions	Amortization of Unfunded Actuarial Liability	Death & Disability Benefit Contributions	Supplemental Retirement Benefit Contributions	Total Contributions	Percentage of Actuarial Required Contribution Contributed
2006	\$ 429,460,710	\$ 112,993,136	\$ 25,166,224	\$ 35,155,725	\$ 602,775,795	100%
2007	440,054,100	97,121,315	26,551,837	37,094,883	600,822,135	100
2008	463,833,388	106,266,646	21,844,517	39,202,925	631,147,476	100
2009	478,760,517	119,391,054	21,417,551	40,830,286	660,399,408	100
2010	483,792,012	225,268,536	20,582,277	40,499,453	770,142,278	91
2011	486,731,753	254,898,222	18,654,559	40,519,719	800,804,253	95
2012	503,108,449	317,890,978	21,340,072	40,876,782	883,216,281	98
2013	512,289,897	356,734,526	20,344,350	41,600,283	930,969,056	99
2014	513,293,254	348,081,564	19,531,784	42,476,223	923,382,825	100
2015	519,959,516	317,936,978	19,973,953	43,606,437	900,476,884	100
2016	478,317,043	390,244,865	20,170,190	43,973,422	932,705,521	100

Table III Solvency Test (Last ten years)

	Aggregate	e Actuarial Liabili	ties (AAL)		Portion of Actuari Liabilities Covered by Asset			
Calendar Year	Active Member Contributions (1)	Annuitants (2)	Active Members (Employer Financed Portion) (3)	Actuarial Assets	(1)	(2)	(3)	
2007	\$ 4,248,399,825	\$ 9,400,832,984	\$10,572,310,907	\$23,274,361,198	100%	100%	91.0%	
2008	4,573,736,116	10,025,599,295	11,011,863,938	21,601,053,512	100	100	63.6	
2009	4,893,022,745	10,903,323,478	11,548,766,993	22,754,803,784	100	100	60.3	
2010	5,153,902,881	12,121,959,266	11,853,366,092	24,251,136,889	100	100	58.8	
2011	5,417,822,062	13,388,018,799	12,156,974,567	25,711,287,584	100	100	56.8	
2012	5,705,336,025	14,482,560,758	12,415,347,316	27,491,809,785	100	100	58.8	
2013	5,957,217,332	15,753,071,341	12,646,286,800	30,083,042,548	100	100	66.2	
2014	6,262,110,058	17,885,026,667	13,318,010,887	32,700,208,537	100	100	64.2	
2015	6,488,892,894	19,506,345,352	13,491,335,644	34,913,127,469	100	100	66.1	
2016	6,714,120,028	21,085,519,077	13,559,071,297	36,773,397,527	100	100	66.2	

Total obligation and actuarial value of assets calculated by the Actuary.

Table IV Participating Member Contribution Rates (Last ten years)

Calendar Year	Total Salaries	Percent Increase (Decrease) in Total Salaries	Average Annual Salary	Percent Increase in Average Salary	Number of Participating Members	Average Attained Age	Average Years of Service
2007	\$ 5,931,443,117	5.3%	\$ 33,607	3.3%	177,783	46.6	9.5
2008	6,259,283,197	5.5	34,655	3.1	181,678	46.8	9.6
2009	6,461,696,602	3.2	35,771	3.2	181,380	47.1	9.8
2010	6,391,164,701	(1.1)	36,277	1.4	176,703	47.5	10.3
2011	6,431,296,235	0.6	36,701	1.2	175,844	47.7	10.4
2012	6,496,076,569	1.0	37,252	1.5	174,771	47.8	10.6
2013	6,602,479,436	1.6	38,059	2.2	173,481	47.9	10.7
2014	6,732,500,876	2.0	38,786	1.9	173,579	47.9	10.6
2015	6,919,337,807	2.8	39,805	2.6	173,832	47.9	10.6
2016	7,006,710,264	1.3	40,076	0.7	174,835	47.8	10.5

Source for salaries, average annual salary, attained age, and service is in the Actuarial Report.

# Table V Schedule of Adds and Removals from Rolls (Last ten years)

#### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

	Added to Rolls		Removed	d from Rolls	End o	f Year Rolls		
Calendar Year	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	Average Annual Benefit	Percent Change in Average Benefit
2007	6,218	\$ 91,831,041	3,241	\$22,262,632	86,362	\$ 865,453,211	\$ 10,021	5.0%
2008	6,000	94,526,796	3,408	23,956,030	88,954	936,023,977	10,523	5.0
2009	6,422	106,361,549	3,318	26,218,141	92,058	1,016,167,385	11,038	4.9
2010	7,518	131,651,729	3,509	28,512,198	96,067	1,119,306,916	11,651	5.6
2011	7,733	130,378,649	5,200	35,101,362	98,600	1,214,584,203	12,318	5.7
2012	7,912	137,928,914	3,736	37,015,540	102,776	1,315,497,577	12,800	3.9
2013	8,855	154,660,608	3,899	39,647,140	107,732	1,430,511,045	13,278	3.7
2014	9,099	142,621,088	4,076	16,601,950	112,755	1,556,530,183	13,805	4.0
2015	9,553	154,096,739	4,276	17,348,199	118,032	1,693,278,723	14,346	3.9
2016	9,387	150,640,326	4,219	16,654,518	123,200	1,827,264,531	14,832	3.4

#### Schedule of Disabilitants Added to and Removed from Rolls

	Adde	d to Rolls	Remove	d from Rolls	End of Year Rolls			
Calendar Year	Number	Annual Benefits	Number Annual Benefits		Number	Annual Benefits	Average Annual Benefit	Percent Change in Average Benefit
2007	2,354	\$27,188,433	2,348	\$ 27,006,030	1,325	\$11,380,170	\$ 8,589	1.2%
2008	2,313	28,754,216	2,422	29,343,494	1,216	10,790,892	8,874	3.3
2009	2,349	28,136,992	2,325	28,024,488	1,240	10,903,396	8,793	(0.9)
2010	2,407	29,913,347	2,433	29,158,561	1,214	11,658,182	9,603	9.2
2011	2,338	27,038,672	2,468	28,452,864	1,084	10,243,990	9,450	(1.6)
2012	2,207	25,996,458	2,138	25,600,824	1,153	10,639,624	9,228	(2.3)
2013	2,166	26,589,417	2,237	26,682,159	1,082	10,546,882	9,748	5.6
2014	2,123	26,688,760	2,115	26,126,923	1,090	11,108,719	10,191	4.5
2015	1,936	24,777,914	2,036	26,296,672	990	9,589,961	9,687	(4.9)
2016	1,841	24,551,597	1,899	25,084,100	932	9,057,458	9,718	0.3

Table VI Average Employer Contribution Rates (Last five years)

