

**JUDGES' RETIREMENT SYSTEM OF THE STATE OF
ILLINOIS**

FINANCIAL AUDIT
FOR THE YEAR ENDED JUNE 30, 2018

PERFORMED AS SPECIAL ASSISTANT AUDITORS
FOR THE AUDITOR GENERAL, STATE OF ILLINOIS



Judges' Retirement System of the State of Illinois

Financial Audit

For the Year Ended June 30, 2018

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Judges' Retirement System of the State of Illinois

Financial Audit For the Year Ended June 30, 2018

System Officials

Executive Secretary
Accounting Division Manager
Division Manager

Timothy B. Blair
Alan Fowler, CPA
Angie Ackerson (1/1/18 – Present)
Jayne Waldeck (7/1/17 – 12/31/17)
Casey Evans

Internal Audit

Office Locations

Springfield Office

2101 South Veterans Parkway
P.O. Box 19255
Springfield, Illinois 62794-9255

Chicago Office

State of Illinois Building
160 North LaSalle Street, Suite N725
Chicago, Illinois 60601

Financial Statement Report Summary

The audit of the accompanying financial statements of the Judges' Retirement System of the State of Illinois (System) was performed by RSM US LLP.

Based on their audit and the report of other auditors, the auditors expressed an unmodified opinion on the System's basic financial statements.



Independent Auditor's Report

Honorable Frank J. Mautino, Auditor General – State of Illinois

Board of Trustees, Judges' Retirement System of the State of Illinois

Report on the Financial Statements

As Special Assistant Auditors for the Auditor General, we have audited the accompanying Statement of Fiduciary Net Position of the Judges' Retirement System of the State of Illinois (System), as of June 30, 2018, and the Statement of Changes in Fiduciary Net Position for the year then ended, and the related notes to the financial statements, which collectively comprise the System's 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 audit. We did not audit the 2018 financial statements of the Illinois State Board of Investment, an internal investment pool of the State of Illinois, which statements represent 95 percent, 97 percent and 32 percent, respectively, of total assets, net position restricted for pension benefits, and total additions of the System. Those financial statements were audited by other auditors whose report thereon has been furnished to us, and our opinion, insofar as it relates to the amounts included for the Illinois State Board of Investment is based solely on the report of other auditors. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. 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, based on our audit and the report of other auditors, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2018, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

The actuarially determined pension liability, calculated as required by GASB Statement No. 67, is dependent on several assumptions including the assumption that future required contributions from State sources are made based on statutory requirements in existence as of the date of this report. These assumptions and required contributions are discussed in Notes 5 and 6 of the financial statements on pages 25 through 27. Our opinion is not modified with respect to this matter.

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 4 through 6 and the required supplementary information as listed in the table of contents on pages 30 through 33 be presented to supplement the basic 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 basic financial statements in an appropriate operational, economic, or historical context. We, and other auditors, 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 basic financial statements, and other knowledge we obtained during our audit of the basic 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 June 30, 2018 was conducted for the purpose of forming an opinion on the System's basic financial statements. The supplementary financial information, as listed in the table of contents, is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The supplementary financial information, as listed in the table of contents, for the year ended June 30, 2018 is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements for the year ended June 30, 2018 and certain additional procedures, including comparing and reconciling such information directly to underlying accounting and other records used to prepare the basic financial statements, or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America by us and other auditors. In our opinion, based on our audit and the report of other auditors, the supplementary financial information, as listed in the table of contents, is fairly stated, in all material respects, in relation to the basic financial statements as a whole for the year ended June 30, 2018.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 14, 2018 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to solely describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

SIGNED ORIGINAL ON FILE

Schaumburg, Illinois
December 14, 2018

MANAGEMENT'S DISCUSSION AND ANALYSIS

This section presents management's discussion and analysis of the financial position and performance of the Judges' Retirement System of Illinois (System) for the year ended June 30, 2018. It is presented as a narrative overview and analysis.

The System is a defined benefit, single-employer public employee retirement system. It provides services to 936 active judges and 1,193 benefit recipients. Throughout this discussion and analysis, units of measure (i.e. billions, millions, thousands) are approximate, being rounded up or down to the nearest tenth of the respective unit value.

OVERVIEW OF THE FINANCIAL STATEMENTS

This discussion and analysis is intended to serve as an introduction to the System's financial reporting which is comprised of the following components:

1. **Basic Financial Statements and Notes.** For the fiscal year ended June 30, 2018, basic financial statements are presented for the System. This information presents the fiduciary net position restricted for pensions for the System as of June 30, 2018. This financial information also summarizes the changes in fiduciary net position restricted for pensions for the year then ended. The notes to the financial statements provide additional information that is essential to achieve a full understanding of the data provided in the basic financial statements.
2. **Required Supplementary Information.** The required supplementary information consists of three schedules and related notes concerning actuarial information, funded status, information on state contributions and investment returns.
3. **Other Supplementary Schedules.** Other supplementary schedules include more detailed information pertaining to the System, including schedules of revenues by source, cash receipts and disbursements, and payments to consultants and advisors.

FINANCIAL HIGHLIGHTS

- The fiduciary net position increased by \$70.7 million during fiscal year 2018. The change was the result of a \$3.3 million increase in cash, a \$78.5 million increase in investments (excluding securities lending collateral) and a \$11.2 million decrease in receivables during the fiscal year.
- The System was funded at 36.4% as of June 30, 2018.
- The overall rate of return for the Illinois State Board of Investment (ISBI) Commingled Fund was a gain of 7.6% for fiscal year 2018 and the System's annual money-weighted rate of return on its investment in the ISBI Commingled Fund was a gain of 7.5%.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Condensed Statements of Fiduciary Net Position (in thousands)

	As of June 30,		Increase/(Decrease)
	2018	2017	from 2017 to 2018
Cash	\$ 28,938.2	\$ 25,658.0	\$ 3,280.2
Receivables	5,419.8	16,623.3	(11,203.5)
Investments, at fair value *	990,635.8	909,295.1	81,340.7
Capital Assets, net	70.5	55.8	14.7
Total assets	1,025,064.3	951,632.2	73,432.1
Liabilities *	12,579.5	9,828.7	2,750.8
Total fiduciary net position	\$ 1,012,484.8	\$ 941,803.5	\$ 70,681.3

* Including securities lending collateral

ADDITIONS TO FIDUCIARY NET POSITION

Additions to Fiduciary Net Position include employer and participant contributions and net income from investment activities. Participant contributions were approximately \$14.3 million and \$14.8 million for the years ended June 30, 2018 and June 30, 2017, respectively. Participant contribution rates are set by statute as a percentage of gross salary. For fiscal year 2018, employer contributions increased to approximately \$136.0 million from \$131.3 million in fiscal year 2017. These changes were the result of the actuarially determined employer contributions required by the State's funding plan.

DEDUCTIONS FROM FIDUCIARY NET POSITION

Deductions from Fiduciary Net Position are primarily benefit and refund payments. During fiscal years 2018 and 2017, the System paid out approximately \$148.6 million and \$141.5 million in benefits and refunds, respectively. This increase of 5.0% from 2017 to 2018 is mainly the result of the annual scheduled 3% increase in retirement and other benefit payments. The administrative costs of the System represented less than 1% of the total deductions in each of the fiscal years presented within the condensed statements.

Condensed Statements of Changes in Fiduciary Net Position (in thousands)

	For the Year Ended June 30,		Increase/(Decrease)
	2018	2017	from 2017 to 2018
Additions			
Participant contributions	\$ 14,295.6	\$ 14,770.4	\$ (474.8)
Employer contributions	135,962.0	131,334.0	4,628.0
Net Investment income (loss)	69,949.6	97,796.5	(27,846.9)
Total additions	220,207.2	243,900.9	(23,693.7)
Deductions			
Benefits	148,146.9	140,497.2	7,649.7
Refunds	481.7	974.7	(493.0)
Administrative expenses	897.3	914.4	(17.1)
Total deductions	149,525.9	142,386.3	7,139.6
Net increase(decrease) in fiduciary net position	\$ 70,681.3	\$ 101,514.6	\$(30,833.3)

FUNDED RATIO

The funded ratio of the plan measures the ratio of the fiduciary net position against total pension liability as measured by the actuary and is one indicator of the fiscal strength of a pension fund's ability to meet obligations to its members. An annual actuarial valuation is performed. The most recent available valuation showed the funded status of the System was 36.4% on June 30, 2018. The amount by which total pension liability exceeded the fiduciary net position was \$1,771.4 million on June 30, 2018.

INVESTMENTS

Investments of the System are combined in an internal commingled investment pool and held by the Illinois State Board of Investment (ISBI) with the State Employees' Retirement System, General Assembly Retirement System, and one other state agency. The investments of this other state agency are immaterial to the total commingled investment pool. Each participating entity owns an equity position in the pool and receives proportionate investment income from the pool in accordance with respective ownership percentage. Investment gains or losses are reported in the Statement of Changes in Fiduciary Net Position of each participating entity.

The net investment income of the total ISBI Commingled Fund was approximately \$1,331.5 million during fiscal year 2018, resulting in returns of 7.6%. The actual rate of return earned by the System will vary from the return earned on the total ISBI Commingled Fund as a result of overall market conditions at the time of additional investments in or withdrawals from the ISBI Commingled Fund. For the three, five, and ten year periods ended June 30, 2018, the ISBI Commingled Fund earned a compounded rate of return of 6.2%, 8.1%, and 6.0%, respectively.

