

Annual Financial Report

for the fiscal year ending June 30, 2016



## Arkansas Public Employees Retirement System Annual Financial Report

For the Fiscal Year Ended June 30, 2016

A Pension Trust Fund of the State of Arkansas

Gail H. Stone, Executive Director



Public Pension Coordinating Council

## Public Pension Standards Award For Funding and Administration 2016

Presented to

## Arkansas Public Employees Retirement System

In recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA) National Conference on Public Employee Retirement Systems (NCPERS) National Council on Teacher Retirement (NCTR)

alan Helinkle

Alan H. Winkle Program Administrator

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Introduction

### A HISTORY OF APERS

The Arkansas Public Employees Retirement System (APERS or the System), formerly the Arkansas State Employees Retirement System, was established by the General Assembly in 1957 as a multi-employer defined benefit retirement plan for State of Arkansas employees. From 1957 through 1965, county employers (via Act 42 of 1959), some municipal employers (via Act 64 of 1961), college and university employers (via Act 149 of 1963), and non-teaching public school employers (via Act 63 of 1965) all joined the System.

APERS is governed by a nine member board of trustees. Three of the trustees are ex officio – the Auditor of State, the Treasurer of State, and the Director of the Department of Finance and Administration. The remaining trustees are appointed by the Governor and shall be three members who are state employees and three members who are non-state employees.

Any member joining the System prior to January 1, 1978 was required to contribute a percentage of his or her salary to the System. However, effective January 1, 1978, new members were not required to contribute to the System; only the employer contributed. At that time, all contributory members of the System were given an opportunity to remain contributory or choose to become non-contributory.

Act 653 of 1989 required that all newly hired public school employees be enrolled in the Arkansas Teacher Retirement System. The School Division then became a closed plan.

In 2005, the 86th General Assembly established a new contributory provision for the System. Therefore, effective July 1, 2005, all new members would be enrolled as contributory members and would be required to contribute 5% of their salary into the System. Current members of the System were given the option to remain non-contributory or choose to be contributory members of the System.

Effective July 1, 2007, the Arkansas District Judges Retirement System (ADJRS) was transferred to APERS by Act 177 of the 2007 Arkansas Legislature. ADJRS was treated as a closed system and as a result of the change was recorded as one of APERS' divisions. District judges entering the System after July 1, 2007 are treated as APERS-covered employees and fall under the same provisions as other APERS members.

Prior to January 1, 2012, when members began participating in the Deferred Retirement Option Plan (DROP) or returned to work after retiring, their employers did not pay matching contributions on their salaries. Act 558 of 2011, effective January 1, 2012, amended the Arkansas Code Annotated (A.C.A.) § 24-4-402 to provide that participating employers must make contributions for both active and retired members who have returned to work in an eligible APERS-covered position. Act 558 amended A.C.A. § 24-4-802 to state that when a member begins participating in the DROP the member's employee contributions to the System cease but the employer's contributions on behalf of the member continue.

#### **Financial Objective**

APERS has developed into a mature system that continues to satisfy the financial objective of generationally level contribution financing. As of June 30, 2016, the assets of the System remained healthy at \$7.37 billion. The APERS investment program has seen rates of return that range from a low of -20.89% in 2009 to a high of +26% in 2011. The investment of these assets is allocated among numerous managers that invest in domestic equities, domestic fixed income, international equities, and alternative investments (for example, timber and real estate). Based on our most recent actuarial valuation, the funded status of the System remains strong at 80%.

#### Investments

From inception until 1985, the trust fund was governed by Arkansas statutes that provided a permissible list of investments. In 1985, Act 412 repealed the permissible list of investments and enacted the prudent investor rule. It also allowed the establishment of a custodian bank relationship. The act stated that the System should invest at least 5% percent but no more than 10% of the System's portfolio in Arkansas-related investments but only when consistent with the fiduciary requirements of the trustees. In 1989, Act 302 allowed the System to employ multiple discretionary money managers as appropriate. In 1997, Act 1194 revised and updated the investment policies and rules, including the prudent investor rule.

Act 1242 of 2009 merged the investable assets of the Arkansas State Police Retirement System with those of APERS while granting all investment authority to the APERS Board of Trustees. The reporting schedules contained herein reflect the respective values allocated to each pension system.

#### **Retirement Benefit Program**

Prior to July 1, 1991, a member could only receive service credit in one-month increments. Act 757 of 1991 provided for fractional service credit for vested members who work fewer than 80 hours per month.

Act 1143 of 1997 required adherence by retirement systems to qualified domestic relations orders or "QDROs." Also, during the 1997 legislative session, reciprocity was established. With the establishment of reciprocity, service rendered to other state-authorized retirement systems could be recognized for vesting in conjunction with service rendered to APERS.

Enhancements to the monthly retirement annuity have included ad hoc increases for retirees and increases in the multipliers for active and deferred (non-retired) members as well as a reduction in the number of years used to calculate the final average compensation (FAC). Act 975 of 1991 changed the FAC used in the calculation of retirement benefits from 5 years to 4 years. Act 104 of 1999 allowed members with 28 years actual service to retire with an unreduced benefit. Act 1137 of 1997 set the FAC to 3 years. Effective July 1, 1997, the vesting requirements changed from 10 years to 5 years for all active and future members of the System with the exception of members of the General Assembly (Act 1356 of 1995). Prior to July 1, 1999, members who were retired from another state-sponsored retirement system, worked in a position covered by APERS, and met the eligibility requirements couldn't receive service credit in APERS. That changed, effective July 1, 1999 when retired members of another state-sponsored retirement system who worked in a position covered by APERS and met the eligibility requirements could be reported to APERS.

In keeping with trends in retirement systems, APERS has implemented additional retirement options that include the DROP and a partial annuity withdrawal.

Act 295 of 2009, which went into effect in March 2009, broadened members' ability to purchase retirement credit for time served in the military or armed forces reserves. Vested members who are either eligible for or currently receiving military retirement benefits may purchase up to, but not more than, five years of service in APERS. Similarly vested members may purchase up to five years of armed forces reserve time in the System. Act 295 also invoked the federal protections afforded by the Uniformed Services Employment and Reemployment Rights Act for APERS members called to active duty.

The 2011 legislative session brought about the following changes:

- Act 38, effective February 16, 2011, states that after an APERS DROP participant exits the DROP the member is not eligible for employment in any position covered by any authorized state retirement plan.
- Act 563, effective July 1, 2011, amended A.C.A. § 24-4-521 to restrict the amount of credited service earned by a local non-contributory elected public official to one year of retirement credit for every year worked unless additional contributions are provided.
- Act 774, effective March 30, 2011, extends the termination period required for retirement purposes of individuals who receive at least two-for-one service credit under APERS to one year.

The 2013 legislative session also brought a number of changes that included the following:

• Act 332, effective March 14, 2013, revised several aspects of the System:

Section 3 clarifies that to meet the definition of "police officer," a person must have satisfied the training requirements to be a police officer established by the Arkansas Commission on Law Enforcement Standards and Training under A.C.A. § 12-9-106.

Section 6 states that a retiree shall not begin receiving annuity payments until all requirements for terminating qualified employment are satisfied.

Section 8 requires a participating public employer to promptly provide all information requested by the System concerning the status of an employee.

Section 9 states that the disability annuity shall be effective the first day of the calendar month following APERS' approval of the disability application and is not retroactive (see A.C.A. § 24-4-511[a][2]).

Section 12 enables a non-contributory APERS member to convert to the contributory provisions at any time. The effective date of the member's contributory coverage shall be the first payroll period that is paid and reported in the next month after the contributory election is made and provided to APERS. This provision is prospective only and is irrevocable.

- Act 378, effective July 1, 2013, amended A.C.A. § 14-14-1320(a)(2) by declaring that any county elected officer who resigns during a term of office shall be ineligible for appointment to any county elective office during the term for which he or she resigned.
- Act 288, effective January 1, 2014, requires that a newly elected contributory elected official is required to contribute an additional 2.5% of his or her gross payroll and that the employer shall also contribute said amount in order for the elected official to receive multiple service credit.

# Introduction

## SYSTEM HIGHLIGHTS

State and Local Systems Only as of June 30, 2016

			Age and	
Active Members		Retired Members*	Service	Disability
Number	45,676	Newly Retired Members	1,644	144
Average Age (yrs.)	44.7	Average Age (yrs.)	62.5	53.3
Average Service (yrs.)	9.2	Average Service (yrs.)	16.6	12.9
Average Annual Salary	\$ 36,923	Average Monthly Benefit	\$ 960.00	\$ 633.10
Inactive Vested Members				
Number	13,624	Total Retired Members	34,214	
		Average Monthly Benefit	\$ 1,241.53	
		* Includes DROP Participants.		

# Introduction Arkansas Public Employees Retirement System Annual Financial Report 2016

## LETTER OF TRANSMITTAL

Dear Board Members:

It is my honor to present to you the 2016 Annual Financial Report of the Arkansas Public Employees Retirement System (APERS or the System) for the fiscal year ended June 30, 2016. The report evidences our continuing effort to provide reliable and timely information on the financial status of APERS and the changes therein for the fiscal year.

Accountability is the imperative of financial reporting. It insists that APERS' resources be safeguarded and used for the benefit of all members, that transactions be executed only with the proper authorization of the Board and management, and that transactions be recorded properly to permit the reporting of timely and reliable financial information on the activities of the System.

Responsibility for both the accuracy of the data and completeness and fairness of the presentation, including all disclosures, rests with the management of the System. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial status of the System and changes therein.

APERS was established by legislation enacted in 1957 and has subsequently expanded to include state, county, municipal, school, and other political subdivisions. A comprehensive list of all participating employers is provided at the end of the Statistical Section. The summary of plan provisions is presented in the Actuarial Section. The mission of the System is to provide current and future retirement or survivor benefits for its members. All services provided by the staff are performed to meet that objective.

The APERS Annual Financial Report contains six sections:

- The Introduction contains the administrative organization, a letter of transmittal, and the chairman's report.
- The Financial Section contains the financial statements of the System and required supplementary information. The Investments Section contains a report on investment activity as well as the investment policies, investment results, and various investment schedules.
- The Actuarial Section contains the actuary's certification letter and the results of the annual actuarial valuation.
- The Statistical Section includes significant trend data pertaining to the System.
- The Appendix contains combined APERS and ASPRS financial statements, member valuation schedules, a schedule of benefits paid by county, as well as a list of participating employers as of June 30, 2016.