Calendar Year	Normal Cost	Prior Service Cost	Disability and Death	Supplemental Retirement Benefit	Total		
Regular membe	ers						
2014^	7.64%	4.04%	0.28%	0.62%	12.58%		
2015	7.51	3.28	0.28	0.62	11.69		
2016	6.84	3.98	0.29	0.62	11.73		
2017	6.71	3.74	0.27	0.62	11.34		
2018	6.80	3.63	0.19	0.62	11.24		
Sheriff's Law Enforcement Personnel (SLEP) members							
2014^	12.61%	9.68%	0.29%	0.62%	23.20%		
2015	12.42	9.00	0.29	0.62	22.33		
2016	11.95	9.85	0.29	0.62	22.71		
2017	11.77	9.73	0.27	0.62	22.39		
2018	11.63	9.05	0.19	0.62	21.49		
<b>Elected County</b>	Official (ECO) me	mbers					
2014^	17.59%	56.02%	0.29%	0.62%	74.52%		
2015	17.73	51.73	0.29	0.62	70.37		
2016	16.49	68.67	0.29	0.62	86.07		
2017	16.83	55.78	0.27	0.62	73.50		
2018	16.85	65.03	0.22	0.62	82.72		

<sup>^</sup> Prior to impact of optional phase-in plan.

Table VII Participating Member Contribution Rates (Last ten years)

	Regular IMRF				Sheriff's Law Enforcement Personnel				Elected County Official			
Year	Normal	Survivor	Total	Normal	Survivor	SLEP	Total	Normal	Survivor	ECO	Total	
2007	3.75%	0.75%	4.50%	3.75%	0.75%	3.00%*	7.50%	3.75%	0.75%	3.00%	7.50%	
2008	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	
2009	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	
2010	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	
2011	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	
2012	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	
2013	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	
2014	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	
2015	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	
2016	3.75	0.75	4.50	3.75	0.75	3.00	7.50	3.75	0.75	3.00	7.50	

<sup>\*</sup> The SLEP enhancement percentage changed from 2.00% to 3.00% on June 1, 2006.

## **Actuarial Balance Sheet**

	Decem	ber 31
	2016	2015
Sources of Funds		
Actuarial value of assets	\$ 36,773,397,527	\$ 34,913,127,469
Actuarial present value of future contributions		
Member	2,635,457,204	2,607,372,968
Employer Normal Costs	3,818,042,923	3,858,381,884
Under Funded Actuarial Accrued Liability	4,585,312,875	4,573,446,421
Total Sources	\$ 47,812,210,529	\$ 45,952,328,742
Uses of Funds		
Retired members and beneficiaries	\$ 21,085,519,077	\$ 19,506,345,352
Inactive members	3,503,326,675	3,369,434,293
Active members	23,067,895,901	23,047,908,585
Voluntary additional members	122,864,462	0
Death and disability benefits	32,604,414	28,640,512
Total Uses	\$ 47,812,210,529	\$ 45,952,328,742

## Analysis of Under Funded Liability

	Decem	ber 31
	2016	2015
Under funded liability beginning of year	\$ 4,573,446,421	\$ 4,764,939,075
Assumed net (payments) during year	(295,381,436)	(306,609,121)
Assumed interest (7.5 percent)	332,065,180	346,011,165
Decrease due to investment performance	109,908,168	(313,208,972)
Decrease due to other sources	(134,725,458)	82,314,274
Under funded liability end of year	\$ 4,585,312,875	\$ 4,573,446,421

## Derivation of Experience Gain (Loss)

Type of Risk Area	2016	2015								
Risks Related to Assumptions (in millions)	Risks Related to Assumptions (in millions)									
Economic Risk Areas										
Investment Return	\$ (109.9)	\$ 313.2								
Pay Increases	312.7	22.9								
Demographic Risk Areas										
Service Retirements	(20.2)	(28.5)								
Early Retirements	(2.6)	(4.7)								
Vested Deferred Retirements	(14.1)	(16.8)								
Death and Survivor Benefits	(3.3)	(3.4)								
Disability Benefits	12.0	15.8								
Terminated with Refund	35.7	33.0								
Risks Not Related to Assumptions (1)	(185.5)	(100.6)								
Total Gain (Loss) During Year	\$ 24.8	\$ 230.9								

Regular actuarial valuations give information about the composite change in unfunded actuarial accrued liabilities — whether or not the liabilities are increasing or decreasing and by how much. The objective of a gain and loss analysis is to determine the portion of the change in actuarial condition (unfunded actuarial accrued liabilities) attributable to each risk area. The fact that actual experience differs from assumed experience is to be expected — the future cannot be predicted with 100 percent precision. The economic risk areas (particularly investment return and pay increases) are volatile. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common.

(1) This is primarily due to rehires of former employees and actual reserve transfers for retirees being higher than the estimated reserve transfers.

## Summary of Benefits

This is a brief description of IMRF benefits. Additional conditions and restrictions may apply. A complete description is found in Article 7 of the Illinois Pension Code.

#### General

IMRF serves 2,987 employers including cities, villages, counties, school districts, townships, and various special districts, such as parks, forest preserves, and sanitary districts. Each employer contributes to separate accounts to provide future retirement benefits for its own employees.

Employees of these employers are required to participate if they work in an IMRF qualified position. An IMRF qualified position is one that is expected to equal or exceed the employer's annual hourly standard; the standard is either 600 or 1,000 hours a year.

IMRF has three benefit plans. The vast majority of IMRF members participate in the Regular Plan (RP). The Sheriff's Law Enforcement Personnel (SLEP) plan is for sheriffs, deputy sheriffs, and selected police chiefs. Forest preserve districts may adopt the SLEP plan for their law enforcement personnel. Counties could adopt the Elected County Official (ECO) plan for their elected officials prior to August 8, 2011. The ECO plan was closed to new participants after that date. After a county adopted the ECO plan, participation was optional for the elected officials of that county.

All three IMRF benefit plans have two tiers. Tier 2 benefits are lower than Tier 1, and cost about 40 percent less to provide. All IMRF members initially hired on or after January 1, 2011, are in Tier 2.

Both the member and the employer contribute toward retirement benefits. Members contribute a percentage of their salary as established by the Pension Code. The percentage depends on the plan in which the member participates. Regular members contribute 4.5 percent. SLEP and ECO members contribute 7.5 percent. Members also have the option of making voluntary after-tax contributions up to 10 percent of their salary. Employer contribution rates are actuarially calculated annually for each employer. Employers pay most of the cost for member and survivor pensions and all of the cost for supplemental retirement, death, and disability benefits. All contributions are pooled for investment purposes. Since 1982, investment returns account for 63 percent of IMRF revenue.