The ISBI is exposed to general market risk. This general market risk is reflected in asset valuations fluctuating with market volatility. Any impact from market volatility on the ISBI's investment portfolio depends in large measure on how deep the market downturn is, how long it lasts, and how it fits within fiscal year reporting periods. The resulting market risk and associated realized and unrealized gains and losses could significantly impact the ISBI's financial condition.

FUTURE OUTLOOK

The actuarial assumptions adopted as of June 30, 2018 were based on the experience review for the three years ended June 30, 2015, and the annual review of all economic assumptions. The state's statutory employer contribution for fiscal year 2019 will increase by \$4.507 million, or 3.3%.

Tier 2 active members' annual earnings on which they can contribute were capped at \$119,792 in 2018 and will be capped at \$122,547 in 2019. The caps on Tier 2 members' earnings decreases the anticipated amount of future earnings credit as well as the associated contributions.

Benefit payments are projected to continue to grow at a rate of approximately 4% to 6%, primarily as a result of the increasing numbers of retirees and the 3% annual COLA.

The ISBI plans to continue to improve the overall investment portfolio performance by increasing reliance on passive investment strategies and reducing investment advisor and management fees.

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of the Systems' finances. For questions concerning the information in this report or for additional information, contact the Accounting Division of the State Retirement Systems at srsacctgdiv@srs.illinois.gov.

FINANCIAL STATEMENTS

JUDGES' RETIREMENT SYSTEM, STATE OF ILLINOIS

Statement of Fiduciary Net Position

June 30, 2018

Assets

Cash \$ 28,938,179

Receivables:

Employer contributions 5,215,000

Participants' contributions 92,465

Interest on cash balances 49,755

Due from General Assembly Retirement System 62,567

Total receivables 5,419,787

Investments:

Investments - held in the Illinois State Board of
Investment Commingled Fund at fair value 978,196,836

Securities lending collateral with State Treasurer 12,439,000

Total Investments 990,635,836

Capital Assets, net 70,481

Total Assets 1,025,064,283

Liabilities

Benefits payable 17,290

Refunds payable 13,270

Administrative expenses payable 109,922

Securities lending collateral 12,439,000

Total Liabilities 12,579,482

Net position – restricted for pensions \$ 1,012,484,801

See accompanying notes to financial statements.

FINANCIAL STATEMENTS

JUDGES' RETIREMENT SYSTEM, STATE OF ILLINOIS

Statement of Changes in Fiduciary Net Position
for the Year Ended June 30, 2018

Additions:	
Contributions:	
Participants	\$ 14,295,562
Employer	135,962,000
Total contributions	<u>150,257,562</u>
Investment income:	
Net appreciation/(depreciation) in fair value of investments	49,815,053
Interest and dividends	21,459,864
Less investment expense, other than from securities lending	<u>(1,421,235)</u>
Net income (loss) from investing, other than from securities lending	69,853,682
Net securities lending income	95,964
Net investment income (loss)	<u>69,949,646</u>
Total Additions	<u>220,207,208</u>
Deductions:	
Benefits:	
Retirement annuities	122,966,147
Survivors' annuities	25,140,113
Temporary disability	<u>40,678</u>
Total benefits	148,146,938
Refunds of contributions	481,716
Administrative expenses	<u>897,285</u>
Total Deductions	<u>149,525,939</u>
Net increase/(decrease) in net position	<u>70,681,269</u>
Net position - restricted for pensions:	
Beginning of year	<u>941,803,532</u>
End of year	<u>\$ 1,012,484,801</u>

See accompanying notes to financial statements.

FINANCIAL STATEMENTS

JUDGES' RETIREMENT SYSTEM OF ILLINOIS

Notes to Financial Statements June 30, 2018

1. Reporting Entity

Generally accepted accounting principles require that the financial reporting entity include (1) the primary government, (2) organizations for which the primary government is financially accountable and (3) other organizations for which the nature and significance of their relationship with the primary government are such that exclusion would cause the reporting entity's financial statements to be misleading or incomplete.

The Judges' Retirement System of Illinois (System) is administered by a Board of Trustees consisting of five persons, which include the State Treasurer, the Chief of the Supreme Court, ex officio, and three participating judges appointed by the Supreme Court. Operation of the System and the direction of its policies are the responsibility of the Board of Trustees.

Based on the criteria of the Governmental Accounting Standards Board Statement No. 61, there are no other state agencies, boards or commissions, or other organizations required to be combined with the System, however, the System is a pension trust fund of the State of Illinois financial reporting entity, and is to be combined and included in the State of Illinois' comprehensive annual financial report.

Pursuant to federal tax law and regulations governing the administration of public employee pension plans, the System has established a separate fund for the sole purpose of paying benefits in accordance with Section 415 of the Internal Revenue Code. The receipts and disbursements from the fund for fiscal year 2018 were each less than \$1.8 million. Due to the immaterial nature of the separate fund, these receipts and disbursements have been included in the System's financial statements.

At June 30, 2018, the System membership consisted of:

	2018
Retirees and beneficiaries	
currently receiving benefits:	
Retirement annuities	871
Survivors' annuities	322
Temporary disability	-
	<u>1,193</u>
Inactive participants entitled to benefits	
but not yet receiving them	<u>9</u>
Total	<u>1,202</u>
Active participants:	
Vested	532
Nonvested	404
Total	<u>936</u>

2. Plan Description

The System is the administrator of a single-employer defined benefit public employee retirement system (PERS) established and administered by the State of Illinois to provide pension benefits for its participants. The plan is comprised of two tiers of contribution requirements and benefit levels. Tier 1 pertains to participants who first became a participant of the System prior to January 1, 2011. Tier 2 pertains to participants who first became a participant of the System on or after January 1, 2011.

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a. Eligibility and Membership

The Judges' Retirement System covers Judges, Associate Judges and, under certain conditions, the Administrative Director of the Illinois courts. Participation by Judges, either appointed or elected, is mandatory unless the Judge files an election not to participate within thirty days of receipt of notice of this option.

b. Contributions

In accordance with Chapter 40, Section 5/18-133 of the Illinois Compiled Statutes, participants contribute specified percentages of their salaries for retirement annuities, survivors' annuities, and annual increases. Tier 1 participants contribute based on total annual compensation. Beginning January 1, 2011, Tier 2 participants contribute based on an annual compensation rate not to exceed \$106,800 with limitations for future years increased by the lesser of 3% or the annual percentage increase in the Consumer Price Index. The rate is \$119,792 for calendar year 2018. Contributions are excluded from gross income for Federal and State income tax purposes.

Participants who are eligible to receive the maximum rate of annuity may irrevocably elect to discontinue contributions and have their benefits "frozen" based upon the applicable salary in effect immediately prior to the effective date of such election.

Participants who have attained age 60 and are eligible to receive the maximum rate of annuity and have not elected to discontinue contributing to the System may irrevocably elect to have their contributions based only on the salary increases received on or after the effective date of such election rather than on the total salary received. The total contribution rate is 11% if the participants elect to contribute for their spouse and dependents as shown below:

7.5%	Retirement annuity
2.5%	Survivors' annuity
1.0%	Automatic annual increases
<u>11.0%</u>	

The statutes governing the Judges' Retirement System provide for optional contributions by participants, with interest at prescribed rates, to retroactively establish service credits for periods of prior creditable service.

The Board of Trustees has adopted the policy that interest payments by a participant, included in optional contributions to retroactively establish service credits, shall be considered an integral part of the participant's investment in annuity expectancies and, as such, shall be included as a part of any refund payable.

The payment of (1) the required State contributions, (2) all benefits granted under the System and (3) all expenses in connection with the administration and operation thereof are the obligations of the State to the extent specified in Chapter 40, Article 5/18 of the Illinois Compiled Statutes.

c. Benefits Retirement Annuity: Tier 1

Participants have vested rights to full retirement benefits beginning at age 60 with at least 10 years of credited service or reduced retirement benefits beginning at age 55. Participants also have vested rights to full retirement benefits at age 62 upon completing 6 years of credited service or at age 55 upon completing 26 years of credited service.

The retirement annuity provided is 3-1/2% for each of the first 10 years of service, plus 5% for each year of service in excess of 10, based upon the applicable final salary. The maximum retirement annuity is 85% of the applicable final salary. Annual automatic increases of 3% of the current amount of retirement annuity are provided.

Retirement Annuity: Tier 2

Participants have vested rights to full retirement benefits at age 67 with at least 8 years of credited service or reduced retirement benefits at age 62 with at least 8 years of credited service.

FINANCIAL STATEMENTS

The retirement annuity provided is 3% for each year of service based upon the applicable final average salary. The maximum retirement annuity is 60% of the applicable final average salary. Annual automatic increases equal to the lesser of 3% or the annual change in the Consumer Price Index are provided.

Other Benefits

The Judges' Retirement System also provides survivors' annuity benefits, temporary and/or total disability benefits and, under certain specified conditions, lump-sum death benefits.

Participants who terminate service and are not eligible for an immediate annuity may receive, upon application, a refund of their total contributions. Participants or annuitants who are not married are entitled to refunds of their contributions for survivors.