I trust that you and the members of the System will find this annual report helpful in understanding your public employees' retirement system - a system that continues to maintain a strong and positive financial future.

#### Economic Condition and Outlook

The economic condition of the System is based primarily upon investment earnings. For the last five years, the System's annualized rate of return has been 7.29%. The System's investments are evaluated quarterly by Callan Associates, Inc. and compared to market indicators and comparable funds. A comparable analysis of rates of return is presented in the Investments Section.

#### Performance

For the fiscal year ending June 30, 2016, the fund recognized a positive 0.30% rate of return. The funding status of the System increased to 80% in fiscal 2016 from 79% in 2015.

#### Financial Information and Management Responsibility

The financial statements of APERS have been prepared by management, which is responsible for the integrity and fairness of the data presented, including the amounts which must, of necessity, be based on estimates and judgments. The 2016 Annual Financial Report has been prepared to conform to the accounting principles generally accepted in the United States.

The executive management of the System is responsible for establishing and maintaining adequate internal control over financial reporting. APERS' internal control over financial reporting is designed to provide reasonable assurance that transactions are executed in accordance with management's general or specific authorization and are recorded as necessary to maintain accountability for assets and to permit the preparation of financial statements in accordance with generally accepted accounting principles. This System includes written policies and procedures adopted by the Board of Trustees and promulgated in accordance with the Arkansas Administrative Procedures Act.

#### Funding

A pension fund is well funded when it has enough money in reserve to meet all earned future obligations to participants. The System's funding objective is to meet long-term benefit promises through contributions that remain approximately level as a percentage of member payroll. The greater the level of funding, the larger the ratio of assets accumulated to the actuarial accrued liability and the greater the investment potential. The advantage of a well-funded plan is that the participants can be assured that sufficient assets exist which are committed to the payment of benefits. The actuarial accrued liability and actuarial funding value of assets of the System as of June 30, 2016 amounted to \$9.662 billion and \$7.769 billion respectively. A detailed discussion of funding is provided in the Actuarial Section of this report.

#### Investments

The investments of the System are governed primarily by an investment authority known as the "prudent investor rule." The rule established a standard for all fiduciaries, which includes anyone that has investment authority with respect to a fund. The prudent investor rule states that in making investments, the fiduciaries shall act "using the judgment and care under the circumstances then prevailing that persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not in regard to speculation but in regard to the permanent disposition of their funds, considering the probable income as well as the probable safety of their capital" (A.C.A. § 24-2-619). By permitting diversification of investments within a fund, the fund may reduce overall risks and increase returns. A summary of the asset allocation can be found in the Investments Section.

The Arkansas Investment Code (A.C.A. Title 24, Chapter 2, Subchapter 6) permits the fund to establish an investment policy based upon certain investment criteria and allows for the delegation of investment authority to professional investment managers. The statement of investment policy outlines the responsibility for the investment of the fund and the degree of risk that is deemed appropriate for the fund. Investment managers appointed by the Board are listed in the Introductory Section. The System's annualized rate of return over the last three years was a positive 7.21%.

#### Audit

The State of Arkansas Division of Legislative Audit in accordance with A.C.A. § 24-2-702, audits the System each fiscal year. Legislative audit has issued an unmodified opinion on the Arkansas Public Employees Retirement System's Statements of Fiduciary Net Position as of June 30, 2016 and 2015, and the related Statements of Changes in Fiduciary Net Position for the years then ended.

#### Management's Discussion and Analysis

Management's discussion and analysis (MD&A) provides a narrative introduction, overview, and analysis of the basic financial statements. MD&A compliments this letter of transmittal and should be read in conjunction with it.

#### Actuarial Survey and Valuation

An actuarial review of the System is performed annually. The assumptions utilized by the actuary in performing the valuation are reviewed annually by the Board. The actuarial firm Gabriel, Roeder, Smith & Company completed the actuarial review and valuation, and they served as technical advisor to the System. Actuarial certification and supporting statistics are included in the Actuarial Section and the Statistical Section of this report.

Introduction

#### Acknowledgments

The compilation of this report reflects the combined efforts of the staff under the leadership of the Board of Trustees of the Arkansas Public Employees Retirement System. The report is intended to provide extensive and reliable information for making management decisions, determining compliance with legal provisions, and determining responsible stewardship for the assets contributed by the System's members and their employers.

I would like to take this opportunity to express our gratitude to the Board, the staff, the advisors, and the many people who have worked so diligently to ensure the successful operation and financial soundness of the Arkansas Public Employees Retirement System.

Sincerely yours,

Sail H. Stone

Gail H. Stone Executive Director

# Introduction Arkansas Public Employees Retirement System Annual Financial Report 2016

## CHAIRMAN'S LETTER

#### Dear Members:

On behalf of the Board of Trustees, I am pleased to present the Annual Financial Report of the Arkansas Public Employees Retirement System for the fiscal year ended June 30, 2016. APERS continues to be in sound condition with 80% of all commitments prefunded. The assets accumulated to pay your retirement benefits are carefully invested to ensure the necessary funding when your future benefits are due to you. As Board members we serve as trustees to ensure that your interests are properly safeguarded. We have the responsibility and the mandate to provide retirement benefits to all participants commensurate with the valuable service each has rendered to the citizens of Arkansas.

Act 1242 of 2009 merged the investable assets of the Arkansas State Police Retirement System with those of APERS beginning July 1, 2009. The retirement systems themselves remain separate entities. Thus, you will see the investment schedules broken out to reflect the market values accruing to each system. Act 1242 bestowed all investment authority on the APERS Board of Trustees.

The APERS Board members are cognizant of the need to balance cost containment with the well-being of the System's membership. While APERS remains in the top quartile of public plans in terms of financial health, we will continue to seek ways to keep the costs associated with the benefit program under control. The strong investment results being reported here offset some of the expense, but prudent cost-cutting will be foremost in the Board's mind.

That said, the APERS staff, in conjunction with project oversight consultant Linea Solutions and system developer Vitech Inc., has spent significant time and energy in creating a new pension administration system — COMPASS. It will have web based portals for both employer self-service (ESS) and member self-service (MSS). We are excited for its anticipated "go live" date in the first half of 2017.

As Board chair, I assure you that all of the APERS trustees have the best interests of the System and its membership in mind as we chart the future direction of the investment program and all other policy areas of the plan. As your board, we also recognize the dedication and fine work of the entire administrative staff of APERS; they are committed to delivering the highest quality service to all stakeholders.

Sincerely,

eewillion

Artee Williams, Chair APERS Board of Trustees

# Introduction

## **BOARD OF TRUSTEES**

As of June 30, 2016

Mr. Artee Williams, Chair State Employee Representative Expiration of Term, March 9, 2020

The Honorable David Morris, Vice Chair Municipal Employee Representative Expiration of Term, March 9, 2022

Ms. Ouida Wright State Employee Representative Expiration of Term, March 9, 2017

Ms. Carol Bevis Other Non-State Employee Representative Expiration of Term, March 9, 2018

Mr. Bill Gaddy State Employee Representative Expiration of Term, March 9, 2019

The Honorable David Hudson County Employee Representative Expiration of Term, March 9, 2021

The Honorable Andrea Lea Auditor of State Ex-Officio Member

The Honorable Dennis Milligan Treasurer of State Ex-Officio Member

Mr. Larry Walther Director of the Department of Finance and Administration Ex-Officio Member

# Introduction Arkansas Public Employees Retirement System Annual Financial Report 2016

### **APERS SENIOR STAFF**

Ms. Gail Stone Executive Director

Mr. Jay Wills Deputy Director

Mr. Jason Willett Chief Financial Officer

Mr. Carlos Borromeo Chief Investment Officer

Ms. Susan Bowers Assistant Director of Investments

Ms. Allison Woods Director of Benefits Administration

Mr. Phillip Norton Director of Information Technology

Ms. Becky Walker Director of Operations

Ms. Jacobia Twiggs Manager, Educational Outreach

Ms. Jennifer Taylor Manager, Member and Retiree Services Section

Mr. Jon Aucoin Manager, Communications Section

Ms. Jessica Middleton-Kurlyko Legal Counsel

Mr. John Owens Internal Auditor

# Introduction

### **PROFESSIONAL SERVICE PROVIDERS**

Custodian Bank	Actuary	Investment Consultant
The Bank of New York Mellon	Gabriel, Roeder, Smith & Co.	Callan Associates, Inc.
Pittsburgh, PA 15258	Southfield, MI 48076	Chicago, IL 60602
l.	nvestment Managers: Domestic Eq	uity
CastleArk Management, LLC	Golden Capital Management	Horrell Capital Management
Chicago, IL 60606	Charlotte, NC 28262	Little Rock, AR 72211
INTECH	Lazard Asset Management	Lombardia Capital Partners
West Palm Beach, FL 33401	New York, NY 10020	Pasadena, CA 91101
Mellon Capital Management Pittsburgh, PA 15258	SSI Investment Management Beverly Hills, CA 90210	Stephens Investment Management Group
1.1.1.2.2.2		Houston, TX 77046
Wellington Management	Westwood Management Corp.	
Company Boston, MA 02210	Dallas, TX 75201	
Boston, MA 02210		
	Investment Managers: Fixed Incon	ne
MacKay Shields	Prudential Investments, Inc.	
New York, NY 10105	Newark, NJ 07102	
Inve	estment Managers: Diversified Stra	tegies
AQR Capital Management	Blackstone Alternative Asset Mgmt., LP	Newton Capital Management
Greenwich, CT 06830	New York, NY 10154	New York, NY 10166-0005
	Investment Managers: Real Asset	s
CastleArk Management, LLC	Heitman America Real Estate	Invesco Real Estate
Chicago, IL 60606	Chicago, IL 60606	Dallas, TX 75240
	Disperale Ferrest Investments IIC	TA Associatos Doslty
LaSalle Investment Management San Francisco, CA 94111	Pinnacle Forest Investments, LLC Little Rock, AR 72211	TA Associates Realty Boston, MA 02109
	,	· · · · ·
Inv	vestment Managers: International E	auity
	-	- /
Artisan Partners Milwaukee, WI 53202	Baillie Gifford Overseas Ltd. Edinburgh, Scotland	Lazard Asset Management New York, NY 10020

Pyramis Global Advisors Smithfield, RI 02917

Manning & Napier Advisors Dublin, OH 43017

## FINANCIAL



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### MANAGEMENT'S DISCUSSION AND ANALYSIS

To help facilitate a better understanding of the financial condition of the Arkansas Public Employees Retirement System ("APERS" or the "System") as of June 30, 2016, the results of its operation for the fiscal year ended, and the fiscal policies that govern its significant business operations, management has prepared this narrative analysis. The narrative is intended to supplement the System's financial statements, and, as such, should be read in conjunction with these statements, which are presented beginning on page 31.