## Vesting

#### Tier 1

Members are vested for pension benefits when they have at least eight years of qualifying service credit. SLEP members are vested for a SLEP pension when they have at least 20 years of SLEP service credit. SLEP members with more than eight years of service, but less than 20 years of SLEP service, will receive a Regular pension. Revised ECO members (those who joined the ECO plan after January 25, 2000) are vested with eight or more years of ECO service credit in the same elected county position. Revised ECO members with eight years of service, but less than eight years in the same elected county office, will receive a Regular pension.

#### Tier 2

Members are vested for pension benefits when they have at least ten years of qualifying service credit. SLEP members are vested for a SLEP pension when they have at least ten years of SLEP service credit. ECO members (those who joined the ECO plan after January 1, 2011, and before August 8, 2011) are vested with ten or more years of total service credit with at least eight years in the same elected county position. ECO members with at least ten years of total service credit, but less than eight years of service in the same elected county office, will receive a Regular pension.

#### Refunds

Non-vested members who stop working for an IMRF employer can receive a lump sum refund of their IMRF member contributions. Vested members can receive a lump sum refund of their IMRF member contributions if they stop working for an IMRF employer prior to age 55, or 62 for Tier 2 members. Vested members age 55 or older (62 or older for Tier 2 Members) may receive separation refunds if the member rolls over the refund into another defined benefit retirement plan for the purpose of purchasing service credit.

Members who retire without an eligible spouse (married to or in a civil union with the member at least one year before the member terminates IMRF participation) may receive a refund of their surviving spouse contributions with interest or an annuity.

If, upon a member's death, all of the member contributions with interest were not paid as a refund or pension to either the member or his or her spouse, the beneficiary will receive any balance of the member's account.

#### Pension Calculations

#### A Regular IMRF pension is:

- 1-2/3 percent of the final rate of earnings for each of the first 15 years of service credit, plus
- 2 percent for each year of service credit in excess of 15 years.

The maximum pension at retirement cannot exceed 75 percent of the final rate of earnings.

#### A SLEP pension is:

• 2-1/2 percent of the final rate of earnings for each year of service.

The maximum pension at retirement cannot exceed 80 percent (75 percent for Tier 2) of the final rate of earnings.

#### An ECO pension is:

- 3 percent of the final rate of earnings for each of the first eight years of service, plus
- 4 percent for each year of service between eight and 12 years of service, plus
- 5 percent for years of service credit over 12.

The maximum pension at retirement cannot exceed 80 percent of the final rate of earnings.

A money purchase minimum pension is provided if it exceeds the normal formula amount. The money purchase minimum is the amount that may be purchased by 2.4 times the member's applicable accumulated contributions, including interest thereon.

A reversionary pension option is provided to members at retirement. This option permits the member to revert a portion of his pension to one other person. This election is irrevocable.

An IMRF pension is paid for life.

## Final Rate of Earnings

#### Tier 1

The final rate of earnings for Regular and SLEP members is the highest total earnings during any 48 consecutive months within the last 10 years of IMRF service, divided by 48, or the total lifetime earnings divided by the total lifetime number of months of service, whichever is higher. The final rate of earnings for ECO members is the annual salary of the ECO member on the day he or she retires. For Revised ECO members, the final rate of earnings is the highest total earnings during any 48 consecutive months within the last 10 years of IMRF service, divided by 48, for each office held.

#### Tier 2

The final rate of earnings for Regular and SLEP members is the highest total earnings during any 96 consecutive months within the last 10 years of IMRF service, divided by 96, or the total lifetime earnings divided by the total lifetime number of months of service, whichever is higher. For ECO members who joined the plan after January 1, 2011, and before August 8, 2011, the final rate of earnings is the highest total earnings during any 96 consecutive months within the last 10 years of IMRF service, divided by 96, for each office held. Pensionable earnings are initially capped at \$106,800, which will increase annually beginning in 2012 by three percent or one-half of the increase of the Consumer Price Index, whichever is less. The pensionable earnings cap for 2016 was \$111,571.63 and for 2017 will be \$112,408.42. For Tier 2 SLEP members, overtime compensation is excluded from pensionable earnings.

## Retirement Eligibility

#### Tier 1

Normal retirement for an unreduced pension is:

- Age 60 with eight or more years of service, or 35 or more years of service at age 55,
- Age 50 with 20 or more years of SLEP service for members with SLEP service,
- Age 55 with eight or more years of service for members with ECO service, or
- Age 55 with eight or more years of service in the same elected county office for members with Revised ECO service.

Regular members may retire as early as age 55 with a reduced pension. The reduction is the lesser of:

- One-fourth percent for each month the member is under age 60, or
- One-fourth percent for each month of service less than 35 years.

#### Tier 2

Normal retirement for an unreduced pension is:

- Age 67 with ten or more years of service, or 35 or more years of service at age 62,
- Age 55 with ten or more years of SLEP service for members with SLEP service, or
- Age 67 with eight or more years of service in the same elected county official for members with ECO service (ten years total service).

Regular members may retire as early as age 62 with a reduced pension. The reduction is the lesser of:

- One-half percent for each month the member is under age 67, or
- One-half percent for each month of service less than 35 years.

SLEP members may retire as early as age 50 with a reduced pension. The reduction is one-half percent for each month the member is under age 55.

#### Service Credit

Service credit is the total time under IMRF, stated in years and fractions. Service is credited monthly while the member is working, receiving IMRF disability benefits, or on IMRF's Benefit Protection Leave. For revised ECO members, the ECO benefit formula is limited to service in an elected office.

Members may qualify for a maximum of one year of additional service credit for unused, unpaid sick leave accumulated with the last employer. Members who retire from a school district may utilize unused sick leave from all school district employers. This additional service credit applies only for members leaving employment for retirement. The service credit is earned at the rate of one month for every 20 days of unused, unpaid sick leave or fraction thereof.

IMRF is a participating plan under the Reciprocal Act, as are all other Illinois public pension systems, except local police and fire pension plans. Under the Reciprocal Act, service credit from multiple pension systems of at least one year may be considered together at the date of retirement or death for the purpose of determining eligibility for and amount of benefits.

#### Post-retirement Increases

#### Tier 1

Members in all plans receive an annual three percent increase based upon the original amount of the pension. The increase for the first year is prorated for the number of months the member was retired.

#### Tier 2

Members in all plans receive an annual increase based upon the original amount of the pension of three percent or one-half of the increase in the Consumer Price Index, whichever is less. For Regular and ECO members, the annual increases do not begin until the retiree reaches the age of 67 or after 12 months of retirement, whichever is later. For SLEP members the increases begin at age 60 or after 12 months of retirement, whichever is later.