3. Summary of Significant Accounting Policies & Plan Asset Matters

a. Basis of Accounting

The financial transactions of the System are maintained and these financial statements have been prepared using the accrual basis of accounting in conformity with generally accepted accounting principles.

Participant and employer contributions are recognized as revenues when due pursuant to statutory requirements. Benefits and refunds are recognized as expenses when due and payable in accordance with the terms of the plan.

b. Cash

The System retains all of its available cash in a commingled investment pool managed by the Treasurer of the State of Illinois (Treasurer). All deposits are fully collateralized by the Treasurer.

"Available cash" is determined to be that amount which is required for the current operating expenditures of the System. The excess of available cash is transferred to the Illinois State Board of Investment (ISBI) for purposes of long-term investment for the System.

c. Implementation of New Accounting Standards

GASB Statement No. 75, "*Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*", addresses accounting and financial reporting for OPEB that is provided to the employees of state and local governmental employers. The statement establishes standards for recognizing and measuring liabilities, deferred outflows / deferred inflows of resources and expense/expenditures. In the case of defined benefit OPEB, the statement also identifies methods and assumptions that are required to be used to project benefit payments, discount projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service. Note disclosures and required supplementary information about defined benefit OPEB are also addressed. This GASB is effective for fiscal years beginning after June 15, 2017 (FY 2018) and it has been determined that it will not impact the System's financial statements.

GASB Statement No. 82, "*Pension Issues – Amendment to GASB 67 & 68*", addresses the presentation of payroll related measures in the required supplementary information and the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The System implemented this statement for the year ended June 30, 2017. The impact of implementation is reflected in the updated RSI schedules applicable to covered payroll.

d. General Litigation

The System is subject to claims and lawsuits that arise primarily in the ordinary course of business. It is the opinion of management that the disposition or ultimate resolution of such claims and lawsuits will not have a material adverse effect on the plan net position or the changes in plan net position of the System.

e. Methods Used to Value Investments

Investments are managed by the ISBI pursuant to Chapter 40, Article 5/22A of the Illinois Compiled Statutes (ILCS) and are maintained in the ISBI Commingled Fund.

Investments are reported at fair value as follows: (1) U.S. Government and Agency, Foreign and Corporate

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Obligations, Convertible Bonds – prices quoted by a major dealer in such securities; (2) Common Stock and Equity Funds, Foreign Preferred Stock, Foreign Equity Securities, Forward Foreign Currency Contracts and Options: (a) Listed – closing prices as reported on the composite summary of national securities exchanges; (b) Over-the-counter – bid prices; (3) Money Market Instruments – amortized cost; (4) Real Estate Investments – fair values based on audited financial statements of the funds and then adjusted by the ISBI and its investment managers for activity from audit date to fiscal year end; (5) Alternative Investments (Private Equity, Hedge Funds, Bank Loans, Opportunistic Debt and Infrastructure) – fair values based on audited financial statements of the funds and then adjusted by the ISBI and its investment managers for activity from audit date to fiscal year end; (6) Commingled Funds – fair values based on audited financial statements of the funds and then adjusted by the ISBI and its investment managers for activity from audit date to fiscal year end.

Units of the ISBI Commingled Fund are issued to the participating entities on the last day of the month based on the unit net asset value calculated as of that date. Net investment income of the ISBI Commingled Fund is allocated to each of the participating entities on the last day of the month on the basis of percentage of accumulated units owned by the respective systems. Management expenses are deducted monthly from income before distribution.

The investment authority of the ISBI is provided in Chapter 40, Section 5/22A-112 of the ILCS. Such investment authority requires that all opportunities be undertaken with care, skill, prudence and diligence given prevailing circumstances that a prudent person acting in like capacity and experience would undertake.

f. Actuarial Experience Review

In accordance with Illinois Compiled Statutes, an actuarial experience review is to be performed at least once every three years to determine the adequacy of actuarial assumptions regarding the mortality, retirement, disability, employment, turnover, interest and earnable compensation of the members and beneficiaries of the System. An experience review was last performed for the period from July 1, 2012 to June 30, 2015 resulting in the adoption of new assumptions as of June 30, 2016.

g. Administrative Expenses

Expenses related to the administration of the System are financed through investment earnings and employer retirement contributions. These expenses are budgeted and approved by the System's Board of Trustees.

Administrative expenses common to the Judges' Retirement System and the General Assembly Retirement System are allocated 75% to the Judges' Retirement System and 25% to the General Assembly Retirement System. Invoices/vouchers covering common expenses incurred are paid by the Judges' Retirement System, and the appropriate amount is allocated to and reimbursed by the General Assembly Retirement System. Administrative expenses allocated to and reimbursed by the General Assembly Retirement System as of June 30, 2018 was \$236,908. The total administrative expenses attributable to the Judges' Retirement System was \$897,285 for fiscal year 2018.

h. Risk Management

The System, as part of the primary government of the State, provides for risks of loss associated with workers' compensation and general liability through the State's self-insurance program. The System obtains commercial insurance for fidelity, surety, and property. There have been no commercial insurance claims in the past three fiscal years.

i. Use of Estimates

In preparing financial statements in conformity with U.S. generally accepted accounting principles, the System makes estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates and assumptions.

4. Investments

Introduction

Investments of the System are combined in a commingled internal investment pool and held by the Illinois State Board of Investment (ISBI). The System owns approximately 5% of the net position of the ISBI commingled fund as of June 30, 2018. A schedule of investment expenses is included in the ISBI's annual report.

For additional information on ISBI's investments, please refer to their Annual Report as of June 30, 2018. A copy of the report can be obtained from the ISBI at 180 North LaSalle Street, Suite 2015, Chicago, Illinois 60601 or by visiting their website, <https://www.isbinvestment.com>.

Summary of the ISBI Fund's investments at fair value by type

	June 30, 2018
U.S. govt. and agency obligations	\$ 3,772,996,557
Foreign obligations	317,071,356
Corporate obligations	978,155,830
Municipal bonds	8,911,164
Common stock & equity funds	5,227,218,322
Commingled funds	1,721,839,058
Foreign equity securities	2,301,280,852
Foreign preferred stock	8,763,970
Hedge funds	360,744,003
Opportunistic debt	225,053,335
Real estate funds	1,594,774,574
Private equity	706,768,270
Infrastructure	408,985,767
Bank loans	464,315,920
Foreign currency forward contracts	(7,847,062)
Money market instruments	231,743,812
Total investments	\$ 18,320,775,728

Rate of Return

For the fiscal year ended June 30, 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 7.5%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Deposits

Custodial credit risk for deposits is the risk that, in the event of a financial institution failure, the System's and ISBI'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 State Treasurer or agents in the name of the State Treasurer. As of June 30, 2018, the ISBI had a non-investment related bank balance of \$903,541. A Credit Risk Policy was implemented by the ISBI staff and formally adopted by the ISBI Board in July of 2007. The policy outlines the control procedures used to monitor custodial credit risk. These assets are under the custody of Northern Trust. Northern Trust has an A+ Long-term Deposit/Debt rating by Standard & Poor's and an A2 rating by Moody's. Certain investments of the ISBI with maturities of 90 days or less would be considered cash equivalents; these consist of short-term investment funds and U.S. Treasury bills with maturities of 90 days or less, which are not subject to the custodial credit risk. For financial statement presentation and investment purposes, the ISBI reports these types of cash equivalents as Money Market Instruments within their investments. As of June 30, 2018, the ISBI had an investment related bank balance of \$13,382,746. This balance includes USD and foreign cash balances. As of January 1, 2013, cash held in the investment related bank account is neither insured nor collateralized for amounts in excess of \$250,000. However, the ISBI is the beneficiary of multiple policies and bonds held by Northern Trust providing for recovery of various potential losses related to services provided by Northern Trust as the ISBI's custodian. At any given point and time, the foreign cash balances may be exposed to custodial credit risk.

Investment Commitments

The ISBI had total investment commitments of \$2.1 billion at the end of fiscal year 2018. The ISBI's real estate, private equity, infrastructure and opportunistic debt investment portfolios consist of passive interests in limited partnerships. At the end of fiscal year 2018, the ISBI had no outstanding commitments to separate real estate accounts within the real estate and private equity investment portfolios. The ISBI would fund outstanding commitments by utilizing available cash and then selling liquid securities in the portfolio as necessary.

Investment Liquidity

The majority of the ISBI's portfolio is highly liquid, however, the ISBI holds investments in hedge funds, real estate funds, opportunistic debt funds, private equity funds and infrastructure funds that are considered illiquid by the very nature of the investment. Market risk exists with respect to these investments as the ISBI may not be able to exit from the illiquid investments during periods of significant market value declines.

Alternative Investments

The ISBI's investments in alternative investment vehicles consist of Commingled Funds, Private Equity Funds, Hedge Funds, Infrastructure Funds, Opportunistic Debt Funds and Real Estate Funds. These types of vehicles are used for making investments in various equity and debt securities according to the investment strategies as determined by the fund managers at the commencement of the fund.