#### **Overview of the Financial Statements**

This overview is intended to serve as an introduction to the System's financial reporting. Collectively, all the information contained in the Financial Section of this annual report presents the net assets held in trust for pension benefits as of June 30, 2016.

The basic financial statements contained in the Financial Section of the annual report consist of the following:

#### The Statement of Fiduciary Net Position

*The Statement of Fiduciary Net Position* reports the pension trust fund's assets, liabilities, and resulting net position such that assets – liabilities = net position at the end of the fiscal year. It is a snapshot of the financial position of the pension trust fund at that specific time. Below is a summary of total assets, total liabilities, and resulting net position for fiscal years 2016 and 2015:

Summary of Fiduciary Net Position			
Assets	2016	2015	
Cash and Cash Equivalents	\$ 239,355,424	\$ 230,352,583	
Receivables	82,731,421	73,321,222	
Investments	7,143,145,454	7,301,196,656	
Securities Lending Collateral	897,876,345	993,010,007	
Property and Equipment	15,662,882	10,372,669	
Other Assets	21,013	29,905	
Total Assets	\$ 8,378,792,539	\$ 8,608,283,042	
Liabilities			
Other liabilities	\$ 107,587,992	\$ 61,660,086	
Securities lending collateral	900,880,227	996,629,718	
Total Liabilities	1,008,468,219	1,058,289,804	
Net Position Restricted For Pension Benefits	\$ 7,370,324,320	\$ 7,549,993,238	

#### The Statement of Changes in Fiduciary Net Position

*The Statement of Changes in Fiduciary Net Position* summarizes the pension trust fund's financial transactions that have occurred during the fiscal year such that additions – deductions = net change in net position. It supports the change that has occurred to the prior year's net position value on the *Statement of Fiduciary Net Position*. Below is a summary of the financial transactions of the trust fund for fiscal years 2016 and 2015:

Additions	2016		2015
Employer Contributions	\$ 263,141,390	\$	262,327,561
Member Contributions	\$55,944,132		51,596,001
Supplemental Contributions	\$404,433		392,653
Net Investment Income	(4,177,314)		169,621,019
Total Other Additions	6,487,306		6,175,949
Total Additions	321,799,946		490,113,183
Deductions			
Benefits	480,913,495		451,912,791
Refunds of Contributions	\$13,188,729		12,195,637
Administrative Expenses	\$7,366,640		7,201,144
Total Deductions	501,468,864		471,309,572
Net Increase (Decrease)	(179,668,918)		18,803,611
Net Position			
Beginning of the Year	\$ 7,549,993,238	\$7	,531,189,627
End of the Year	 7,370,324,320	7	,549,993,238

#### Summary of Changes in Fiduciary Net Position

#### Additions to Fiduciary Net Position

The reserves needed to finance retirement benefits are accumulated through the collection of employer and employee contributions and through earnings on investments. Accumulations for fiscal year 2016 totaled approximately \$322 million (see the following table):

Operating Additions	2016	2015
Employer Contributions	\$ 263,141,390	\$ 262,327,561
Member Contributions	55,944,132	51,596,001
Supplemental Contributions	404,433	392,653
Investment Earnings	(4,177,314)	169,621,019
Miscellaneous Additions	1,435,671	908,250
Transfers from Other Public Employee Retirement Systems	5,051,635	5,267,700
Total	\$ 321,799,947	\$ 490,113,184

The overall decrease in additions was approximately \$168 million when compared to fiscal year 2015 and was due primarily to lower investment returns. The Investments Section of this report reviews investment activity and the results of the investment portfolio for fiscal year 2016.

#### **Deductions to Fiduciary Net Position**

The primary deductions from the System include the payment of benefits to members and beneficiaries, the refund of contributions to former members, and the cost of administering the System. Deductions for fiscal year 2016 totaled approximately \$501 million (see the following table):

Operating Deductions	2016	2015
Benefit Payments	\$ 480,913,495	\$ 451,912,791
Refunds of Contributions	13,188,729	12,195,637
Administrative Expenses	7,366,640	7,201,144
Total	\$ 501,468,864	\$ 471,309,572

The overall increase in deductions was approximately \$30 million when compared with fiscal year 2015. The increase in benefit payments resulted primarily from an increase in both the number and average amount of benefits paid and from cost-of-living increases granted. The overall net decrease in the System's net position was approximately \$180 million during fiscal year 2016.

#### The Notes to the Financial Statements

The Notes to the Financial Statements are provided as an integral component of the financial statements to help explain in narrative form some of the more complex or less obvious elements of the statements. Further, the Notes to the Financial Statements provide additional information that is essential for a comprehensive understanding of the System's financial condition and the results of its operations.

- Note 1 provides a general description of the System, including information regarding membership and employers.
- Note 2 summarizes significant accounting policies, including the basis of accounting, management's use of estimates, and other accounting policies.
- Note 3 describes deposits, discloses investment risks, and addresses securities lending as well as derivative instruments.
- Note 4 addresses other postemployment benefits (OPEB).
- Note 5 provides information regarding legally required reserves.
- Note 6 provides information regarding the System's net pension liability.
- Note 7 describes the System's Deferred Retirement Option Plan.
- Note 8 provides capital assets activity.

The required supplementary information provides additional detail and historical information considered to be useful in evaluating the condition of the plan administered by APERS. The System provides certain required schedules and related note disclosures that collectively demonstrate the System's annual progress toward funding its actuarial accrued liability and disclose the annual employer contributions required and the percentage contributed.

The other supplementary schedules summarize the major categories of administrative and investment expenses and detail the amounts paid to professional consultants.

#### Funding

The System's overall funding objective is to accumulate sufficient assets over time to meet its long term benefit obligations as they become due. Accordingly, collecting employer and member contributions and earning an adequate long term rate of return on its investments are essential components of the System's plan for accumulating the funds needed to finance future retirement benefits.

APERS' overall pension fund net position decreased during the fiscal year ended June 30, 2016 by \$179,668,918. This decrease can be attributed to a decrease in the value of investments and their associated income.

#### System Investments as of June 30, 2016

The investments of the pension trust fund generated a 0.30% return for the fiscal year, which is lower than the prior year's return of 2.45%. The 0.30% return placed APERS in the fifty-sixth percentile when compared with a median return of 0.54% for large public plans. Investment results over time are compared with the System's benchmarks in the schedule of comparative investment results located in the Investments Section of this annual report. Below is a summary of the performance of the System's assets by class:

- Domestic Equity The System had \$2.906 billion in U.S. domestic equity securities, which is approximately a 13.54% decrease from fiscal year 2015. Domestic equity posted a return of negative 0.38% for the fiscal year. The Russell 3000 Index posted a return of 2.14%.
- International Equity The System had \$1.763 billion in international equity securities which is approximately a 10.93% decrease from fiscal year 2015. International equity posted a return of negative 6.88% for the fiscal year. The MSCI EAFE Index posted a return of negative 10.16%.
- Fixed Income The System had \$1.31 billion in fixed income securities, which is approximately a 4.65% increase from fiscal year 2015. Fixed income posted a return of 5.06% for the fiscal year. The Barclays Aggregate Index posted a return of 6.00%.
- Diversified Strategies The System had \$373 million in diversified strategies, which is approximately a 2.05% increase from fiscal year 2015. Diversified strategies posted a return of 2.86% for the fiscal year.
- Real Assets The System had \$1.235 billion in real assets, which is approximately a 25.81% increase from fiscal year 2015. Real assets posted a return of 8.29% for the fiscal year.



#### **Securities Lending**

The System earns additional investment income by lending investment securities to broker-dealers. This is done by the System's custodian bank, Bank of New York Mellon (BNYM). The broker-dealers provide collateral to BNYM and generally use the borrowed securities to cover short sales and failed trades for their clients. BNYM invests cash collateral to earn interest. For the fiscal year 2016, securities lending income to the System amounted to \$4.738 million.

#### **Actuarial Valuations and Funding Progress**

An actuarial valuation of the System is performed annually as of June 30. The actuarial accrued liability and actuarial value of assets of the System as of June 30, 2016 amounted to \$9.662 billion and \$7.768 billion, respectively.

As of June 30, 2016, the System experienced a decrease in its funded status from 81% to 76% on a market value basis. On a funding basis, the System experienced an increase in its funded status from 79% to 80%.

#### **Requests for Information**

This annual report is designed to provide a general overview of the finances of the System. Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Arkansas Public Employees Retirement System, 124 W. Capitol, Suite 400, Little Rock, AR 72201.