## Early Retirement Incentive (ERI)

IMRF employers may offer an Early Retirement Incentive (ERI) program to their employees who are over 50 years of age (57 for Tier 2 Regular and ECO members) and have at least 20 years of service credit. Eligible members may purchase up to five years of service credit and age. Employers must pay off the additional ERI liability within 10 years. Subsequent ERI programs may be offered by an employer only after the liability for the previous ERI program is paid. An employer may only offer an ERI program once every five years.

## Supplemental Retirement Benefits

Each July, IMRF provides a supplemental benefit payment, or "13<sup>th</sup> Payment," to IMRF retirees and surviving spouses who have received IMRF pension payments for the preceding 12 months. The supplemental benefit payment amount will vary depending on the dollar amount to be distributed and the number of persons eligible. The supplemental benefit payment amount is decreasing annually because the number of retirees is increasing while the pool of available money is decreasing.

## **Disability Benefits**

Regular and SLEP members are eligible for a maximum of 30 months of temporary disability benefits if they:

- Have at least 12 consecutive months of service credit since being enrolled in IMRF,
- Have at least nine months of service credit in the 12 months immediately prior to becoming disabled,
- Are unable to perform the duties of any position which might reasonably be assigned by the IMRF employer because
  of any illness, injury, or other physical or mental condition, and
- Are not receiving any earnings from any IMRF employer.

Regular and SLEP members are eligible for total and permanent disability benefits until they become eligible for full Social Security Old Age benefits if they:

- Have exhausted their temporary disability benefits,
- Have a medical condition which did not pre-exist their IMRF participation or they have five years of IMRF participation without being on temporary disability, and
- Are unable to work in any gainful activity for any employer.

The monthly disability benefit payment is equal to 50 percent of the average monthly earnings based on the 12 months prior to the month the member became disabled.

ECO members are eligible for ECO disability benefits if they:

- Have at least 12 consecutive months of service credit since being enrolled in IMRF,
- Are in an elected county office at the time the disability occurred,
- Are making ECO contributions at the time the disability occurred,
- Are unable to reasonably perform the duties of their offices,
- · Have resigned their offices, and
- Have two licensed physicians, approved by IMRF, certify that the ECO member is permanently disabled.

The monthly ECO disability benefit is equal to the greater of:

- 50 percent of the annualized salary payable on the last day of ECO participation divided by 12 or,
- The retirement benefit earned to date.

Disability benefits under all plans are offset by Social Security or workers' compensation benefits. If disabled members receive Social Security disability and/or workers' compensation benefits, IMRF pays the difference between those benefits and 50 percent of the member's average monthly earnings. However, IMRF will always pay a minimum monthly benefit of \$10. Members on disability earn pension service credit as if they were working.

#### **Death Benefits**

Beneficiaries of active members who have more than one year of service, or whose deaths are job-related, are entitled to lump sum IMRF death benefits. If the member was not vested, or vested without an eligible spouse, the death benefit is equal to one year's earnings (limited to pensionable earnings cap for Tier 2 members) plus any balance in the member's account. Eligible spouses of deceased, vested, active members may choose the lump sum or a monthly surviving spouse pension.

Beneficiaries of inactive, non-vested members receive a lump sum payment of any balance in the member's account, including interest. If the beneficiary is an eligible spouse of an inactive, vested member age 55 or older, the spouse may choose between the lump sum payment or a death benefit of \$3,000, plus a monthly surviving spouse pension. Beneficiaries of retired members receive a \$3,000 death benefit. Eligible spouses also receive a surviving spouse pension.

## Surviving Spouse Pension

For Regular and SLEP members, a surviving spouse's monthly pension is one-half (66-2/3 percent for Tier 2) of the member's pension.

For ECO members, a surviving spouse's monthly pension is 66-2/3 percent of the member's pension. This pension is payable once the surviving spouse becomes 50 years old. If the spouse is caring for the member's minor, unmarried children (the age 50 requirement does not apply), the spouse will receive:

- A monthly pension equal to 30 percent of the ECO member's salary at time of death, plus
- 10 percent of the ECO member's salary at time of death for each minor, unmarried child. The maximum total monthly benefit payable to spouse and children cannot exceed 50 percent of the ECO member's salary at the time of death, or
- A monthly pension equal to 66-2/3 percent of the pension the member earned.

Surviving spouse pensions under all plans are increased each January 1. The increase is based on the original amount of the pension. The increase for the first year is prorated for the number of months the surviving spouse or the member received a pension. For Tier 1, the annual increase is three percent. For Tier 2, the annual increase is three percent or one-half the increase in the Consumer Price Index, whichever is less.





## STATISTICAL

### **FINANCIAL TABLES**

- 88 Changes in Fiduciary Net Position
- 89 Benefit Expense by Type
- 90 Net Cash Flow From Contributions After Benefits

### OPERATING AND DEMOGRAPHIC TABLES

- 90 Operating Statistics: Number of Initial Benefit Payments
- 91 Number of Employees
- 91 Number of Actively Participating Employers
- 92 Principal Participating Employers
- 92 Number of Actively Participating Members
- 93 Participating Members' Length of Service
- 93 Active Members by Age
- 94 Annuitants by Age

## **BENEFIT PAYMENT TABLES**

- 94 Average Initial Benefit Payment Amounts
- 95 Analysis of Initial Retirement Benefits: Regular Plan
- 96 Analysis of Initial Retirement Benefits: SLEP Plan
- 97 Analysis of Initial Retirement Benefits: ECO Plan
- 98 Distribution of Current Annuitants by Pension Amount

Table VIII Changes in Fiduciary Net Position (Last ten years)

Α				

		Employer	Contributions			
Calendar Year	Investment Earnings Net of Direct Investment Expense	Dollars	Percent of Annual Covered Payroll	Member Contributions	Other	Total Additions
2007	\$ 1,799,391,405	\$600,822,135	10.13%	\$ 296,690,070	\$ 6,049	\$2,696,909,659
2008	(6,096,480,733)	631,147,476	10.08%	314,019,939	18,722	(5,151,294,596)
2009	4,423,550,741	660,399,408	10.22%	324,070,795	9,148	5,408,030,092
2010	2,976,549,317	770,142,278	12.05%	324,901,985	7,032	4,071,600,612
2011	(92,930,304)	800,804,253	12.45%	327,680,889	9,852	1,035,564,690
2012	3,393,689,073	883,216,281	13.60%	330,814,542	12,037	4,607,731,933
2013	5,583,120,005	930,969,056	14.10%	338,934,421	8,455	6,853,031,937
2014	2,001,420,871	923,382,825	13.72%	351,089,445	19,157	3,275,912,298
2015	200,727,209	900,476,884	13.01%	368,005,271	464,050	1,469,673,414
2016	2,664,864,774	933,937,321	13.33%	380,385,015	12,340	3,979,199,450
			Deductions			
Calendar Year	Benefits	Refunds	Administrative Expenses	Total Deductions		Change in Fiduciary Net Position
2007	\$ 924,005,832	\$ 36,206,951	\$ 20,811,398	\$ 981,024,181		\$ 1,715,885,478
2008	997,492,141	31,926,120	20,727,536	1,050,145,797		(6,201,440,393)
2009	1,077,852,453	27,426,079	21,967,308	1,127,245,840		4,280,784,252
2010	1,178,030,534	32,201,577	22,318,493	1,232,550,604		2,839,050,008
2011	1,284,405,609	32,900,105	23,086,712	1,340,392,426		(304,827,736)
2012	1,389,815,471	34,142,193	24,508,053	1,448,465,717		3,159,266,216
2013	1,503,374,148	36,944,214	25,463,299	1,565,781,661		5,287,250,276
2014	1,626,821,250	39,191,090	26,431,652	1,692,443,992		1,583,468,306
2015	1,758,184,358	36,748,509	28,707,981	1,823,640,848		(353,967,434)
2016	1,902,139,899	37,690,098	37,550,066	1,977,380,063		2,001,819,388