Fair Value Measurements

Fair value is the amount that would be received to sell the investment in an orderly transaction between market participants at the measurement date (i.e. exit price). The fair value measurements are determined within a framework that utilizes a three-tier hierarchy, which maximizes the use of observable inputs and minimizes the use of unobservable inputs. Investments measured and reported at fair value are classified and disclosed in one of the following categories:

- Level 1 – Unadjusted quoted prices in active markets for identical assets.
- Level 2 – Inputs other than quoted prices that are observable for the asset, either directly or indirectly. These inputs include:
 - a. quoted prices for similar assets in active markets;
 - b. quoted prices for identical or similar assets in markets that are not active;
 - c. inputs other than quoted prices that are observable for the asset or;
 - d. inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 – Inputs that are unobservable for the asset. The valuation of these investments requires significant judgement due to the absence of quoted market values, inherent lack of liquidity, and changes in market conditions.

The valuation methodologies are as follows:

- U.S. Treasuries and U.S. Agencies: quoted prices for identical securities in markets that are not active;
- Foreign Government Obligations and Foreign Corporate Obligations: Broker quote in an active market;
- Corporate Bonds: quoted prices for similar securities in active markets;
- Bank Loans: discounted cashflow, internal assumptions, weighting of the best available pricing inputs and third party pricing services;
- Common Stock and Equity Funds, Foreign Preferred Stocks, Foreign Equity Securities and Commingled Funds-Domestic and Foreign: quoted prices for identical securities in an active market. Brokers quote in an active market;
- Money Market Funds: Average cost which approximates fair value;
- Derivative Instruments: valued using a market approach that considers foreign exchange rates.

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The recurring fair value measurements for the year ended June 30, 2018 are as follows:

At June 30, 2018

Fair Value Measurements Using

	Level 1	Level 2	Level 3	Totals
Investments by fair value level				
Debt Securities				
Government and agency obligations	\$ -	\$ 3,772,996,557	\$ -	\$ 3,772,996,557
Municipal bonds	-	8,911,164	-	8,911,164
Foreign obligations	-	316,170,777	900,579	317,071,356
Corporate obligations	-	973,728,079	4,427,751	978,155,830
Bank loans	-	36,604,268	427,711,652	464,315,920
Total debt securities	<u>\$ -</u>	<u>\$ 5,108,410,845</u>	<u>\$ 433,039,982</u>	<u>\$ 5,541,450,827</u>
Equity Securities				
Common stock and equity funds	\$ 5,226,061,569	\$ 1,134,591	\$ 22,162	\$ 5,227,218,322
Foreign equity securities	2,297,170,419	3,662,373	448,060	2,301,280,852
Foreign preferred stocks	8,763,970	-	-	8,763,970
Total equity securities	<u>\$ 7,531,995,958</u>	<u>\$ 4,796,964</u>	<u>\$ 470,222</u>	<u>\$ 7,537,263,144</u>
Other				
Foreign currency forward contracts	\$ (7,847,062)	\$ -	\$ -	\$ (7,847,062)
Total other	<u>\$ (7,847,062)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (7,847,062)</u>
Total investments by fair value level	<u>\$ 7,524,148,896</u>	<u>\$ 5,113,207,809</u>	<u>\$ 433,510,204</u>	<u>\$ 13,070,866,909</u>
Investments measured at the Net Asset Value (NAV)				
Commingled funds				\$ 1,721,839,058
Real estate funds				1,594,774,574
Private equity				706,768,270
Infrastructure				408,985,767
Opportunistic debt				225,053,335
Hedge funds				360,744,003
Total investments measured at the NAV				<u>\$ 5,018,165,007</u>
Investments not measured at fair value				
Money market instruments				<u>\$ 231,743,812</u>
Total investments				<u>\$ 18,320,775,728</u>

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Investments valued using the net asset value (NAV) per share (or its equivalent) are considered “alternative investments” and, unlike more traditional investments, generally do not have readily obtainable market values and take the form of limited partnerships. The ISBI values these investments based on the partnerships’ audited financial statements. If June 30 statements are available, those values are used preferentially. However, some partnerships have fiscal years ending at other than June 30. If June 30 valuations are not available, the value is adjusted from the most recently available valuation taking into account subsequent calls and distributions, adjusted for unrealized appreciation/depreciation, other income and fees.

The following table presents the unfunded commitments, redemption frequency (if currently eligible), and the redemption notice period for alternative investments measured at NAV:

	June 30, 2018			
	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Commingled funds	\$ 1,721,839,058	-	Quarterly	90 Days
Real estate funds	1,594,774,574	\$ 713.3 million	Quarterly	90 Days
Private equity	706,768,270	707.6 million	N/A	N/A
Opportunistic debt	225,053,335	660.1 million	N/A	N/A
Hedge funds	360,744,003	-	Quarterly	90 Days
Infrastructure	408,985,767	23.5 million	Quarterly	90 Days
Total Investments measured at the NAV	<u>\$ 5,018,165,007</u>			

1) Commingled Funds – The ISBI’s investments in this category consist of assets that are blended together with other investments in order to provide economies of scale which allows for lower trading costs per dollar of investment and diversification. These investments provide primarily liquid exposure to publicly traded equity and fixed income markets. The equity portfolios provide diversification benefits and return enhancement to the overall fund in both domestic and international equity markets. Commingled funds are also called “pooled funds” and “master trusts”. Investment strategies consist of investments in six diversified funds focusing on emerging markets and six long-only equity funds. The fair value of these investments is based on audited financial statements of the funds adjusted for activity from the audit date to year end. The ISBI has no plans to liquidate these investments as of June 30, 2018. It is probable that any investments sold will be sold at an amount different from the current NAV of the plan’s ownership interest.

2) Private Equity – The ISBI’s assets in this category consist of investments in funds not listed on public exchanges. Investment strategies consist of investments in sixty-five funds with the goals of generating returns significantly greater than typically available in the public market and diversifying the ISBI’s overall portfolio which is comprised predominantly of fixed income and equity assets. The strategies of Private Equity funds include, but are not limited to, leveraged buyouts, venture capital, growth capital and mezzanine capital. Returns are commensurate with the risks presented by this asset class which include illiquidity and lack of standard historical evaluation data. The fair value of these investments is based on audited financial statements of the funds adjusted for activity from the audit date to year end. The ISBI has no plans to liquidate these investments as of June 30, 2018. It is probable that any investments sold will be sold at an amount different from the current NAV of the plan’s ownership interest

3) Hedge Funds – The ISBI is currently in the process of transitioning investments in hedge fund vehicles to long-only equity vehicles. Assets in this category have historically consisted of investments in funds that seek to generate better than average return and provide a hedge against a downward trend in the overall market. Investment strategies currently consist of investments in eighteen funds including hedge fund and long only

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equity assets. Returns are commensurate with the risks presented by this asset class which include illiquidity and lack of standard historical evaluation data. The fair value of these investments is based on audited financial statements of the funds adjusted for activity from the audit date to year end. As of June 30, 2018, for the majority of the hedge fund investments, the ISBI has plans to transition out entirely or to long only equity assets. It is probable that any investments sold will be sold at an amount different from the current NAV of the plan's ownership interest.

4) Infrastructure – The ISBI's assets in this category consist of investments in funds that identify infrastructure assets which provide essential services or facilities to a community (ports, bridges, toll roads etc.) and are typically made as a part of a privatization initiative on the part of a government entity. Investment strategies consist of investments in six funds with the goals of diversifying the ISBI's overall portfolio which is comprised predominantly of fixed income and equity assets and providing capital appreciation and income generation. The fair value of these investments is based on audited financial statements of the funds adjusted for activity from the audit date to year end. The ISBI has no plans to liquidate these investments as of June 30, 2018. It is probable that any investments sold will be sold at an amount different from the current NAV of the plan's ownership interest.

5) Opportunistic Debt – The ISBI's assets in this category consist of investments in private fixed income markets. Investment strategies consist of investments in seventeen funds with the goals of diversifying the ISBI's overall portfolio, providing downside protection through assets that are capital collateralized and supplementing the total return of the portfolio which is comprised predominantly of fixed income and equity assets. The fair value of these investments is based on audited financial statements of the funds adjusted for activity from the audit date to year end. The ISBI has no plans to liquidate these investments as of June 30, 2018. It is probable that any investments sold will be sold at an amount different from the current NAV of the plan's ownership interest.

6) Real Estate Funds – The ISBI's assets in this category consist of investments in the Core and Non-Core Real Estate Fund categories. Investment strategies consist of investments in thirty-six funds with the goals of diversifying the ISBI's overall portfolio, providing capital appreciation and supplementing the total return of the portfolio through exposure to private real estate assets in both open-end and closed-end structures. Investments in this category are globally diversified and consist of office, industrial, multi-family, storage and other types of assets. Core assets are expected to provide strong diversification through primary markets and high-income potential. Non-Core assets are typically higher risk assets with stronger capital appreciation. The fair value of these investments is based on audited financial statements of the funds adjusted for activity from the audit date to year end. The ISBI has no plans to liquidate these investments as of June 30, 2018. It is probable that any investments sold will be sold at an amount different from the current NAV of the plan's ownership interest.

Certain real estate investments are leveraged whereby partnerships have been established to purchase properties through a combination of contributions from the ISBI and through acquisition of debt. At June 30, 2018, real estate equities of approximately \$1,595 million are reported at estimated fair value. Of this amount, \$1,679 million is net assets and \$84 million is long term debt.