#### Arkansas Public Employees Retirement System Annual Financial Report 2016

# Financial

## STATEMENT OF FIDUCIARY NET POSITION (as of June 30, 2016)

STATEMENT OF FIDUCIART NET POST	(as of June 30, 2016)	
Assets	2016	2015
Cash and Cash Equivalents	\$ 239,355,424	\$ 230,352,583
Receivables		
Contributions	4,538,850	4,157,178
Dec 2004 Actuarial Liability Receivable	8,890,840	8,978,643
Investment Principal Receivable	52,383,622	40,842,637
Accrued Investment Income Receivable	16,918,109	15,984,105
Termination Agreement Receivable	0	5,281,099
Allowance for Doubtful Accounts	0	(1,922,440)
Other Receivables Total Receivables	82,731,421	0
	02,731,721	75,521,222
Investments, At Fair Value Government Securities		
U.S. Government Securities	151,567,072	98,546,504
Futures	(1,457,483)	(855,875)
Government Agency Securities	120,720,514	103,244,018
Corporate Securities	22 241 760	41 228 642
Collateralized Obligations Corporate Bonds	32,341,769 390,159,487	41,338,642 416,500,311
Convertible Bonds	150,159,963	188,699,681
Convertible Preferred Stock	62,489,439	49,132,761
Common Stock	2,291,993,978	2,524,285,757
Equity Index Funds	680,177,673	641,002,358
Equity Commingled	0	88,137,673
High Yield Income Fund	59,886,227	60,023,193
International Securities	2	
Global Fixed Income Fund Corporate Fixed Income	0 26,623,673	0 28.458.972
Equity Securities	956,342,319	1,144,990,165
Global Preferred Stock	1,412,303	1,224,203
Equity Pooled Fund Units	566,627,008	708,532,111
Global Equity Index Funds	0	0
Global Collateralized Obligations	0	0
Emerging Markets	0	1,523,537
Emerging Markets Collateralized Obligations	0	0
Forward Contracts Core Plus Bond Fund	(527,453 <u>)</u> 430,447,478	345,529 402,136,164
Interest Rate Swaps	430,447,478	402,130,104
Real Estate	719,132,033	386,947,368
Diversified Strategies	360,402,608	254,613,311
Timberland	132,227,836	157,231,753
Municipal Bonds	0	0
Commercial Loans	12,419,009	5,138,520
Total Investments	7,143,145,454	7,301,196,656
Securities Lending Collateral Investments, At Fair Value		
Repurchase Agreements	80,487,784	180,345,059
Asset Backed Floating Rate Notes	187,766,700	249,063,773
U.S. Agencies U.S. Governments	0	0
Certificates of Deposit	ő	0
Commercial Paper	0	0
Corporate Floating Rate Notes	559,302,831	510,360,541
Corporate Bonds	0	0
Time Deposits	70,319,030	53,240,634
Fixed Rate Notes	0	0
Bank Obligations Asset Backed Securities	0 0	0
Total Securities Lending Collateral Investments	897,876,345	993,010,007
-		
Prepaids and Other Assets Fixed Assets, Net	21,013 15,662,882	29,906 10,372,669
Total Assets	8,378,792,539	8,608,283,042
Liabilities		
Accrued Expenses and Other Liabilities	8,338,000	9,450,465
Investment Principal Payable	96,542,343	49,935,802
Other Post Employment Benefits	2,707,649	2,273,819
Convertion Londing Linkility	900,880,227	996,629,718
Securities Lending Liability		
Total Liabilities Net Position Restricted for Pension Benefits	1,008,468,219 \$ 7,370,324,320	1,058,289,804 \$ 7,549,993,238

## STATEMENT OF CHANGES IN FIDUCIARY NET POSITION (as of June 30, 2016)

Additions	2016	2015
Contributions		
Employer	\$ 263,141,390	\$ 262,327,561
Plan Member	55,944,132	51,596,001
Supplemental	404,433	392,653
Total Contributions	319,489,954	314,316,215
Investment Income		
Interest	72,456,583	73,075,336
Dividends	78,971,953	80,542,075
Investment Gain/(Loss)	(130,702,730)	42,240,341
Security Lending Income	4,494,855	2,930,365
Other	1,322,030	0
Total Investment Income	26,542,692	198,788,117
Less: Investment Expense	30,720,006	29,167,098
Net Investment Income	(4,177,314)	169,621,019
Other Additions		
Miscellaneous Additions	952,597	1,029,024
Transfers from Other Public Employees Retirement Systems	5,051,635	5,267,700
Miscellaneous Transfers from State Agencies	266,835	261,739
Total Other Additions	6,271,067	6,558,462
Total Additions	321,583,707	490,495,697
Deductions		
Benefits	480,913,495	451,912,791
Refunds of Contributions	13,188,729	12,195,637
Administrative Expenses	7,366,640	7,201,144
Total Deductions	501,468,864	471,309,572
Adjustments		
Actuarial Adjustment to DJ Unfunded Liability	216,239	(382,513)
Net Increase (Decrease)	(179,668,918)	18,803,612
Net Position Restricted for Pension Benefits		
Beginning of Year	7,549,993,238	7,531,189,627
End of Year	\$ 7,370,324,320	\$ 7,549,993,238

## NOTES TO THE FINANCIAL STATEMENTS

#### Note 1: Plan Description

#### **General Information**

The Arkansas Public Employees Retirement System (APERS or the System) is a cost-sharing, multiple employer, defined benefit pension plan established by authority of the Arkansas General Assembly with the passage of Act 177 of 1957. Its purpose is to provide retirement benefits for eligible employees and elected officials of state and local governmental entities in Arkansas. The laws governing the operations of APERS are set forth in Arkansas Code Annotated (A.C.A.), Title 24, Chapter 4, with related laws in Chapter 2 and Chapter 7.

The general administration and responsibility for the proper operation of the System is vested in the nine member Board of Trustees of the Arkansas Public Employees Retirement System (the Board). Membership includes three state and three non-state employees, all appointed by the Governor, and three ex-officio trustees, including the Auditor of State, the Treasurer of State, and the Director of the Department of Finance and Administration.

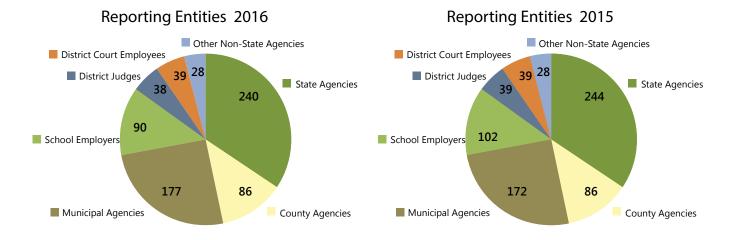
#### **Reporting Entity**

The executive director and administrative staff of APERS also serve as the executive director and administrative staff of two other state retirement systems, the Arkansas State Police Retirement System and the Arkansas Judicial Retirement System. These systems do not constitute part of the APERS reporting entity under the provisions of Governmental Accounting Standards Board (GASB) Statement No. 14, The Financial Reporting Entity because these systems are legally separate, fiscally independent entities with separate boards of trustees. The nature of the relationship between these systems and APERS is merely a sharing of administrative resources and, as such, does not require inclusion of these systems in APERS financial statements.

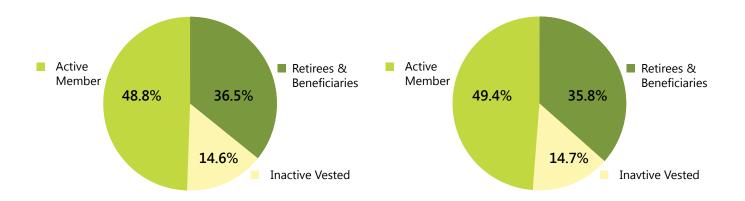
#### Membership

APERS covers all state employees who are not covered by another authorized plan, all county employees, municipal employees whose municipalities have elected coverage under the System, college and university employees, certain non-teaching school employees, and other public entities specifically defined by law.

Reporting Entities	2016	2015
State	240	244
County	86	86
Municipal	177	172
School	90	102
District Judges	38	39
District Court	39	39
Other Non-State	28	28
Total	698	710



Membership	2016	2015
Retirees and Beneficiaries Receiving Benefits (Includes DROP Participants)	34,214	33,106
Terminated System Members Entitled to But Not Yet Receiving Benefits	13,624	13,638
Active System Members	45,676	45,722



#### Contributions

All participating employers are required to contribute a portion of their eligible employees' salaries into the System. The Board establishes the provisions for these employer contributions based on the rates the independent actuary determines are necessary to fund the System. Because of the cost of providing enhanced service credit to certain members classified as public safety employees, and pursuant to the provisions of Act 625 of 1983 and Act 1097 of 1993, certain agencies employing individuals in public safety positions are required to remit additional contributions in amounts determined by the actuary.

The System was established as a contributory plan in which member-employees also contributed a portion of their salaries to the System. However, with the passage of Act 793 of 1977, existing members and previous members were offered the opportunity to choose to become non-contributory members. Anyone who joined the System subsequent to January 1, 1978 and had not previously been a member was automatically enrolled as a non-contributory member.

Act 2084 of 2005 directed APERS to establish a new contributory plan effective July 1, 2005. It required that all covered employees first hired on or after July 1, 2005 contribute 5% of their salary into the System. Employees hired before June 30, 2005 who were in the non-contributory plan were given the option to join the new contributory plan by December 31, 2005. Non-contributory members who did not join the new contributory plan by that deadline remain non-contributory members.

Members may have employee contributions in the System if (a) they were members of APERS on or before January 1, 1978, (b) they are members first hired after July 1, 2005, or (c) they have purchased service in the System. A member's employee contributions are refundable if the member terminates APERS-covered employment before a monthly benefit is payable. Employee contributions remaining on deposit with APERS earn interest (at the rate of 4% per year), which is included in the refund. Contribution refunds do not include contributions made by an employer.

<b>Employer Contribution Rates</b>	2016	2015
State Division	14.76 %	14.76 %
Wildlife Subdivision	26.76	26.76
State Capitol Police Subdivision	14.76	14.76
County Division	14.76	14.76
Municipal Division	14.76	14.76
School Division	4.00	4.00
Other Non-State Division	14.76 %	14.76 %

#### System Administration

The costs of administering the System are paid out of investment earnings.

#### Benefits

Benefit provisions are established by state law and may be amended only by the Arkansas General Assembly. Members are eligible for full benefits under the following conditions:

- at age 65 with five years of actual service,
- at any age with 28 years of actual service,
- at age 60 with 20 years of actual service if under the old contributory plan (prior to July 1, 2005), or
- at age 55 with 35 years of credited service for elected or public safety officials.

The normal retirement benefit amount, paid on a monthly basis, is determined by the member's final average salary and years of service. A member may retire with a reduced benefit at age 55 with at least five years of actual service or at any age with 25 years of actual service. APERS also provides for disability and survivor benefits.

#### Tax Status

During the fiscal years ended June 30, 2016 and 2015, APERS was confirmed as exempt from federal income taxes under Section 501(a) of the Internal Revenue Code.

#### Note 2: Summary of Significant Accounting Policies

#### **Basis of Accounting**

APERS' accounts and records are maintained using fund accounting principles, and its financial statements are prepared using the accrual basis of accounting. Expenses are recorded when the liability is incurred, revenues are recorded in the accounting period in which they are earned and become measurable, and investment purchases and sales are recorded as of their trade dates. Member and employer contributions are established by statute as a percentage of salaries and are recognized when due, pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

#### Investments

The System is authorized to invest in eligible investments as approved by the Board as set forth in its investment policy. System investments are reported at fair value. Short-term investments, debt securities, and equity securities are reported at fair value, as determined by the System's custodial agent, using pricing services or prices quoted by independent brokers based on the latest reported sales prices at current exchange rates for securities traded on national or international exchanges. The fair value of the pro rata share of units owned by the System in equity index and commingled trust funds is determined by the respective fund trustee based on quoted sales prices of the underlying securities.