Table IX Benefit Expense by Type (Last ten years)

		De	ath			Dis	ability
Calendar Year	Supplemental	Supplemental Refund Burial		Residual	Residual		Temporary
2007	\$ 8,428,232	\$ 8,757,533	\$ 7,255,736	\$ 692,275		\$ 3,887,168	\$ 7,705,263
2008	10,416,827	7,971,900	7,334,749	765,241		4,113,550	7,195,656
2009	8,486,871	9,096,938	7,813,566	961,645		4,211,002	6,649,144
2010	10,313,306	8,547,634	7,726,161	1,439,264		4,286,549	7,205,576
2011	9,664,027	9,184,487	8,435,071	1,328,589		4,157,671	7,471,493
2012	10,377,472	9,641,181	8,103,523	1,711,659		3,878,005	7,012,081
2013	9,681,776	9,155,295	8,369,090	1,850,712		3,949,374	7,265,126
2014	8,159,700	9,697,949	8,941,815	1,785,250		3,688,052	7,214,455
2015	7,115,125	9,142,480	9,578,310	1,935,771		3,526,820	6,267,477
2016	9,066,318	9,154,917	9,350,020	2,199,715		3,480,432	6,227,065

		Annu	iities	Refu			
Calendar Year	Retirement	Surviving Spouse	Beneficiary	Supplemental	Separation	Other	Total
2007	\$ 794,767,293	\$ 54,255,986	\$ 1,477,778	\$ 36,778,568	\$ 34,110,636	\$ 2,096,315	\$ 960,212,783
2008	861,528,538	57,647,849	1,581,010	38,936,821	28,287,188	3,638,932	1,029,418,261
2009	936,104,649	61,615,626	1,751,952	41,161,060	25,974,794	1,451,285	1,105,278,532
2010	1,027,761,178	66,174,661	1,962,756	42,613,449	30,440,247	1,761,330	1,210,232,111
2011	1,130,473,927	71,188,507	2,208,709	40,293,128	31,515,077	1,385,028	1,317,305,714
2012	1,229,614,161	76,545,359	2,455,082	40,476,948	31,482,985	2,659,208	1,423,957,664
2013	1,337,638,438	81,839,499	2,669,383	40,955,455	33,987,457	2,956,757	1,540,318,362
2014	1,453,666,782	88,033,643	2,944,872	42,688,732	35,250,093	3,940,997	1,666,012,340
2015	1,580,258,463	93,884,986	3,233,682	43,243,914	32,618,840	4,126,999	1,794,932,867
2016	1,713,504,074	100,899,288	3,539,931	44,718,138	30,955,185	6,734,913	1,939,829,996

Table X Net Cash Flow from Contributions After Benefits  $(Last\ ten\ years)$ 

Year	Employer Contributions	Member Contributions	Total Contributions	Total Benefit Payments	Net Cash Flow
2007	\$ 600,822,135	\$ 296,690,070	\$ 897,512,205	\$ 960,212,783	\$ (62,700,578)
2008	631,147,476	314,019,939	945,167,415	1,029,418,261	(84,250,846)
2009	660,399,408	324,070,795	984,470,203	1,105,278,532	(120,808,329)
2010	770,142,278	324,901,985	1,095,044,263	1,210,232,111	(115,187,848)
2011	800,804,253	327,680,889	1,128,485,142	1,317,305,714	(188,820,572)
2012	883,216,281	330,814,542	1,214,030,823	1,423,957,664	(209,926,841)
2013	930,969,056	338,934,421	1,269,903,477	1,540,318,362	(270,414,885)
2014	923,382,825	351,089,445	1,274,472,270	1,626,821,250	(352,348,980)
2015	900,476,884	368,005,271	1,268,482,155	1,794,932,867	(526,450,712)
2016	933,937,321	380,385,015	1,314,322,336	1,939,829,996	(625,507,660)

Table XI Operating Statistics - Number of Initial Benefit Payments (Last ten years)

Calendar Year	Annuity	Disability	Death	Refund	Total
2007	5,283	2,354	2,975	12,487	23,099
2008	5,081	2,313	3,033	10,469	20,896
2009	5,467	2,349	3,149	10,593	21,558
2010	6,541	2,407	3,141	10,219	22,308
2011	6,751	2,338	3,308	10,001	22,398
2012	6,845	2,207	3,288	9,864	22,204
2013	7,791	2,166	3,228	10,530	23,715
2014	7,959	2,123	3,413	11,139	24,634
2015	8,347	1,936	3,644	10,571	24,498
2016	8,222	1,841	3,599	10,125	23,787

Table XII Number of Employees (Last ten years)

	Admini	stration Intern	al Audit	, Resources	e Invest	ments Legal	Commi	unications Membe	Reneft Benefit	s Informati	on ces Prografa	agement Office	Serv <sup>ices</sup> Total
Calendar Year													
2007	3	1	4	31	11	4	6	24	27	43	-	26	180
2008	4	1	4	30	11	4	6	25	27	42	-	22	176
2009	4	1	4	31	11	4	6	26	26	41	-	22	176
2010	4	1	4	30	11	4	6	26	27	39	-	22	174
2011	4	4	4	27	10	4	7	26	28	34	6	22	176
2012	4	4	4	28	9	4	7	28	28	34	4	22	176
2013	4	7	3	29	10	4	6	30	28	35	5	21	182
2014	4	7	4	27	13	5	7	33	28	33	5	19	185
2015	4	7	4	27	13	5	9	35	31	34	6	19	194
2016	5	8	4	20	14	5	9	37	31	32	6	19	190

Table XIII Number of Actively Participating Employers (Last ten years)