Required repayment of real estate debt, which is non-recourse debt, is as follows as of June 30, 2018:

Debt Maturities Year Ending June 30	<u>2018</u>
2019	\$ 25,492,500
2020	57,963,872
	<u>\$ 83,456,372</u>

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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, the ISBI will not be able to recover the value of investments or collateral securities that are in the possession of a counterparty. As of June 30, 2018, there were no investments that were uninsured and unregistered securities held by the counterparty or by its trust department or agent but not in the ISBI's name.

Interest Rate Risk

The ISBI manages its exposure to fair value losses arising from interest rate risk by diversifying the debt securities portfolio and maintaining the debt securities portfolio to an effective weighted duration consistent with the Barclay's U.S. Universal Index (benchmark index). As of June 30, 2018, the effective weighted duration of the ISBI's fixed income portfolio was 6.7 years and the effective duration of the benchmark index was 5.8 years.

Duration is the 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 fair value. The effective duration measures the sensitivity of market price to parallel shifts in the yield curve. The table below shows the detail of the duration by investment type as of June 30, 2018:

Investment Type	Fair Value	Effective Weighted Duration Years
U.S. Govt. and Agency Obligations		
U.S. Government	\$ 3,051,823,420	8.4
Federal Agency	721,173,138	5.4
Municipal Obligations	8,911,164	10.7
Foreign Obligations	317,071,356	5.3
Corporate Obligations		
Bank & Finance	306,945,996	3.3
Industrial	92,423,482	5.7
Other	578,786,351	5.1
Total	<u>\$ 5,077,134,907</u>	

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For the ISBI's bank loan portfolio, the appropriate measure of interest rate risk is weighted average maturity. Weighted average maturity is the average time it takes for securities in a portfolio to measure weighted in proportion to the dollar amount that is invested in the portfolio. Weighted average maturity measures the sensitivity of fixed-income portfolios to interest rate changes. At June 30, 2018, the weighted average maturity of ISBI's bank loan portfolio was 5.1 years.

Concentration of Credit Risk and Credit Risk for Investments

The ISBI's portfolio of investments is 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 ISBI did have one issuer investment that exceeded 5% of the total investments of the fund as of June 30, 2018. This security was U.S. Treasury Notes/Bills with a Moody's rating of Aaa. This investment represented 7.0% of the total investments of the fund. The table below and continued on the next page, presents the quality ratings of debt securities held by the ISBI as of June 30, 2018.

	Moody's Quality Rating	
U.S. Government and Agency Obligations	AAA	\$ 3,763,976,416
	Not Rated	9,020,142
Total U.S. Government and Agency Obligations		<u>\$ 3,772,996,557</u>
Municipal Obligations	AAA	\$ 838,626
	AA	1,511,700
	A	1,269,124
	CA	19,320
	Not Rated	5,272,393
Total Municipal Obligations		<u>\$ 8,911,164</u>
Foreign Obligations	AAA	\$ 41,977,946
	AA	27,460,930
	A	54,344,245
	BAA	59,881,915
	BA	27,877,269
	B	47,658,967
	CAA	19,185,346
	CA	740,870
	C	487,825
	Not rated	37,456,043
Total Foreign Obligations		<u>\$ 317,071,356</u>

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	Moody's Quality Rating	
Corporate Obligations		
Bank and Finance		
	AAA	\$ 30,463,803
	AA	1,918,280
	A	186,631,850
	BAA	40,936,878
	BA	17,326,045
	B	10,584,845
	CAA	1,040,188
	C	192,675
	Not Rated	17,851,432
Total Bank and Finance		<u>\$ 306,945,996</u>
Industrial		
	AAA	\$ 170,856
	AA	55,479
	A	16,784,165
	BAA	22,770,802
	BA	7,207,064
	B	27,952,272
	CAA	10,735,935
	Not Rated	6,746,912
Total Industrial		<u>\$ 92,423,482</u>
Other		
	AAA	\$ 12,892,695
	AA	39,432,846
	A	131,626,425
	BAA	140,301,493
	BA	56,287,806
	B	117,871,856
	CAA	52,532,525
	CA	761,400
	C	546,904
	Not Rated	26,532,402
Total Other		<u>\$ 578,786,352</u>
Total Corporate Obligations		<u>\$ 978,155,830</u>
Total Bank Loans	Not Rated	<u>\$ 464,315,920</u>
Total Money Market	Not Rated	<u>\$ 231,743,812</u>

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Foreign Currency Risk

The ISBI's international portfolio is constructed on the principles of diversification, quality, growth, and value. Risk of loss arises from changes in currency exchange rates and other factors. Certain investments held in infrastructure and real estate funds trade in a reported currency of Euro-based dollars valued at \$120,121,360 as of June 30, 2018. The table below presents the foreign currency risk by type of investment as of June 30, 2018.

Currency	2018	
	Foreign Equity Securities & Foreign Preferred Stock	Foreign Obligations
Australian Dollar	\$ 140,703,692	\$ -
Brazilian Real	2,328,245	-
Canadian Dollar	34,869,856	-
Danish Krone	34,178,475	-
English Pound Sterling	379,925,049	-
Euro Currency	697,623,140	-
Hong Kong Dollar	81,794,995	-
Japanese Yen	563,029,069	-
Mexican Peso	2,758,008	-
New Israeli Sheqel	9,802,812	-
Norwegian Krone	23,598,464	-
Singapore Dollar	26,008,370	-
South African Rand	5,241	-
South Korean Won	15,771,428	-
Swedish Krona	65,000,505	-
Swiss Franc	167,379,349	-
Thailand Baht	3,152,176	-
UAE Dirham	464,120	-
Foreign investments denominated in U.S. Dollars	<u>61,651,828</u>	<u>317,071,356</u>
Total	<u>\$ 2,310,044,822</u>	<u>\$ 317,071,356</u>

Securities Lending

The ISBI participated in a securities lending program with Deutsche Bank AG, New York Branch as of June 30, 2018 who acts as securities lending agent. The ISBI is in the process of winding down this program and therefore, as of June 30, 2018 there were no outstanding loans or balances associated with any of the related financial statement accounts on the Statement of Net Position. Public markets securities are loaned to brokers and, in return, the ISBI receives cash and non-cash collateral. All of the public market securities were eligible for the securities lending program. Collateral consists solely of cash, government securities and certain equity securities having a fair value equal to or exceeding 102% of the value of the loaned securities (105% for non-U.S. securities). In the event of borrower default, Deutsche Bank AG, New York Branch provides the ISBI with counterparty default indemnification. Investments in the cash collateral account represent securities that were distributed to the ISBI in connection with the in-kind redemption of the ISBI's ownership in the State Street Bank and Trust Company Quality Funds for Short-Term Investment (Quality D). Deutsche Bank is not responsible for any losses with regards to these legacy investments. This arrangement subjects the ISBI to credit risk as the credit quality of these investments may decline over time. The credit risk on the legacy investments is the risk of a possible loss arising from the inability of counterparty to meet its obligations. This loss could include the loss of principal, interest and/or decreased expected cash flows in any of the

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investments held in the ISBI's cash collateral account. In the event counterparty defaults on its obligations, the ISBI would need to credit the cash collateral account with the amount of the default to make the account whole so that once loaned securities are returned, the cash pledged by borrowers can be returned to them.

Cash and cash equivalents included in the System's Statement of Fiduciary Net Position consist of deposits held in the State Treasury. The Illinois Office of the Treasurer invests the deposits held and allocates investment income on a monthly basis.

The State Treasurer lends securities to broker-dealers and other entities for collateral that will be returned for the same securities in the future. The State Treasurer has, through a Securities Lending Agreement, authorized Deutsche Bank AG to lend the State Treasurer's securities to broker-dealers and banks pursuant to a form of loan agreement.

During fiscal year 2018, Deutsche Bank AG lent U.S. Agency securities and U.S. Treasury securities and received as collateral U.S. dollar denominated cash. Borrowers were required to deliver collateral for each loan equal to at least 100% of the aggregate fair value of the loaned securities. Loans are marked to market daily. If the fair value of collateral falls below 100%, the borrower must provide additional collateral to raise the fair value to 100%.

The State Treasurer did not impose any restrictions during fiscal year 2018 on the amount of the loans of available, eligible securities. In the event of borrower default, Deutsche Bank AG provides the State Treasurer with counterparty default indemnification. In addition, Deutsche Bank AG is obligated to indemnify the State Treasurer if Deutsche Bank AG loses any securities, collateral or investments of the State Treasurer in Deutsche Bank AG's custody. There were no losses during fiscal year 2018 resulting from a default of the borrowers or Deutsche Bank AG.

During fiscal year 2018, the State Treasurer and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested in repurchase agreements with approved counterparties collateralized with securities approved by Deutsche Bank AG and marked to market daily at no less than 102%. Because the loans are terminable at will, their duration did not generally match the duration of the investments made with cash collateral. The State Treasurer had no credit risk as a result of its securities lending program as the collateral held exceeded the fair value of the securities lent. The securities lending collateral received that was invested in repurchase agreements and the fair value of securities on loan for the State Treasurer as of June 30, 2018 were \$4,521,091,000 and \$4,451,198,793, respectively. The System's portion of securities lending collateral that was invested in repurchase agreements as of June 30, 2018 was \$12,439,000.