Net investment income (loss) includes net appreciation (depreciation) in the fair value of investments, interest income, dividend income, securities lending income and expenses, and investment expenses, which include investment management and custodial fees and all other significant investment related costs. The System's international investment managers may enter into forward foreign exchange contracts to protect against fluctuation in exchange rates between the trade date and the settlement date of foreign investment transactions. Any gains and losses on these contracts are included in income in the period in which the exchange rates change.

Investment securities and investment securities underlying commingled or mutual fund investments are exposed to various risks, such as interest rate and credit risks. Due to the risks associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities may occur in the near term, and those changes could materially affect the amounts reported in the *Statement Of Fiduciary Net Position*.

#### Use of Estimates

The preparation of the System's financial statements in conformity with accounting principles generally accepted in the U.S. requires the System administrator to make significant estimates and assumptions that affect various data in the report, including the following:

- The net position restricted for pensions at the date of the financial statements
- The net pension liability and other actuarial information presented in Note 6
- The required supplementary information as of the benefit information date
- The changes in fiduciary net position during the reporting period

Estimates may also be involved in formulating disclosures of contingent assets and liabilities at the date of the financial statements. Actual results could differ from these estimates.

#### Cash and Cash Equivalents

Cash and cash equivalents include demand accounts, imprest accounts, cash in the state treasury, and short-term investment funds (STIF). The STIF accounts are created through daily sweeps of excess cash by the System's custodian bank into bank-sponsored commingled funds that are invested in U.S. Government and agency securities and other short-term investments. The STIF accounts had an average weighted maturity of 90 days or less and are stated at fair value.

#### **Capital Assets**

Capital assets purchased and in the custody of APERS were recorded as expenditures at the time of purchase. Assets with costs exceeding \$5,000 and an estimated useful life exceeding one year are reported at historical cost, including ancillary costs (such as professional fees and costs, freight costs, preparation and setup costs, and installation costs). Depreciation is reported for capital assets based on a straight-line method with no salvage value. The estimated useful life generally assigned by APERS to capital assets held ranges from five to 20 years. A schedule of capital asset activity for the fiscal year can be found on page 68.

#### **Risks and Uncertainties**

Certain data in this report -- including contributions to the System and the net pension liability, as well as other actuarial information in Note 6 and the required supplementary information -- has been formulated based on certain projections about interest rates, inflation rates, and employee compensation and demographics. Due to the dynamic nature of these factors, it is possible that these projections will need to be revised in the near term. Moreover, because of the uncertainties inherent in making such projections, the effect of any such changes could be material to the financial statements.

#### Note 3: Deposits and Investments

#### Deposits

Deposits are carried at cost and are included in "cash and cash equivalents." Cash and cash equivalents include demand accounts, cash in state treasury, cash on hand, short-term investment funds (STIF), and petty cash. As of June 30, 2016, these totals were \$608,740, \$2,522,168, \$89,876, \$236,134,440, and \$200 respectively. State Treasury Management Law governs the management of funds held in the State Treasury (cash in state treasury), and it is the responsibility of the Treasurer of State to ensure the funds are adequately insured and collateralized.

#### Custodial Credit Risk for Deposits

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the System will not be able to recover deposits or collateral securities. The System's policy is to place deposits only in collateralized or insured accounts. As of June 30, 2016, the System's only deposits exposed to potential custodial credit risk were those holding its foreign currency balance of \$951,036. The System holds foreign currency in banks outside the United States as a result of transactions by international investment managers.

#### Investments

Arkansas Code Annotated §§ 24-2-601 – 24-2-619 authorize the Board to have full power to invest and reinvest monies of the System and to hold, purchase, sell, assign, transfer or dispose of any of the investments or proceeds of the investment in accordance with the prudent investor rule. Security transactions and any resulting gains or losses are accounted for on a trade basis. Net investment income includes net appreciation in the fair value of investments, interest income, dividend income, and total investment expense, which includes investment management fees, custodial fees, and all other significant investment-related costs.

Arkansas Code Annotated § 24-2-608 also states that the System shall seek to invest not less than 5% nor more than 10% of the System's portfolio in Arkansas-related investments. APERS recognizes a legal responsibility to seek to invest in the Arkansas economy while realizing that its primary, legal, and fiduciary commitment is to beneficiaries of the retirement system. As stated in A.C.A. § 24-2-608 (d), "nothing in this section shall in any way limit or impair the responsibility of a fiduciary to invest in accordance with the prudent investor rule set forth in §§ 24-2-610 – 24-2-619."

Investments are reported at fair value as determined by the custodian bank. The custodian bank's determination of fair values includes, among other things, using pricing services or quotes by major independent brokers at current exchange rates as available. The schedule on page 40 reflects the fair value of investments.

Statement of Invested Assets by Type (fair value as of June 30, 2016)

Investment Type	Fair Value*
Government Securities	
U.S. Government Securities	\$ 157,065,484
Agency Pooled	108,115,823
Agency Debs	16,984,080
Corporate Securities	
Collateralized Obligations	33,515,034
Convertible Bonds	155,607,329
Corporate Bonds	404,313,336
High Yield Bond Fund	62,058,724
Convertible Pref Stock	64,756,374
Common Stock	2,375,140,842
Equity Index Fund	704,852,537
International Securities	
Global Corporate Fixed	27,589,503
Global Preferred Stock	1,463,538
Global Commingled	587,182,585
Global Equity	991,035,632
Diversified Strategies	373,476,965
Core Plus Bond Fund	446,062,859
Real Estate Commingled	745,220,048
Timberland	137,024,677
Commercial Loans	12,869,534
Futures	(1,510,356)
Forwards	(546,587)
	\$ 7,402,277,961
Securities Lending Collateral	
Repurchase Agreements	83,407,646
Asset Backed Floating Rate Notes	194,578,329
Corporate Floating Rate Notes	579,592,709
Time Deposits	72,870,000
	930,448,683
	\$ 8,332,726,644

\* Principal only. Figures are APERS and ASPRS combined. Totals may not add due to rounding.

### Asset Allocation

In order to ensure that the System's investments are prudently diversified, the Board has established the following asset allocation guidelines:

Asset Type	Allocation Target	Lower and Upper Limits
Equities	37%	32% - 42%
International Equities	24%	19% - 29%
Fixed Income	18%	13% - 23%
Diversified Strategies	5%	0% - 10%
Real Assets	16%	11% - 21%

### Custodial Credit Risk for Investments

Custodial credit risk for investments is the risk that, in the event of failure of the counterparty to a transaction, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are (a) uninsured, (b) not registered in the name of the government, and (c) held by either the counterparty or the counterparty's trust department or agent but not in the System's name. Arkansas Code Annotated § 24-2-606 does address the custodianship of assets, and the investment policy states that "the custodian bank shall, by nominee agreement, hold any and all securities for the beneficial interest of the APERS fund." As of June 30, 2016, there were no investments exposed to custodial credit risk.

### Credit Risk for Investments

Credit risk of investments is the risk that the issuer or other counterparty will not fulfill its obligation to the holder of the investment. Credit risk exposure is dictated by each investment manager's agreement. This credit risk is measured by the credit quality of investment in debt securities as described by nationally recognized statistical rating organizations. Each portfolio is managed in accordance with investment guidelines that are specific as to permissible credit quality ranges, exposure levels within individual security quality rating tiers, and the average credit quality of the overall portfolio.

The System's exposure to credit risk as of June 30, 2016, was as follows:

Investment Type and Fair Value	Aaa	Aa	A
Government Securities			
U.S. Government Securities	\$ 157,065,484	0	0
Agency Debentures	16,984,080	0	0
Agency CMO	0	0	0
Agency Pooled	106,679,642	0	0
Corporate Securities			
Collateralized Obligations	14,205,547	1,108,135	3,983,342
Convertible Bonds	0	3,453,066	7,197,223
High Yield Income Fund	0	0	0
Corporate Bonds	3,432,983	2,881,336	68,316,614
International Securities			
Emerging Markets	0	0	0
Emerging Mkts Collateralized Obligations	0	0	0
Global Collateralized Obligations	0	0	0
Global Corporate Fixed	0	0	1,600,150
Global Government Fixed	0	0	0
Core Plus Bond Fund	0	0	446,062,859
Commercial Loans	1,492,500	0	0
Municipal Bonds	0	0	0
	299,860,235	7,442,537	527,160,188
Securities Lending Collateral	\$ 194,685,687	425,185,961	127,083,187

### Moody's Credit Rating Dispersion Detail by Credit Rating

#### S&P's Credit Rating Dispersion Detail by Credit Rating

Investment Type and Fair Value	AAA	AAA		А	
Government Securities					
U.S. Government Securities	\$	0	157,065,484	0	
Agency Debentures		0	16,984,080	0	
Agency CMO		0	0	0	
Agency Pooled		0	108,115,823	0	
Corporate Securities					
Collateralized Obligations	10,744,	,884	8,266,504	3,941,054	
Convertible Bonds	2,246,	,366	0	8,942,671	
High Yield Income Fund		0	0	0	
Corporate Bonds	3,432,	,983	4,965,642	78,119,699	
International Securities					
Emerging Markets		0	0	0	
Emerging Mkts Collateralized Obligations		0	0	0	
Global Collateralized Obligations		0	0	0	
Global Corporate Fixed		0	0	0	
Global Government Fixed		0	0	0	
Core Plus Bond Fund		0	0	446,062,859	
Commercial Loans		0	0	0	
Municipal Bonds		0	0	0	
	16,424	,233	295,397,533	537,066,283	
Securities Lending Collateral	\$ 127,088	,306	385,179,628	243,553,081	