Calendar Year End	Cities	Villages	Counties	School Districts	Townships	Other	Total
2007	255	403	101	867	472	828	2,926
2008	256	406	101	864	474	839	2,940
2009	256	407	101	865	477	844	2,950
2010	257	410	101	864	477	854	2,963
2011	257	411	101	862	479	854	2,964
2012	258	411	101	859	479	861	2,969
2013	258	413	101	858	480	867	2,977
2014	258	414	101	855	478	870	2,976
2015	259	415	101	850	478	869	2,972
2016	259	417	101	851	488	871	2,987

Table XIV
Principal Participating Employers (Current year and ten years ago)

		2016		2007			
Employer	Active Members	Rank	Percentage of Total Active Members	Active Members	Rank	Percentage of Total Active Members	
DuPage County	3,022	1	1.73%	3,028	1	1.70%	
Lake County	2,573	2	1.47%	2,915	2	1.64%	
Will County	2,505	3	1.43%	2,247	3	1.26%	
Union School District 46	2,202	4	1.26%	1,916	5	1.08%	
Rockford School District 205	1,773	5	1.01%	1,581	6	0.89%	
Winnebago County	1,672	6	0.96%	1,931	4	1.09%	
Kane County	1,389	7	0.79%	1,401	7	0.79%	
Palatine School District 211	1,319	9	0.75%	N/A*	N/A*	N/A*	
McHenry County	1,281	8	0.73%	1,258	10	0.71%	
Peoria School District 150	1,261	10	0.72%	N/A*	N/A*	N/A*	
City of Springfield	N/A**	N/A**	N/A**	1,299	8	0.73%	
Plainfield School District 202	N/A**	N/A**	N/A**	1,275	9	0.72%	

<sup>\*</sup>In 2007, this entity did not rank in the Top Ten.

Table XV Number of Actively Participating Members (Last ten years)

Calendar Year End	Male Participants	Female Participants	Total
2007	65,355	112,428	177,783
2008	66,802	114,876	181,678
2009	66,640	114,740	181,380
2010	65,543	111,160	176,703
2011	65,332	110,512	175,844
2012	64,918	109,853	174,771
2013	64,889	108,936	173,825
2014	65,029	108,939	173,968
2015	65,104	108,994	174,098
2016	65,379	109,640	175,019

<sup>\*\*</sup> In 2016, this entity did not rank in the Top Ten.

Table XVI Participating Members' Length of Service (Last ten years)

Calendar Year	Total Active Members	Under 1 Year	1 to 7 Years	8 to 14 Years	15 Years and Over	Percent Vested
2006	174,008	19,245	76,290	38,781	39,692	45.1%
2007	177,783	20,670	75,311	41,889	39,913	46.0%
2008	181,678	19,543	76,607	44,487	41,041	47.1%
2009	181,380	14,950	77,606	46,749	42,075	49.0%
2010	176,703	12,928	73,980	46,906	42,889	50.8%
2011	175,844	15,158	70,518	46,459	43,709	51.3%
2012	174,771	15,994	67,735	45,777	45,265	52.1%
2013	173,825	16,990	65,389	45,062	46,384	52.6%
2014	173,963	18,391	63,714	44,256	47,602	52.8%
2015	174,098	18,515	63,413	43,470	48,700	52.9%
2016	175,019	18,732	64,487	57,727	34,073	52.5%

Table XVII Active Members by Age

	All Plans		Sheriff's	Sheriff's Law Enforcement Personnel			Elected County Officials		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 20	245	230	475	-	-	-	-	-	-
20 to 29	8,108	10,326	18,434	418	68	486	-	-	-
30 to 39	12,882	17,157	30,039	1,179	190	1,369	6	1	7
40 to 49	14,335	26,191	40,526	1,304	204	1,508	19	7	26
50 to 54	9,091	18,286	27,377	356	69	425	24	10	34
55 to 59	9,339	19,064	28,403	185	39	224	22	17	39
60 to 69	9,706	16,793	26,499	132	21	153	36	16	52
70 and Over	1,673	1,593	3,266	7	-	7	5	3	8
Total	65,379	109,640	175,019	3,581	591	4,172	112	54	166

## Table XVIII Annuitants by Age

	Retirees			Sur	viving Spo	Beneficiaries			
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 55	310	84	394	18	110	128	95	159	254
55 to 59	3,541	5,592	9,133	44	268	312	22	62	84
60 to 64	6,892	12,771	19,663	119	470	589	28	61	89
65 to 69	8,654	17,690	26,344	336	795	1,131	18	60	78
70 to 74	6,443	13,805	20,248	473	1,213	1,686	17	54	71
75 to 79	4,444	9,651	14,095	662	1,494	2,156	8	41	49
80 to 84	3,074	6,717	9,791	738	1,783	2,521	6	24	30
85 to 89	1,759	4,546	6,305	715	1,637	2,352	4	21	25
90 to 94	739	2,188	2,927	399	993	1,392	1	8	9
95 to 99	137	620	757	106	321	427	1	2	3
100 and over	12	81	93	11	59	70	0	0	0
Total	36,005	73,745	109,750	3,621	9,143	12,764	200	492	692

Table XIX
Average Initial Benefit Payment Amounts (Last ten years)

	Single Su	m Payments	Recurring Payments		
Calendar Year	Separation Refunds	Lump Sum Death Benefit	Annual Disability (1)	Annual Retirement (2)	
2007	\$ 2,704	\$ 28,926	\$ 16,341	\$ 14,152	
2008	2,758	29,352	17,238	15,219	
2009	2,459	28,763	17,359	16,200	
2010	2,987	30,817	17,830	17,014	
2011(3)	3,154	30,592	17,958	16,490	
2012(3)	3,218	34,500	18,475	15,718	
2013(3)	3,229	34,853	18,898	15,781	
2014(3)	3,164	35,795	20,048	16,877	
2015(3)	3,127	35,141	19,696	17,301	
2016(3)	3,075	32,018	20,386	17,128	

<sup>(1)</sup> Prior to Social Security and workers' compensation offsets.

<sup>(2)</sup> Includes voluntary additional benefits.

<sup>(3)</sup> Includes Tier 1 and Tier 2.