Derivative Securities

In fiscal year 2010, the ISBI implemented GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments*, with respect to investments held in derivative securities. A derivative security is an investment whose payoff depends upon the value of other assets such as commodity prices, bond and stock prices, or a market index. The ISBI invests in derivative instruments including forward foreign currency contracts, futures, rights and warrants. The ISBI's derivatives are considered investment derivatives.

Foreign currency forward contracts (FX forwards) are used to protect against the currency risk in the ISBI's foreign equity portfolio. A foreign currency forward contract is an agreement to buy or sell a specific amount of a foreign currency at a specified delivery or maturity date for an agreed-upon price. Fluctuations in the market value of foreign currency forward contracts are marked to market on a daily basis. These investments are reported at fair value in the investment section of the ISBI's Statement of Net Position. The gain or loss arising from the difference between the original contracts and the closing of such contracts is recognized in the net increase/decrease in the fair value of investments in the ISBI's Statement of Changes in Net Position. As of June 30, 2018, all foreign currency forward contracts are held by the ISBI's custodian and one investment manager, Northern Trust Asset Management, which is permitted per the investment guidelines to invest in this type of contract under established guidelines.

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The ISBI's investment managers use financial futures to replicate an underlying security they wish to hold (sell) in the portfolio. In certain instances, it may be beneficial to own a futures contract rather than the underlying security (arbitrage). Additionally, financial futures are used in the ISBI's fixed income portfolio to adjust portfolio strategy and overall portfolio duration. A financial futures contract is an agreement to buy or sell a specific amount at a specified delivery or maturity date for an agreed-upon price. If the fair values of the futures contract vary from the original contract price, a gain or loss is recognized and paid to or received from the clearinghouse. The gain or loss is recognized in the net increase/decrease in the fair value of investments in the ISBI's Statement of Changes in Net Position. Financial futures represent an off-balance sheet obligation, as there are no balance sheet assets or liabilities associated with those contracts. The cash or securities to meet these obligations are held in the ISBI's investment portfolio.

The ISBI's investment managers use options in an attempt to add value to the portfolio (collect premiums) or protect (hedge) a position in the portfolio. Financial options are an agreement that gives 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, the ISBI receives a premium at the outset of the agreement and bears the risk of an unfavorable change in the price of the financial instrument underlying the option. All written financial options are recognized as a liability in the ISBI's Statement of Net Position. As a purchaser of financial options, the ISBI pays a premium at the outset of the agreement and the counterparty bears the risk of an unfavorable change in the price of the financial instrument underlying the option. The gain or loss associated with options is recognized in the net increase/decrease in the fair value of investments in the ISBI's Statement of Changes in Net Position.

Rights and warrants allow the ISBI's investment managers to replicate an underlying security they wish to hold (sell) in the portfolio. Rights and warrants provide the holder with the right, but not the obligation, to buy or sell a company's stock at a predetermined price. Rights usually expire after a few weeks and warrants can expire from one to several years. Under certain circumstances, a type of warrant called Participatory Notes (P-Notes) are used in the portfolio by the ISBI's investment managers that are not registered to trade in domestic Indian Capital Markets. P-Notes are issued by Indian-based brokerage firms against an underlying Indian security permitting holders to get a share in the income from the security. These investments are reported at fair value in the investment section of the ISBI's Statement of Net Position within the common stock and foreign equity classifications. The gain or loss associated with rights and warrants is recognized in the net increase/decrease in the fair value of investments in the ISBI's Statement of Changes in Net Position.

The fair values of the forward contracts are estimated based on the present value of their estimated future cash flows. Futures contracts are exchange traded instruments where the fair value is determined by the equilibrium between the forces of supply and demand. The fair value of a right or warrant closely tracks the intrinsic value of the underlying stock and can be determined either by formulaic methodology (most commonly Black-Scholes) or intrinsic value methodology.

The table below presents the investment derivative instruments aggregated by type that were held by the ISBI as of June 30, 2018.

	Changes in Fair Value	Fair Value at Year End	Notional Amount Number of Shares
	2018	2018	2018
FX Forwards	\$ 3,646,386	\$ (7,847,062)	-
Futures	-	-	276
Rights/Warrants	50,984	181,512	435,088
	<u>\$ 3,697,370</u>	<u>\$ (7,665,550)</u>	<u>435,364</u>

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The table below shows the futures positions held by the ISBI as of June 30, 2018.

	Number of Contracts	2018 Contract Principal*
Equity Futures Purchased	263	\$29,211,622
Fixed Income Futures Purchased	-	-
Fixed Income Futures Sold	13	(1,562,438)

* Contract principal amounts shown represent the fair value of the underlying assets the contracts control. These are shown to present the volume of the transactions but do not reflect the extent to which positions may offset one another. These amounts do not represent the much smaller amounts potentially subject to risk. Contract principal values also do not represent actual recorded values reported in the ISBI's Statement of Net Position.

Derivative transactions 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. Derivatives which are exchange traded are not subject to credit risk. No derivatives held are subject to custodial credit risk. Market risk is the possibility that a change in interest (interest rate risk) or currency rates (foreign currency risk) 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. These limits are approved by the Board of Trustees and management of the ISBI and the risk positions of the investment managers are reviewed on a periodic basis to monitor compliance with the limits. As of June 30, 2018, the ISBI held futures contracts whose underlying instruments were exposed to interest risk but there were no GASB 53 reportable elements. The ISBI has not adopted a formal policy specific to master netting arrangements.

The following table presents the fair value of derivative investments exposed to foreign currency risk as of June 30, 2018:

Currency	2018	
	<u>FX Forwards</u>	<u>Rights</u>
Australian Dollar	\$ (794,928)	\$ 2,265
English Pound Sterling	(1,706,100)	76,108
Euro Currency	(2,533,864)	103,139
Japanese Yen	(2,812,170)	-
	<u>\$ (7,847,062)</u>	<u>\$ 181,512</u>

The ISBI's derivative investments in foreign currency forward contracts are held with counterparties. The counterparties were not rated and the fair value and net exposure as of June 30, 2018 for these contracts were \$0.

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5. Funding - Statutory Contributions Required & Contributions Made

On an annual basis, a valuation of the liabilities and reserves of the System is performed by the System's actuarial consultants in order to determine the amount of contributions statutorily required from the State of Illinois. For fiscal year 2018, the actuary used the projected unit credit actuarial method for determining the proper employer contribution amount.

For fiscal year 2018, the required employer contribution was computed in accordance with the State's funding plan. This funding legislation provides for a systematic 50-year funding plan with an ultimate goal to fund the cost of maintaining and administering the System at an actuarial funded ratio of 90%.

In addition, the funding plan provides for a 15-year phase-in period to allow the state to adapt to the increased financial commitment. Since the 15-year phase-in period ended June 30 2010, the state's contribution will remain at a level percentage of payroll for the next 35 years until the 90% funded level is achieved.

The total amount of statutorily required employer contributions for fiscal year 2018 was \$135,962,000. The total amount of employer contributions received from the state during fiscal year 2018 was \$135,962,000.

6. Net Pension Liability of the State

The components of the State's net pension liability for this plan at June 30, 2018 are as follows:

The System is significantly underfunded which raises concerns about its future financial solvency should there be a significant market downturn coupled with the State's inability or unwillingness to pay the employer contributions.

Total Pension Liability (TPL)	Plan Fiduciary Net Position (FNP)	Net Pension Liability	Plan FNP as % of TPL
\$2,783,868,067	\$1,012,484,801	\$1,771,383,266	36.37%

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2018, using the following actuarial assumptions, which were based on the results of an actuarial experience study for the period from July 1, 2012 to June 30, 2015:

Actuarial Cost Method:	Entry-Age Normal
Mortality rates:	
Post retirement:	RP-2014 White Collar Total Healthy Annuitant mortality table, sex distinct, with rates set forward one (1) year for males and set back one (1) year for females and generational mortality improvements using MP-2014 two-dimensional mortality improvement scales recently released by the Society of Actuaries (SOA).
Pre-retirement:	RP-2014 White Collar Total Employee mortality table, sex distinct and generational mortality improvements using MP-2014 two-dimensional mortality improvement scales recently released by the SOA, to reflect that experience shows active members having lower mortality rates than retirees of the same age.
Inflation:	2.5%, compounded annually
Investment rate of return:	6.75% per year, compounded annually
Salary increases:	2.75% per year (consisting of an inflation component of 2.5% per year, a productivity / merit / promotion component of 0.25% per year).
Group size growth rate:	0.0%
Post-retirement increase:	Tier 1: 3.0% per year, compounded annually. Tier 2: 3.0% per year or the annual change in the Consumer Price Index, whichever is less, compounded annually.