# Arkansas Public Employees Retirement System Annual Financial Report 2016

# Financial

Ваа	Ва	В	Caa or below	NR		Fair Value*
0	0	0	0	0	\$	157,065,484
0	0	0	0	0	•	16,984,080
0	0	0	0	0		0
0	0	0	0	1,436,181		108,115,823
•		· · ·	, i i i i i i i i i i i i i i i i i i i	.,,		,
4,608,683	331,412	1,656,678	3,886,042	3,735,195		33,515,034
14,095,301	14,405,049	8,362,017	0	108,094,672		155,607,329
0	36,009,660	26,049,064	0	0		62,058,724
214,793,892	69,363,997	30,328,779	7,104,337	8,091,398		404,313,336
0	0	0	0	0		0
0	0	0	0	0		0
0	0	0	0	0		0
16,369,960	9,177,641	0	0	441,752		27,589,503
0	0	0	0	0		0
0	0	0	0	0		446,062,859
177,949	0	2,295,508	1,827,023	7,076,554		12,869,534
0	0	0	0	0		0
250,045,785	129,287,759	68,692,048	12,817,401	128,875,752		1,424,181,706
	<u>·</u>			<u>·</u>		<u> </u>
0	0	0	4,833,441	178,660,408	\$	930,448,684
BBB	BB	В	CCC or below	NR		Fair Value*
0	0	0	0	0	\$	157,065,484
0 0	0 0	0 0	0 0	0 0	\$	157,065,484 16,984,080
0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	\$	157,065,484 16,984,080 0
0 0	0 0	0 0	0 0	0 0	\$	157,065,484 16,984,080
0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	\$	157,065,484 16,984,080 0 108,115,823
0 0 0 4,017,498	0 0 0 0 139,683	0 0 0 0	0 0 0 0 3,855,226	0 0 0 0 2,550,185	\$	157,065,484 16,984,080 0 108,115,823 33,515,034
0 0 0 4,017,498 24,705,525	0 0 0 139,683 21,957,784	0 0 0 0 6,233,726	0 0 0 0	0 0 0 2,550,185 91,521,257	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329
0 0 0 4,017,498 24,705,525 0	0 0 0 139,683 21,957,784 62,058,724	0 0 0 0 6,233,726 0	0 0 0 3,855,226 0 0	0 0 0 2,550,185 91,521,257 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724
0 0 0 4,017,498 24,705,525	0 0 0 139,683 21,957,784	0 0 0 0 6,233,726	0 0 0 3,855,226 0	0 0 0 2,550,185 91,521,257	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329
0 0 0 4,017,498 24,705,525 0 209,090,562	0 0 0 139,683 21,957,784 62,058,724 68,715,435	0 0 0 0 6,233,726 0 27,016,981	0 0 0 3,855,226 0 0 4,176,690	0 0 0 2,550,185 91,521,257 0 8,795,344	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724
0 0 0 4,017,498 24,705,525 0 209,090,562 0	0 0 0 139,683 21,957,784 62,058,724	0 0 0 0 6,233,726 0 27,016,981 0	0 0 0 3,855,226 0 0	0 0 0 2,550,185 91,521,257 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724
0 0 0 4,017,498 24,705,525 0 209,090,562	0 0 0 139,683 21,957,784 62,058,724 68,715,435	0 0 0 0 6,233,726 0 27,016,981 0 0 0	0 0 0 3,855,226 0 0 4,176,690 0 0	0 0 0 2,550,185 91,521,257 0 8,795,344	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336
0 0 0 4,017,498 24,705,525 0 209,090,562 0 0 0 0	0 0 0 139,683 21,957,784 62,058,724 68,715,435 0 0 0	0 0 0 0 6,233,726 0 27,016,981 0	0 0 0 0 3,855,226 0 0 4,176,690 0 0 0 0	0 0 0 2,550,185 91,521,257 0 8,795,344 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336 0 0 0
0 0 0 0 0 0 0 24,705,525 0 209,090,562 0 0 0 0 0 0 0 17,753,924	0 0 0 0 139,683 21,957,784 62,058,724 68,715,435 0 0 0 0 9,393,827	0 0 0 0 6,233,726 0 27,016,981 0 0 0 0 0	0 0 0 0 3,855,226 0 0 4,176,690 0 0 0 441,752	0 0 0 2,550,185 91,521,257 0 8,795,344 0 0 0 0 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336 0 0 0 27,589,503
0 0 0 4,017,498 24,705,525 0 209,090,562 0 0 0 0	0 0 0 139,683 21,957,784 62,058,724 68,715,435 0 0 0	0 0 0 0 6,233,726 0 27,016,981 0 0 0 0	0 0 0 0 3,855,226 0 0 4,176,690 0 0 0 0	0 0 0 2,550,185 91,521,257 0 8,795,344 0 0 0 0 0 0 0 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336 0 0 0 27,589,503 0
0 0 0 0 0 0 0 24,705,525 0 209,090,562 0 0 0 0 17,753,924 0 0 0	0 0 0 0 139,683 21,957,784 62,058,724 68,715,435 0 0 0 9,393,827 0 0 0	0 0 0 0 0 6,233,726 0 27,016,981 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 3,855,226 0 0 4,176,690 0 0 441,752 0 0 0	0 0 0 2,550,185 91,521,257 0 8,795,344 0 0 0 0 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336 0 0 27,589,503 0 446,062,859
0 0 0 0 0 0 0 24,705,525 0 209,090,562 0 0 0 0 0 0 17,753,924 0	0 0 0 0 139,683 21,957,784 62,058,724 68,715,435 0 0 0 0 9,393,827 0	0 0 0 0 6,233,726 0 27,016,981 0 0 0 0 0 0 0	0 0 0 0 3,855,226 0 0 4,176,690 0 0 441,752 0	0 0 0 2,550,185 91,521,257 0 8,795,344 0 0 0 0 0 0 0 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336 0 0 0 27,589,503 0
0 0 0 0 0 0 24,017,498 24,705,525 0 209,090,562 0 0 0 0 17,753,924 0 0 0 2,273,683 0	0 0 0 0 0 0 139,683 21,957,784 62,058,724 68,715,435 0 0 0 9,393,827 0 0 0 1,492,500 0 0	0 0 0 0 0 0 6,233,726 0 27,016,981 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 3,855,226 0 0 4,176,690 0 4,176,690 0 0 441,752 0 0 0 1,827,023 0	0 0 0 2,550,185 91,521,257 0 8,795,344 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336 0 0 27,589,503 0 446,062,859 12,869,534 0
0 0 0 0 0 0 0 24,017,498 24,705,525 0 209,090,562 0 0 0 0 17,753,924 0 0 0 2,273,683	0 0 0 0 0 0 139,683 21,957,784 62,058,724 68,715,435 0 0 0 9,393,827 0 0 0 1,492,500	0 0 0 0 0 6,233,726 0 27,016,981 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 3,855,226 0 0 4,176,690 0 4,176,690 0 0 441,752 0 0 0 1,827,023	0 0 0 2,550,185 91,521,257 0 8,795,344 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336 0 0 27,589,503 0 446,062,859 12,869,534
0 0 0 0 0 0 24,017,498 24,705,525 0 209,090,562 0 0 0 0 17,753,924 0 0 0 2,273,683 0	0 0 0 0 0 0 139,683 21,957,784 62,058,724 68,715,435 0 0 0 9,393,827 0 0 0 1,492,500 0 0	0 0 0 0 0 0 6,233,726 0 27,016,981 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 3,855,226 0 0 4,176,690 0 4,176,690 0 0 441,752 0 0 0 1,827,023 0	0 0 0 2,550,185 91,521,257 0 8,795,344 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$	157,065,484 16,984,080 0 108,115,823 33,515,034 155,607,329 62,058,724 404,313,336 0 0 27,589,503 0 446,062,859 12,869,534 0



### Concentration of Credit Risk for Investments

The concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer (not including investments issued or guaranteed by the U.S. government or investments in mutual funds or external investment pools). The System has a formal investment policy for concentration of credit risk. None of the System's investments in any one issuer (other than those issued or guaranteed by the U.S. government) represented more than 5% of total investments.

#### Interest Rate Risk for Investments

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of investments. Investments can be highly sensitive to changes in interest rates due to their terms or characteristics. Interest rate risk is the greatest risk faced by an investor in the debt securities market since the price of a debt security will often move in the opposite direction of the change in interest rates.

The System's external fixed income investment managers use the measurement of effective duration to mitigate the interest rate risk of the fixed income investments. Each fixed income investment manager monitors and reports the effective duration on a monthly basis. The effective duration of the investment portfolio is required to be +/- 10% of the benchmark's duration. The benchmark for the U.S. fixed income markets is the Barclays Capital U.S. Aggregate Bond Index.