Table XX Analysis of Initial Retirement Benefits: Regular Plan (Last ten years)

	Years of Credited Service								
	8-9	10-14	15-19	20-24	25-29	30-34	35+	Total	
2007									
Avg Monthly Annuity	\$ 312	\$ 484	\$ 781	\$1,170	\$1,657	\$2,526	\$3,469	\$1,154	
Avg Monthly FRE	\$2,224	\$2,457	\$2,721	\$3,086	\$3,447	\$4,382	\$4,978	\$3,039	
Number of Retirees	578	787	816	659	518	359	240	3,957	
2008									
Avg Monthly Annuity	\$ 312	\$ 494	\$ 852	\$1,230	\$1,730	\$2,671	\$3,730	\$1,248	
Avg Monthly FRE	\$2,229	\$2,498	\$2,974	\$3,229	\$3,597	\$4,645	\$5,358	\$3,212	
Number of Retirees	538	790	685	657	472	318	283	3,743	
2009									
Avg Monthly Annuity	\$ 317	\$ 509	\$ 891	\$1,364	\$1,951	\$2,549	\$3,712	\$1,389	
Avg Monthly FRE	\$2,253	\$2,565	\$3,052	\$3,553	\$4,049	\$4,419	\$5,305	\$3,413	
Number of Retirees	551	804	682	717	497	444	371	4,066	
2010									
Avg Monthly Annuity	\$ 340	\$ 513	\$ 895	\$1,410	\$1,935	\$2,598	\$3,703	\$1,421	
Avg Monthly FRE	\$2,401	\$2,583	\$3,100	\$3,686	\$4,022	\$4,514	\$5,295	\$3,486	
Number of Retirees	601	1,029	767	826	645	524	459	4,851	
2011									
Avg Monthly Annuity	\$ 339	\$ 543	\$ 906	\$1,352	\$1,929	\$2,731	\$3,879	\$1,437	
Avg Monthly FRE	\$2,401	\$2,764	\$3,163	\$3,499	\$4,044	\$4,711	\$5,529	\$3,542	
Number of Retirees	578	1,056	792	834	641	553	426	4,880	
2012									
Avg Monthly Annuity	\$ 345	\$ 539	\$ 848	\$1,407	\$1,961	\$2,807	\$3,780	\$1,391	
Avg Monthly FRE	\$2,473	\$2,758	\$2,946	\$3,670	\$4,083	\$4,808	\$5,436	\$3,503	
Number of Retirees	576	1,096	895	774	636	493	398	4,868	
2013									
Avg Monthly Annuity	\$ 345	\$ 560	\$ 886	\$1,425	\$1,968	\$2,812	\$3,875	\$1,378	
Avg Monthly FRE	\$2,445	\$2,798	\$3,087	\$3,673	\$4,109	\$4,836	\$5,555	\$3,518	
Number of Retirees	723	1,312	1,080	943	770	491	461	5,780	
2014									
Avg Monthly Annuity	\$ 361	\$ 562	\$ 931	\$1,374	\$2,020	\$2,876	\$3,960	\$1,439	
Avg Monthly FRE	\$2,559	\$2,784	\$3,246	\$3,573	\$4,196	\$4,947	\$5,679	\$3,609	
Number of Retirees	687	1,250	1,205	984	808	455	551	5,940	
2015									
Avg Monthly Annuity	\$ 391	\$ 603	\$ 985	\$1,550	\$2,331	\$3,046	\$4,036	\$1,533	
Avg Monthly FRE	\$2,721	\$2,963	\$3,409	\$3,892	\$4,600	\$5,140	\$5,757	\$3,807	
Number of Retirees	923	1,503	1,346	1,112	923	570	627	7,004	
2016									
Avg Monthly Annuity	\$ 337	\$ 520	\$ 837	\$1,331	\$1,888	\$2,578	\$3,620	\$1,193	
Avg Monthly FRE	\$2,363	\$2,573	\$2,868	\$3,331	\$3,755	\$4,346	\$5,167	\$3,457	
Number of Retirees	1,115	1,852	1,626	1,421	1,219	781	599	8,613	

FRE = Final Rate of Earnings used to calculate retirement benefit.

Note: This schedule excludes members retiring with money purchase benefits, reciprocal benefits, or multiple plans.

Table XXI Analysis of Initial Retirement Benefits: Sheriffs' Law Enforcement Personnel (SLEP) Plan (Last ten years)

		Years of	Years of Credited Service								
	20-24	25-29	30-34	35+	Total						
2007											
Avg Monthly Annuity	\$2,907	\$4,105	\$3,927	\$6,707	\$3,607						
Avg Monthly FRE	\$5,846	\$6,068	\$5,403	\$8,383	\$5,901						
Number of Retirees	36	36	13	1	86						
2008											
Avg Monthly Annuity	\$3,093	\$5,144	\$4,950	\$4,283	\$4,239						
Avg Monthly FRE	\$5,988	\$7,495	\$6,326	\$5,354	\$6,516						
Number of Retirees	25	19	16	2	62						
2009											
Avg Monthly Annuity	\$3,358	\$4,419	\$5,503	\$4,967	\$4,454						
Avg Monthly FRE	\$6,613	\$6,569	\$7,286	\$6,209	\$6,837						
Number of Retirees	21	17	22	1	61						
2010											
Avg Monthly Annuity	\$2,974	\$4,598	\$5,500	\$4,455	\$4,347						
Avg Monthly FRE	\$5,620	\$6,996	\$7,348	\$5,750	\$6,636						
Number of Retirees	30	43	26	4	103						
2011											
Avg Monthly Annuity	\$3,682	\$4,624	\$5,479	\$5,015	\$4,465						
Avg Monthly FRE	\$6,833	\$6,868	\$7,070	\$6,269	\$6,887						
Number of Retirees	36	36	21	2	95						
2012											
Avg Monthly Annuity	\$3,085	\$4,382	\$4,844	\$3,809	\$3,752						
Avg Monthly FRE	\$6,024	\$7,000	\$6,363	\$5,312	\$6,340						
Number of Retirees	38	21	11	2	72						
2013											
Avg Monthly Annuity	\$3,372	\$4,639	\$4,418	\$5,497	\$4,130						
Avg Monthly FRE	\$6,181	\$7,101	\$6,026	\$6,871	\$6,547						
Number of Retirees	31	27	10	5	73						
2014											
Avg Monthly Annuity	\$3,439	\$5,142	\$5,220	\$5,868	\$4,547						
Avg Monthly FRE	\$6,430	\$7,631	\$6,706	\$7,448	\$6,998						
Number of Retirees	39	39	18	6	102						
2015											
Avg Monthly Annuity	\$3,508	\$5,179	\$5,511	\$7,123	\$4,690						
Avg Monthly FRE	\$6,642	\$7,685	\$7,480	\$8,904	\$7,316						
Number of Retirees	39	59	18	1	117						
2016											
Avg Monthly Annuity	\$2,828	\$4,190	\$4,531	\$4,856	\$3,797						
Avg Monthly FRE	\$5,427	\$6,352	\$6,161	\$6,267	\$5,979						
Number of Retirees	620	696	379	46	1,741						

FRE = Final Rate of Earnings used to calculate retirement benefit.

Note: This schedule excludes members retiring with money purchase benefits, reciprocal benefits, or multiple plans.