FINANCIAL STATEMENTS

Long-term Expected Return on Plan Assets

The long-term expected rate of return on pension plan investments was determined based on an analysis performed by the System's actuary, Gabriel Roeder Smith and Company (GRS), during their annual review of economic actuarial assumptions, with data provided by the Illinois State Board of Investments (ISBI) in conjunction with its investment consultant. The annualized geometric return for each major asset class were combined to produce the long-term expected rate of return by weighting the expected future returns by the target asset allocation percentage and factoring in the impact of each asset classes correlation relative to other assets and finally, by adding expected inflation. For each major asset class that is included in the pension plan's target asset allocation as of June 30, 2018, the 20-year simulated real rates of return are summarized in the following table:

Asset Class	Asset Allocation	
	Target Allocation	20 Year Simulated Real Rate of Return
U.S. Equity	23.0%	5.5%
Developed Foreign Equity	13.0%	5.3%
Emerging Market Equity	8.0%	7.8%
Private Equity	7.0%	7.6%
Intermediate Investment Grade Bonds	14.0%	1.5%
Long-term Government Bonds	4.0%	1.8%
TIPS	4.0%	1.5%
High Yield and Bank Loans	5.0%	3.8%
Opportunistic Debt	8.0%	5.0%
Emerging Market Debt	2.0%	3.7%
Core Real Estate	5.5%	3.7%
Non Core Real Estate	4.5%	5.9%
Infrastructure	2.0%	5.8%
Total	100%	

Discount Rate

A single discount rate of 6.60% was used to measure the total pension liability as of June 30, 2018. This represents an increase of 0.02% from the discount rate used for the June 30, 2017 valuation, 6.58%.

The single discount rate was based on an expected rate of return on pension plan investments of 6.75% and a municipal bond rate of 3.62% as of June 30, 2018. The projection of cash flows used to determine the single discount rates assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between statutory contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments through the year 2063 at June 30, 2018. As a result, for fiscal year 2018, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through 2063, and the municipal bond rate was applied to all benefit payments after that date.

FINANCIAL STATEMENTS

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

For fiscal year 2018, the following table presents the plan's net pension liability using a single discount rate of 6.60%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage point lower or 1-percentage point higher.

	June 30, 2018		
		Current	
	1% decrease 5.60%	Discount Rate 6.60%	1% increase 7.60%
State's net pension liability	\$ 2,095,210,163	\$ 1,771,383,266	\$ 1,498,870,169

7. Administrative Expenses

A summary of the administrative expenses for the Judges' Retirement System for fiscal year 2018 are listed below.

	2018
Personal services	\$392,613
Employee retirement contributions paid by employer	3,872
Employer retirement contributions	185,773
Social security contributions	28,889
Group insurance	76,153
Contractual services	166,571
Travel	7,733
Printing	252
Commodities	64
Telecommunications	1,046
Information technology	47,859
Automotive	908
Depreciation/amortization	6,132
Change in accrued compensated absences	(20,807)
Interest on lease obligation	227
Total	\$897,285

8. Compensated Absences

Employees of the Judges' Retirement System are entitled to receive compensation for all accrued but unused vacation time upon termination of employment. Additionally, employees of the System are entitled to receive compensation for one-half of the unused sick days that were earned on and after January 1, 1984 and before January 1, 1998, upon termination of employment. Accrued compensated absences as of June 30, 2018 total \$22,804 and are included in administrative expenses payable.

9. Pension Plan & Other Post-Employment Benefits

Plan Description. All of the System's full-time employees who are not eligible for participation in another state-sponsored retirement plan participate in the State Employees' Retirement System (SERS), which is a pension trust fund in the State of Illinois reporting entity.

The SERS is a single-employer defined benefit public employee retirement system (PERS) in which state employees participate, except those covered by the State Universities, Teachers', General Assembly, and Judges' Retirement Systems.

The financial position and results of operations of the SERS for fiscal year 2018 is included in the State of Illinois' Comprehensive Annual Financial Report (CAFR) for the year ended June 30, 2018. The SERS also issues a separate CAFR that may be obtained by writing to the SERS, 2101 South Veterans Parkway, Springfield, Illinois 62794-9255 or by calling 217-785-7202.

The State of Illinois' CAFR may be obtained by writing to the State Comptroller's Office, Financial Reporting Department, 325 West Adams St., Springfield, Illinois 62704-1858 or by calling 217-782-2053.

A summary of SERS' benefit provisions, changes in benefit provisions, employee eligibility requirements including eligibility for vesting, and the authority under which benefit provisions are established, are included as an integral part of the SERS' CAFR. Also included is a discussion of employer and employee obligations to contribute and the authority under which those obligations are established.

Other Post-Employment Benefits. The State provides health, dental, vision, and life insurance benefits for retirees and their dependents in a program administered by the Department of Central Management Services. Substantially all State employees become eligible for post-employment benefits if they eventually become annuitants of one of the State sponsored pension plans. Health, dental, and vision benefits include basic benefits for annuitants and dependents under the State's self-insurance plan and insurance contracts currently in force. Annuitants may be required to contribute towards health, dental, and vision benefits with the amount based on factors such as date of retirement, years of credited service with the State, whether the annuitant is covered by Medicare, and whether the annuitant has chosen a managed health care plan. Annuitants who retired prior to January 1, 1998, and who are vested in the State Employee's Retirement System do not contribute towards health, dental, and vision benefits. For annuitants who retired on or after January 1, 1998, the annuitant's contribution amount is reduced 5% for each year of credited service with the State allowing those annuitants with twenty or more years of credited service to not have to contribute towards health, dental, and vision benefits. Annuitants also receive life insurance coverage equal to the annual salary of the last day of employment until age 60, at which time the benefit becomes \$5,000.

The State pays the System's portion of employer costs for the benefits provided. The total cost of the State's portion of health, dental, vision, and life insurance benefits of all members, including post-employment health, dental, vision, and life insurance benefits, is recognized as an expenditure by the State in the Illinois Comprehensive Annual Financial Report. The State finances the costs on a pay-as-you-go basis. The total costs incurred for health, dental, vision, and life insurance benefits are separated by individual departments or funds for annuitants and their dependents and active employees and their dependents.

A summary of post-employment benefit provisions, changes in benefit provisions, employee eligibility requirements including eligibility for vesting, and the authority under which benefit provisions are established are included as an integral part of the financial statements of the Department of Central Management Services. A copy of the financial statements of the Department of Central Management Services may be obtained by writing to the Department of Central Management Services, Stratton Office Building, 401 South Spring Street, Springfield, Illinois 62706.

FINANCIAL STATEMENTS

10. Capital Assets

Capital assets over \$100 are capitalized at their cost at the time of acquisition. Depreciation is computed using the straight-line method over the estimated useful life of the asset. The estimated useful lives are as follows: (1) office furniture - 10 years, (2) equipment - 6 years, (3) certain electronic data processing equipment - 3 years, and (4) internally developed software - 20 years. The summary of changes in Capital Assets for fiscal year 2018 is as follows:

	Beginning Balance	2018		Ending Balance
		Additions	Deletions	
Equipment	\$ 34,982	\$ -	\$ (73)	\$ 34,909
Accumulated depreciation	(31,443)	(2,167)	73	(33,537)
Internally developed software	58,509	20,773	-	79,282
Accumulated amortization	(6,209)	(3,964)	-	(10,173)
Capital Assets, net	<u>\$ 55,839</u>	<u>\$ 14,642</u>	<u>\$ -</u>	<u>\$ 70,481</u>

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN THE STATE'S NET PENSION LIABILITY AND RELATED RATIOS Fiscal Years Ended June 30, 2018 through 2014

	2018	2017
Total pension liability		
Service cost	\$ 53,221,872	\$ 56,166,214
Interest on the total pension liability	175,399,302	168,163,770
Difference between expected and actual experience	6,190,925	23,042,316
Assumption changes	(14,445,948)	(29,511,474)
Benefit payments	(148,146,938)	(140,497,204)
Refunds	(481,716)	(974,665)
Administrative expense	(897,285)	(914,405)
Net change in total pension liability	70,840,212	75,474,552
Total pension liability - beginning	<u>2,713,027,855</u>	<u>2,637,553,303</u>
Total pension liability - ending (a)	<u>\$2,783,868,067</u>	<u>\$2,713,027,855</u>
Plan fiduciary net position		
Contributions - employer	\$ 135,962,000	\$ 131,334,000
Contributions - participant	14,295,562	14,770,467
Net investment income	69,949,646	97,796,479
Benefit payments	(148,146,938)	(140,497,204)
Refunds	(481,716)	(974,665)
Administrative expense	(897,285)	(914,405)
Net change in plan fiduciary net position	70,681,269	101,514,672
Plan fiduciary net position - beginning	<u>941,803,532</u>	<u>840,288,860</u>
Plan fiduciary net position - ending (b)	<u>\$1,012,484,801</u>	<u>\$ 941,803,532</u>
State's net pension liability - ending (a)-(b)	<u>\$1,771,383,266</u>	<u>\$1,771,224,323</u>
Plan fiduciary net position as a percentage of the total pension liability	36.37%	34.71%
Covered payroll	\$ 132,064,855	\$ 139,737,508
State's net pension liability as a percentage of covered payroll	1,341.30%	1,267.54%

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN THE STATE'S NET
PENSION LIABILITY AND RELATED RATIOS
Fiscal Years Ended June 30, 2018 through 2014