# Financial

#### As of June 30, 2016, the System had the following debt security investments and maturities:

Government Securities         s         157,065,484         s         3,721,228         s         6,0058,767         s         38,372,520         s         54,912           Agency Debentures         16,984,080         0         16,984,080         0         16,984,080         0           Agency CMO         0         0         0         0         0         0         0           Agency Pooled         108,115,823         715,156         878,405         1,679,815         104,842           Corporate Securities         2         715,156         878,405         1,679,815         104,842           Convertible Bonds         155,607,329         7,602,503         98,348,734         14,658,152         34,997           High Yield Income Fund         62,058,724         0         62,058,724         0         62,058,724         0         104,446           International Securities         11,217,795         164,799,842         123,849,191         104,446         104,466           International Securities         0         0         0         0         0         6,00         6,00         6,00         6,01         6,01         6,01         6,01         6,01         6,01         6,01         6,01         6,01	Investment Type		Investment Matu					urity (In Years)		
US. Government Securities       \$ 157,055,484       \$ 3,721,228       \$ 60,058,767       \$ 3,8,372,520       \$ 54,912         Agency Debentures       16,984,080       0       16,984,080       0       0         Agency CMO       0       0       0       0       0       0         Agency Pooled       108,115,823       715,156       878,405       1,679,815       104,842         Corporate Securities        7,602,503       98,348,734       14,658,152       34,997         Collateralized Obligations       33,515,034       4,410,099       0       2,186,762       26,918         Convertible Bonds       155,607,329       7,602,503       98,348,734       14,658,152       34,997         High Yield Income Fund       62,058,724       0       62,058,724       0       104,446         International Securities       0       0       0       0       104,446         Emerging Markets       0       0       0       0       104,446         Global Collateralized Obligations       0       0       0       104,446         Emerging Markets       0       0       0       0       104,446         Global Collateralized Obligations       0       0 <t< th=""><th></th><th></th><th>Fair Value*</th><th></th><th>Less than 1</th><th></th><th>1 - 5</th><th>6 - 10</th><th></th><th>More than 10</th></t<>			Fair Value*		Less than 1		1 - 5	6 - 10		More than 10
Agency Debentures         16,984,080         0         16,984,080         0           Agency CMO         0         0         0         0         0           Agency Pooled         108,115,823         715,156         878,405         1,679,815         104,842           Corporate Securities          5         7,602,503         98,348,734         14,658,152         34,997           High Yield Income Fund         62,058,724         0         62,058,724         0         104,446           Corporate Bonds         404,313,336         11,217,795         164,799,842         123,849,191         104,446           International Securities          0         0         0         0         164,799,842         20,137,101         2,057           Global Collateralized Obligations         0	Government Securities									
Agency CMO         0         0         0           Agency Pooled         108,115,823         715,156         878,405         1,679,815         104,842           Corporate Securities           2,186,762         26,918           Convertible Bonds         155,607,329         7,602,503         98,348,734         14,658,152         34,997           High Yield Income Fund         62,058,724         0         62,058,724         0         104,446           Corporate Bonds         404,313,336         11,217,795         164,799,842         123,849,191         104,446           International Securities                Emerging Markets         0         0         0         0         0         104           Global Collateralized Obligations         0 <t< td=""><td>U.S. Government Securities</td><td>\$</td><td>157,065,484</td><td>\$</td><td>3,721,228</td><td>\$</td><td>60,058,767</td><td>\$ 38,372,520</td><td>Ś</td><td>\$ 54,912,969</td></t<>	U.S. Government Securities	\$	157,065,484	\$	3,721,228	\$	60,058,767	\$ 38,372,520	Ś	\$ 54,912,969
Agency Pooled       108,115,823       715,156       878,405       1,679,815       104,842         Corporate Securities       33,515,034       4,410,099       0       2,186,762       26,918         Convertible Bonds       155,607,329       7,602,503       98,348,734       14,658,152       34,997         High Yield Income Fund       62,058,724       0       62,058,724       0       104,446         Corporate Bonds       404,313,336       11,217,795       164,799,842       123,849,191       104,446         International Securities       0       0       0       0       0       104         Emerging Markets       0       0       0       0       0       104,466         Global Collateralized Obligations       0       0       0       0       0       104,466         Global Collateralized Obligations       0	Agency Debentures		16,984,080		0		16,984,080	0		0
Corporate Securities         Collateralized Obligations         33,515,034         4,410,099         0         2,186,762         26,918           Convertible Bonds         155,607,329         7,602,503         98,348,734         14,658,152         34,997           High Yield Income Fund         62,058,724         0         62,058,724         0         123,849,191         104,446           Corporate Bonds         404,313,336         11,217,795         164,799,842         123,849,191         104,446           International Securities         Emerging Markets         0         0         0         0         0           Global Collateralized Obligations         0 <t< td=""><td>Agency CMO</td><td></td><td>0</td><td></td><td>0</td><td></td><td>0</td><td>0</td><td></td><td>0</td></t<>	Agency CMO		0		0		0	0		0
Collateralized Obligations       33,515,034       4,410,099       0       2,186,762       26,918         Convertible Bonds       155,607,329       7,602,503       98,348,734       14,658,152       34,997         High Yield Income Fund       62,058,724       0       62,058,724       0       104,446         Corporate Bonds       404,313,336       11,217,795       164,799,842       123,849,191       104,446         International Securities         11,217,795       164,799,842       123,849,191       104,446         Emerging Markets       0       0       0       0       0       104,446         Global Collateralized Obligations       0	Agency Pooled		108,115,823		715,156		878,405	1,679,815		104,842,446
Convertible Bonds       155,607,329       7,602,503       98,348,734       14,658,152       34,997         High Yield Income Fund       62,058,724       0       62,058,724       0       112,3849,191       104,446         Corporate Bonds       404,313,336       11,217,795       164,799,842       123,849,191       104,446         International Securities         0       0       0       0       0         Emerging Markets       0       <	Corporate Securities									
High Yield Income Fund       62,058,724       0       62,058,724       0         Corporate Bonds       404,313,336       11,217,795       164,799,842       123,849,191       104,446         International Securities       Emerging Markets       0       0       0       0       0         Emerging Markets       0       0       0       0       0       0       0         Global Collateralized Obligations       0 <td>Collateralized Obligations</td> <td></td> <td>33,515,034</td> <td></td> <td>4,410,099</td> <td></td> <td>0</td> <td>2,186,762</td> <td></td> <td>26,918,173</td>	Collateralized Obligations		33,515,034		4,410,099		0	2,186,762		26,918,173
Corporate Bonds       404,313,336       11,217,795       164,799,842       123,849,191       104,446         International Securities       Emerging Markets       0       0       0       0       0         Emerging Markets       0	Convertible Bonds		155,607,329		7,602,503		98,348,734	14,658,152		34,997,940
International Securities       Image: Securities	High Yield Income Fund		62,058,724		0		62,058,724	0		0
Emerging Markets         0         0         0         0         0           Emerging Mkts Collateralized Obligations         0	Corporate Bonds		404,313,336		11,217,795		164,799,842	123,849,191		104,446,507
Emerging Mkts Collateralized Obligations       0       0       0       0         Global Collateralized Obligations       0       0       0       0       0         Global Corporate Fixed       27,589,503       0       5,394,652       20,137,101       2,057         Global Government Fixed       0       0       0       0       0       0         Global Government Fixed       0       0       0       0       0       0       0         Core Plus Bond Fund       446,062,859       0       0       446,062,859       0 <td< td=""><td>International Securities</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	International Securities									
Global Collateralized Obligations       0       0       0       0       0         Global Corporate Fixed       27,589,503       0       5,394,652       20,137,101       2,057         Global Government Fixed       0       0       0       0       0       0         Global Government Fixed       0       0       0       0       0       0         Core Plus Bond Fund       446,062,859       0       0       446,062,859       0       6,609,893       6,259,641       0         Commercial Loans       12,869,534       0 <t< td=""><td>Emerging Markets</td><td></td><td>0</td><td></td><td>0</td><td></td><td>0</td><td>0</td><td></td><td>0</td></t<>	Emerging Markets		0		0		0	0		0
Global Corporate Fixed       27,589,503       0       5,394,652       20,137,101       2,057         Global Government Fixed       0       0       0       0       0       0       0         Core Plus Bond Fund       446,062,859       0       0       446,062,859       0       446,062,859       0       6,609,893       6,259,641       0 <td>Emerging Mkts Collateralized Obligations</td> <td>5</td> <td>0</td> <td></td> <td>0</td> <td></td> <td>0</td> <td>0</td> <td></td> <td>0</td>	Emerging Mkts Collateralized Obligations	5	0		0		0	0		0
Global Government Fixed       0       0       0       0       0         Core Plus Bond Fund       446,062,859       0       0       446,062,859       0       0       446,062,859         Commercial Loans       12,869,534       0       6,609,893       6,259,641       0       <	Global Collateralized Obligations		0		0		0	0		0
Core Plus Bond Fund       446,062,859       0       446,062,859         Commercial Loans       12,869,534       0       6,609,893       6,259,641         Municipal Bonds       0       0       0       0       0         ½ 1,424,181,706       ½       27,666,781       ¼ 415,133,098       ½ 653,206,041       ⅓ 328,175         Securities Lending Collateral       194,578,329       138,360,860       33,812,963       0       2,404         Corporate Floating Rate Notes       579,592,709       496,628,249       82,964,460       0       0	Global Corporate Fixed		27,589,503		0		5,394,652	20,137,101		2,057,750
Commercial Loans       12,869,534       0       6,609,893       6,259,641         Municipal Bonds       0       0       0       0       0       0         Securities Lending Collateral       194,578,329       138,360,860       33,812,963       0       2,404         Corporate Floating Rate Notes       579,592,709       496,628,249       82,964,460       0       0	Global Government Fixed		0		0		0	0		0
Municipal Bonds         0         \$         328,175         0         \$         328,175         0         0         2,404         0         0         0         2,404         0         0         2,404         0         2,404         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         2,404         0         0         0	Core Plus Bond Fund		446,062,859		0		0	446,062,859		
\$ 1,424,181,706         \$ 27,666,781         \$ 415,133,098         \$ 653,206,041         \$ 328,175           Securities Lending Collateral         \$ 194,578,329         138,360,860         33,812,963         0         2,404           Corporate Floating Rate Notes         579,592,709         496,628,249         82,964,460         0         0	Commercial Loans		12,869,534		0		6,609,893	6,259,641		0
Securities Lending CollateralAsset Backed Floating Rate Notes194,578,329138,360,86033,812,96302,404Corporate Floating Rate Notes579,592,709496,628,24982,964,4600	Municipal Bonds		0		0		0	0		0
Asset Backed Floating Rate Notes         194,578,329         138,360,860         33,812,963         0         2,404           Corporate Floating Rate Notes         579,592,709         496,628,249         82,964,460         0		\$1	,424,181,706	\$	27,666,781	\$	415,133,098	\$653,206,041	\$	\$ 328,175,786
Corporate Floating Rate Notes         579,592,709         496,628,249         82,964,460         0	Securities Lending Collateral									
	Asset Backed Floating Rate Notes		194,578,329		138,360,860		33,812,963	0		2,404,506
Repurchase Agreements 83,407,646 83,407,646 0 0	Corporate Floating Rate Notes		579,592,709		496,628,249		82,964,460	0		0
	Repurchase Agreements		83,407,646		83,407,646		0	0		0
Time Deposits         72,870,000         72,870,000         0 <t< td=""><td>Time Deposits</td><td></td><td>72,870,000</td><td></td><td>72,870,000</td><td></td><td>0</td><td>0</td><td></td><td>0</td></t<>	Time Deposits		72,870,000		72,870,000		0	0		0
\$ 930,448,684 \$ 791,266,755 \$ 116,777,423 \$ 0 \$ 2,404		\$	930,448,684	\$	791,266,755	\$	116,777,423	\$ 0	\$	\$ 2,404,506

### Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. The System's currency risk resides within the international equity investments as well as within the fixed income investments and the fixed income managers. The System's policy is to allow the external investment managers to decide what action to take regarding their respective portfolio's foreign currency exposure using currency forward contracts. The System has a formal investment policy for foreign currency risk which limits foreign currency exposure to 10 % of the investment manager's respective portfolio.