Table XXII
Analysis of Initial Retirement Benefits:
Elected County Official (ECO) Plan (Last ten years)

Years of Credited Service									
	8-9	10-14	15-19	20-24	25-29	30-34	35+	Total	
2007	•								
Avg Monthly Annuity	\$254	\$1,435	\$2,940	\$4,848	-	-	-	\$2,630	
Avg Monthly FRE	\$1,033	\$3,243	\$4,013	\$6,060	-	-	-	\$3,917	
Number of Retirees	2	5	6	4	-	-	-	17	
2008									
Avg Monthly Annuity	\$287	\$1,550	\$4,249	\$4,341	\$664	-	-	\$2,506	
Avg Monthly FRE	\$1,184	\$3,773	\$6,094	\$5,425	\$830	-	-	\$4,024	
Number of Retirees	3	10	3	8	2	-	-	26	
2009									
Avg Monthly Annuity	\$1,489	\$1,987	\$2,804	\$2,523	-	-	-	\$2,241	
Avg Monthly FRE	\$5,958	\$4,358	\$4,511	\$3,154	-	-	-	\$4,247	
Number of Retirees	1	7	3	3	-	-	-	14	
2010									
Avg Monthly Annuity	\$123	\$1,871	\$2,243	\$4,672	\$4,039	\$4,992	\$3,872	\$2,751	
Avg Monthly FRE	\$497	\$4,411	\$3,472	\$5,859	\$5,172	\$6,241	\$4,841	\$4,097	
Number of Retirees	4	6	9	5	4	2	1	31	
2011									
Avg Monthly Annuity	\$141	\$320	\$2,787	\$4,394	\$4,722	-	-	\$2,279	
Avg Monthly FRE	\$580	\$754	\$4,182	\$5,493	\$6,139	-	-	\$3,234	
Number of Retirees	2	2	3	2	1	-	-	10	
2012									
Avg Monthly Annuity	\$687	\$ 845	\$ 762	\$4,046	-	\$4,598	-	\$1,990	
Avg Monthly FRE	\$2,312	\$1,934	\$1,186	\$5,058	-	\$5,748	-	\$2,967	
Number of Retirees	2	9	5	8	-	1	-	25	
2013									
Avg Monthly Annuity	\$992	\$1,070	-	\$3,590	-	-	-	\$2,304	
Avg Monthly FRE	\$3,958	\$2,144	-	\$4,487	-	-	-	\$3,920	
Number of Retirees	4	2	-	6	-	-	-	12	
2014									
Avg Monthly Annuity	-	\$2,519	\$3,872	\$13,226	\$4,453	\$330	\$7,753	\$6,338	
Avg Monthly FRE	-	\$5,821	\$5,454	\$16,533	\$5,678	\$413	\$9,691	\$8,459	
Number of Retirees	-	3	7	6	5	1	2	24	
2015									
Avg Monthly Annuity	-	\$1,204	-	-	-	-	-	\$1,204	
Avg Monthly FRE	-	\$2,988	-	-	-	-	-	\$2,988	
Number of Retirees	-	2	-	-	-	-	-	2	
2016									
Avg Monthly Annuity	\$523	\$2,768	\$2,697	\$8,690	\$11,232	\$2,464	\$1,578	\$5,005	
Avg Monthly FRE	\$2,035	\$6,366	\$3,984	\$10,876	\$14,040	\$3,081	\$2,444	\$7,455	
Number of Retirees  FRE = Final Rate of Earnings us	35	107	82	91	18	2	4	309	

FRE = Final Rate of Earnings used to calculate retirement benefit.

Note: This schedule excludes members retiring with money purchase benefits, reciprocal benefits, or multiple plans.

Table XXIII Distribution of Current Annuitants by Pension Amount

	Retirement Number of			vivor per of	All Annuities Number of	
<b>Monthly Pension Amount</b>	Males	Females	Males	Females	Males	Females
Under \$100	861	4,587	545	656	1,406	5,243
\$100 to under \$250	2,070	10,515	1086	1,797	3,156	12,312
\$250 to under \$500	4,140	15,747	1103	2,482	5,243	18,229
\$500 to under \$750	3,845	10,976	556	1,518	4,401	12,494
\$750 to under \$1,000	3,163	7,676	259	967	3,422	8,643
\$1,000 to under \$2,000	8,200	15,560	239	1669	8,439	17,229
\$2,000 to under \$3,000	5,079	5,359	26	397	5,105	5,756
\$3,000 to under \$4,000	3,355	2009	6	102	3,361	2,111
\$4,000 to under \$5,000	2,179	771	1	26	2,180	797
\$5,000 to under \$6,000	1,327	291	-	12	1,327	303
\$6,000 and over	1,786	254	-	9	1,786	263
Total	36,005	73,745	3,821	9,635	39,826	83,380

Note: Counts do not include disabilities.

## 2017-2019 STRATEGIC OBJECTIVES

IMRF's Strategic Plan for 2017-2019 includes four inter-related objectives that address internal and external strategic advantages, challenges, and opportunities. The Plan not only highlights the four Strategic Objectives, it also provides an overview of the Key Strategies designed to support the objectives.



2017-2019

## STRATEGIC PLAN

Ley Result Ares

#### Financial Health

To achieve and maintain a funding level that sustains the Plan

Otrategic Object

- Achieving stable/ declining employer contribution rates
- Achieving top decile funding level on a market-value basis relative to a universe of public pension funds
- Achieving progress toward 100% funding
- Achieving or exceeding a 7.5% annual return over the long term
- Outperforming the total portfolio benchmark

Ley Result Area

## Customer Engagement

To foster and maintain engaged members and employers

Otrategic Objective

- Achieving 90%
   "Very Likely to Promote"
   rating on member
   engagement survey
- Achieving 90%
   "Very Likely to Promote"
   rating on employer
   engagement survey

Ley Result Area

## Workforce Engagement

To foster and maintain an engaged workforce

Strategic Objectiv

- Achieving top decile ranking on the Employee Engagement Survey
- Achieving employee turnover levels below averages as measured by CompData Surveys

Ley Result Are.

## Operational Excellence

To provide world class customer service at a reasonable cost

Ofrategic Objective

- Achieving top decile "Overall Service Score" ranking for the CEM Benchmarking Survey
- Achieving top decile
   "American Customer
   Satisfaction Index" ranking
   for the Cobalt Retirement
   Fund Benchmarking Survey
- Achieving 90% "Overall Satisfaction" ratings on member and employer "Voice of the Customer" surveys
- Achieving per-member-cost at or below the median of the CEM administrative cost measure

IMRF will continue to develop and implement Strategic Plans to periodically reassess the best direction to take in fulfilling its promise of world-class service to our members, employers, and stakeholders.



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