	2016	2015	2014
Total pension liability			
Service cost	\$ 58,041,274	\$ 59,619,744	\$ 57,138,961
Interest on the total pension liability	158,611,299	151,431,750	145,993,903
Difference between expected and actual experience	(3,260,012)	28,713,856	4,490,010
Assumption changes	205,404,829	9,482,302	-
Benefit payments	(132,571,796)	(125,654,349)	(118,590,965)
Refunds	(658,051)	(945,807)	(687,923)
Administrative expense	(942,950)	(982,656)	(831,652)
Net change in total pension liability	<u>284,624,593</u>	<u>121,664,840</u>	<u>87,512,334</u>
Total pension liability - beginning	<u>2,352,928,710</u>	<u>2,231,263,870</u>	<u>2,143,751,536</u>
Total pension liability - ending (a)	<u>\$ 2,637,553,303</u>	<u>\$ 2,352,928,710</u>	<u>\$ 2,231,263,870</u>
Plan fiduciary net position			
Contributions - employer	\$ 132,060,000	\$ 134,039,684	\$ 126,815,881
Contributions - participant	14,962,055	15,431,105	15,918,732
Net investment income	(6,470,553)	36,009,150	110,058,987
Benefit payments	(132,571,796)	(125,654,349)	(118,590,965)
Refunds	(658,051)	(945,807)	(687,923)
Administrative expense	(942,950)	(982,656)	(831,652)
Net change in plan fiduciary net position	<u>6,378,705</u>	<u>57,897,127</u>	<u>132,683,060</u>
Plan fiduciary net position - beginning	<u>833,910,155</u>	<u>776,013,028</u>	<u>643,329,968</u>
Plan fiduciary net position - ending (b)	<u>\$ 840,288,860</u>	<u>\$ 833,910,155</u>	<u>\$ 776,013,028</u>
State's net pension liability - ending (a)-(b)	<u>\$ 1,797,264,443</u>	<u>\$ 1,519,018,555</u>	<u>\$ 1,455,250,842</u>
Plan fiduciary net position as a percentage of the total pension liability	31.86%	35.44%	34.78%
Covered payroll	\$ 139,537,967	\$ 145,903,074	\$ 150,280,023
State's net pension liability as a percentage of covered payroll	1,288.01%	1,041.11%	968.36%

REQUIRED SUPPLEMENTARY INFORMATION

Notes to the Schedule of Changes in the State's Net Pension Liability and Related Ratios

Valuation Date: June 30, 2018

This Schedule is intended to show information for ten (10) years. Information prior to 2014 is not available. The additional years will be added, prospectively, as they become available.

Key Assumption Changes Related to the Schedule of Changes in the State's Net Pension Liability and Related Ratios

2018 Changes in Assumptions:

- The rate of inflation decreased from 2.75% to 2.5%.
- The salary increase assumption decreased from 3.00% to 2.75%.

2017 Changes in Assumptions:

- There were no significant assumption changes.

2016 Changes in Assumptions:

- The rate of inflation decreased from 3.00% to 2.75%.
- The investment return assumption was decreased from 7.00% to 6.75%.
- The salary increase assumption was changed from 3.75% to 3.00% per year, compounded annually. That rate includes a 0.25% per year productive/merit/promotion component.
- Turnover rates were increased for both Tier 1 and Tier 2 members. For Tier 2 members with less than five years of service, the turnover rate was increased to a flat rate of 1.75%.
- The overall normal retirement rates were decreased to better reflect observed experience.
- Generational mortality improvement factors were added to reflect future mortality improvements. The new mortality tables move from a single dimensional age-based table to a two dimensional table where the year of a person's birth influences their mortality rate.

2015 Changes in Assumptions:

- There were no significant assumption changes.

SCHEDULE OF INVESTMENT RETURNS

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	7.5%	12.4%	(0.6)%	5.1%	17.5%

* **NOTE:** This Schedule is intended to show information for ten (10) years. Information prior to 2014 is not available. The additional years will be added, prospectively, as they become available.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF STATE CONTRIBUTIONS

Fiscal Year Ended June 30	Actuarially determined contribution	Contributions received	Contribution (deficiency) excess	Covered Payroll	Contributions received as a percentage of covered payroll
2009	\$78,386,597	\$59,983,000	\$(18,403,597)	\$155,645,000	38.54%
2010	86,916,418	78,509,810	(8,406,608)	161,164,000	48.71%
2011	95,490,182	62,694,460	(32,795,722)	169,155,000	37.06%
2012	110,923,357	63,644,099	(47,279,258)	153,550,766	41.45%
2013	125,576,795	88,239,564	(37,337,231)	156,142,183	56.51%
2014	125,061,595	126,815,881	1,754,286	150,280,023	84.39%
2015	124,215,990	134,039,684	9,823,694	145,903,074	91.87%
2016	121,362,703	132,060,000	10,697,297	139,537,967	94.64%
2017	152,699,188	131,334,000	(21,365,188)	139,737,508	93.99%
2018	168,056,916	135,962,000	(32,094,916)	132,064,855	102.95%

Notes to Schedule of State Contributions

Valuation Date: June 30, 2016

Notes Actuarially determined contribution rates are calculated as of June 30, which is 12 months prior to the beginning of the fiscal year in which the contributions will be made.

Covered payroll for fiscal years on and after June 30, 2012, were restated to comply with the requirements of GASB Statement No. 82. For fiscal years prior to June 30, 2012, covered payroll was not restated to comply with the requirements of GASB Statement No. 82 due to system limitations.

Methods and Assumptions Used to Determine Contribution Rates as of the Valuation Date

Actuarial Cost Method: Projected Unit Credit

Amortization Method: Normal cost plus a level percentage of capped payroll amortization of the unfunded accrued liability.

Remaining Amortization Period: 25 years, closed.

Asset Valuation Method: 5 year smoothed market

Inflation: 2.75%

Salary Increases: Salary increase rates based on age-related productivity and merit rates plus inflation.

Post Retirement Benefits: Post-retirement benefit increases of 3.00%, compounded, for Tier 1 and 3.00% or the annual change in the Consumer Price Index, whichever is less, simple for Tier 2.

Investment Rate of Return: 6.75%

Retirement Age: Experienced based table of rates that are specific to the type of eligibility condition

Mortality:

Post-retirement: RP-2014 White Collar Healthy Annuitant mortality table, sex distinct, with rates set forward one year for males and set back one year for females and generational mortality improvements using the MP-2014 two-dimensional mortality improvement scales.

Pre-retirement: RP-2014 White Collar Total Employee mortality table, sex distinct, and generational mortality improvement using MP-2014 two-dimensional mortality improvement scales.

SUPPLEMENTARY FINANCIAL INFORMATION

SUMMARY OF REVENUES BY SOURCE

Year Ended June 30, 2018

	2018
Contributions:	
Participants:	
Participants	\$ 14,266,695
Interest paid by participants	28,867
Repayment of refunds	-
Total participant contributions	<u>14,295,562</u>
Employer:	
General Revenue Fund	135,962,000
Paid by participants	-
Total employer contributions	<u>135,962,000</u>
Total contributions revenue	<u>150,257,562</u>
Investment income:	
Net appreciation/(depreciation) in fair value of investments	49,815,053
Interest and dividends from investments	20,954,935
Interest earned on cash balances	504,929
Less investment expense, other than from securities lending	<u>(1,421,235)</u>
Net income (loss) from investing, other than from securities lending	69,853,682
Net securities lending income	<u>95,964</u>
Net investment income (loss)	<u>69,949,646</u>
Total revenues	<u>\$ 220,207,208</u>

SCHEDULE OF PAYMENTS TO CONSULTANTS

Year Ended June 30, 2018

	2018
Actuary	\$ 56,440
Audit fees	31,137
Legal services	<u>450</u>
Total	<u>\$ 88,027</u>

SUPPLEMENTARY FINANCIAL INFORMATION

SUMMARY SCHEDULE OF CASH RECEIPTS AND DISBURSEMENTS
Year Ended June 30, 2018

	2018
Cash balance, beginning of year	\$ <u>25,657,962</u>
Receipts:	
Participant contributions	14,308,340
Employer contributions:	
General Revenue Fund	147,163,750
Paid by participants	-
Interest income on cash balances	484,683
Reimbursements from General Assembly Retirement System	232,536
Cancellation of annuities, net of overpayments	57,018
Cancellation of refunds	-
Tax-deferred installment payments	-
Repayment of refunds	-
Transfers from Illinois State Board of Investment	2,500,000
Miscellaneous	<u>200</u>
Total cash receipts	<u>164,746,527</u>
Disbursements:	
Benefit payments:	
Retirement annuities	122,986,342
Survivors' annuities	25,140,028
Temporary disability	40,678
Refunds	521,424
Transfers to Illinois State Board of Investment	11,600,000
Administrative expenses	<u>1,177,838</u>
Total cash disbursements	<u>161,466,310</u>
Cash balance, end of year	<u>\$ 28,938,179</u>

Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards

Honorable Frank J. Mautino
Auditor General, State of Illinois

Board of Trustees
Judges' Retirement System of the State of Illinois

As Special Assistant Auditors for the Auditor General, we have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Judges' Retirement System of the State of Illinois (System), as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents, and have issued our report thereon dated December 14, 2018. Our report includes a reference to other auditors who audited the financial statements of the Illinois State Board of Investment, an internal investment pool of the State of Illinois, as described in our report on the System's financial statements. This report does not include the results of the other auditors' testing of internal control over financial reporting or compliance and other matters that are reported on separately by those auditors. Our report also includes a reference to the fact that the actuarially determined pension liability is dependent on several assumptions, including the assumption that future required contributions from State sources are made based on statutory requirements.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. *A material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. *A significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

SIGNED ORIGINAL ON FILE

Schaumburg, Illinois
December 14, 2018