The System's exposure to foreign currency risk on June 30, 2016, was as follows:

Currency	%	Fair Value*	Fi	xed Income	Equities	Cash	Forward Contracts
Australian Dollar	3.89	\$ 37,257,039	\$	0	\$ 37,257,039	\$ 0	\$ 0
Brazilian Real	1.10	10,504,935		0	10,504,935	0	0
British Pound Sterling	24.18	231,768,831		1,600,150	231,780,420	713	(1,612,451)
Canadian Dollar	1.00	9,602,276		0	9,602,117	160	0
Chinese Yuan Renminbi	0.75	7,141,449		0	19,188,785	0	(12,047,335)
Danish Krone	4.77	45,686,856		0	45,686,856	0	0
Euro Currency	20.23	193,931,948		0	193,703,756	228,193	0
Hong Kong Dollar	0.98	9,384,066		0	8,851,089	532,977	0
Indian Ruphia	0.68	6,532,631		0	6,532,631	0	0
Israeli Shekel	0.26	2,477,569		0	2,477,569	0	0
Japanese Yen	16.93	162,246,345		0	170,257,099	145,301	(8,156,055)
Malaysian Ringgit	0.17	1,649,589		0	1,649,589	0	0
Mexican New Peso	0.26	2,486,430		0	2,486,430	0	0
Norwegian Krone	2.33	22,295,534		0	22,239,985	55,549	0
New Zealand Dollar	0.64	6,165,132		0	6,165,132	0	0
Papua New Guinea Kina	0.18	1,685,922		0	1,685,922	0	0
Philippines Peso	0.19	1,817,250		0	1,817,250	0	0
Singapore Dollar	0.51	4,926,785		0	4,926,785	0	0
South African Rand	1.27	12,148,349		1	12,148,348	0	0
South Korean Won	3.58	34,330,055		0	34,330,055	0	0
Swedish Krone	3.91	37,432,031		0	37,432,037	(6)	0
Swiss Franc	11.17	107,056,222		0	107,033,571	22,651	0
Taiwan Dollar	0.79	7,569,342		0	7,569,342	0	0
Thailand Baht	0.24	2,309,652		0	2,309,652	0	0
	100.00%	\$ 958,406,240	\$	1,600,151	\$ 977,636,394	\$ 985,537	\$ (21,815,841)

\*Principal only. Figures are APERS and ASPRS combined. Totals may not add due to rounding.

# Financial

### Mortgage-Backed Securities

The System invests in mortgage-backed securities (MBSs), which are reported at fair value in the Statement of Fiduciary Net Position. MBSs entitle holders to receive both principal and interest payments from the payments made by the borrowers of the underlying mortgages over the lives of those loans. MBSs depend on the underlying pool of mortgage loans to provide cash flow to make principal and interest payments on the security. The life of a mortgage that underlies an MBS can be shortened by several economic events, including borrower refinancing. When interest rates decline and remain low, borrowers could refinance their existing loans, which causes MBS holders to be repaid more quickly than originally anticipated and is known as prepayments. Prepayments reduce the weighted average life of the security and are a form of market risk assumed by the holders of MBSs. Alternatively, when interest rates rise, the refinancing of existing mortgages slows. If interest rates remain high for long periods of time, fewer borrowers refinance their mortgages. As a result, MBS holders are repaid over longer periods of time, which is known as extension risk. Extension risk increases the weighted average life of the security and sextension risk. Extension risk increases the weighted average life of the security and is another form of market risk assumed by holders of MBSs.

A collateralized mortgage obligation (CMO) is an MBS that comprises classes of bonds created by prioritizing the cash flows of the underlying mortgage pool. This redistributes prepayment risk and credit risk among the various bond classes in the CMO structure. Income is derived from payments and prepayments of principal and interest generated from collateral mortgages. CMOs may be collateralized by whole-loan mortgages, mortgage pass-through securities, or stripped mortgage-backed securities.

The System invests in MBSs and CMOs for diversification and to enhance fixed income returns. MBSs are subject to credit risk, the risk that the borrower will be unable to meet its obligations. They are also subject to prepayment risk, which is the risk that a payment will be made in excess of the regularly scheduled principal payment. Prepayment risk is composed of two risks: call risk, the risk that prepayments will increase when interest rates have declined, and extension risk, the risk that prepayments will decrease when interest rates have increased.

### **Asset-Backed Securities**

Asset-backed securities (ABSs) are bonds or notes backed by loan paper or accounts receivable originated by banks, credit card companies, or other credit providers. The originator of the loan or accounts receivable paper sells it to a specially created trust, which repackages it as securities. Similar to CMOs, ABSs have been structured as pass-through securities and as structures with multiple bond classes. The System's ability to recover the amount of principal invested in these securities depends on the performance and quality of the trust assets.

# Financial

### **Corporate Bonds**

Corporate bonds are a debt security issued by a corporation. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds. They usually have a fixed term maturity and can have either a fixed or variable interest rate. Variable interest rate bonds have adjustments that are made periodically and vary directly with movements in interest rates.

### **Convertible Corporate Bonds**

Convertible bonds convey an option to the bondholders to be exchanged for another asset, generally a fixed number of shares of common stock at a pre-stated price.

### **Pooled Funds**

Pooled funds are funds from many individual investors that are aggregated for the purposes of investment and benefit from economies of scale. The System could be indirectly exposed to credit and market risks associated with forward currency contracts to the extent that these pooled funds hold forward currency contracts for purposes of managing exposure to fluctuations in foreign exchange rates. APERS and ASPRS have approximately \$587 million invested in international pooled funds.

### **Securities Lending**

Arkansas Code Annotated § 24-2-602 and the Board's investment policy permit the System to participate in a securities lending program to augment investment income. The System lends its securities to brokersdealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. The System has entered into an agreement with BNY Mellon to act as agent for the System in securities lending transactions. BNY Mellon serves as the custodian for the System and is therefore the counterparty to securities lending transactions. The legal and contractual authorization for the securities lending program is contained in the Securities Lending Discretionary Agency Agreement executed between APERS and the custodian.

Whoever borrows the securities provides collateral in the form of cash and cash equivalents, U.S. Treasury or government agency securities, or letters of credit (for the marginal percentage collateralization only). U.S. securities are loaned versus collateral valued at 102.859% of the market value of the securities plus any accrued interest for domestic loans. Non-U.S. securities are loaned versus collateral valued at 105.558% of the market value of the securities plus any accrued interest value of the securities plus any accrued interest. Collateral is marked-to-market daily if price movements exceed certain minimal thresholds.

The custodian provides for full indemnification to the System funds for any losses that might occur in the program due to the failure of a broker to return a security that was borrowed (and if the collateral is inadequate to replace the securities lent) or failure to pay the trust funds for income of the securities while on loan. The System cannot pledge or sell collateral securities received unless the borrower defaults. Cash collateral received is invested in APERS' name; accordingly, investments made with cash collateral appear as an asset on the Statement of Fiduciary Net Position. A corresponding liability is recorded because APERS must return the cash collateral to the borrower upon expiration of the loan. The loan maturity dates generally do not match the maturity dates of the investments made with cash collateral received.

As of June 30, 2016, the cash collateral investments had an average weighted maturity of 27 days, whereas the weighted average loan maturity was three days. Investments with cash collateral were approximately \$1.005 billion.

### **Derivative Instruments**

The System adheres to GASB Statement No. 53, Accounting and Financial Reporting for Derivative Instruments, which addresses the recognition, measurement, and disclosure of information regarding derivative instruments entered into by state and local governments.

Derivative instruments are financial contracts or agreements whose values depend on the values of one or more underlying assets, reference rates, or financial indexes. Derivative instruments include futures contracts, forward contracts, swap contracts, options contracts, and forward foreign currency exchange. APERS, through its external investment managers, could hold such instruments. The external investment managers may enter these certain investments on behalf of APERS primarily to enhance the performance and reduce the volatility of its portfolio. The external investment managers could enter into swaps and futures contracts to gain or hedge exposure to certain markets and to manage interest rate risk. They primarily use forward foreign exchange contracts to hedge foreign currency exposure. APERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. APERS' external investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and procedures for monitoring exposure. APERS' external investment managers anticipate that the counterparties will be able to satisfy their obligations under the contracts. Investments in limited partnerships and commingled funds may include derivatives that are not shown in any derivative totals.

The external investment managers do invest in MBSs which are reported at fair value in the Statement of Fiduciary Net Position, and are based on the cash flows from interest and principal payments by the underlying mortgages. Therefore, they are sensitive to prepayments by mortgages which are likely in a declining interest rate environment, thereby reducing the value of the securities. The external investment managers invest in mortgage-backed securities to diversify APERS' portfolio and increase return while minimizing the extent of risk.



### Swaps

APERS' investment managers have entered into various swaps, including interest rate swaps, credit default swaps, and foreign currency swaps.

### **Interest Rate Swaps**

An interest rate swap is the exchange of one set of cash flows based on interest rate specifications for another based on a specified principal amount over a period in the future. Interest rate swaps typically exchange a fixed payment for a floating payment. The floating payment is usually the London Interbank Offering Rate (LIBOR). In the most common interest rate swap arrangement, one party agrees to pay fixed interest rate payments on designated dates to a counterparty who, in turn, agrees to make return interest rate payments that float with a specified reference rate. Long swap positions (receive fixed) increase exposure to long-term interest rates, and short positions (pay fixed) decrease exposure to interest rate risk.

The System had no interest rate swaps at June 30, 2016.

### Credit Default Swap

A credit default swap is a contract whereby the credit risk associated with an investment is transferred by entering into an agreement with another party, who in exchange for periodic fees, agrees to make payments in the event of a default or predetermined credit event.

The System had no credit default swaps at June 30, 2016.

### Foreign Currency Swap

A foreign currency swap is an agreement to swap principal and interest payments on a loan made in one currency for principal and interest payments of a loan of equal value in another currency.

The System had no foreign currency swaps at June 30, 2016.

### Foreign Currency Forward Contracts

A foreign currency forward is a contractual agreement between two parties to pay or receive specific amounts of foreign currency at a future date in exchange for another currency at an agreed upon exchange rate. Forward commitments are not standardized and carry credit risk due to the possible nonperformance by one of the counterparties. The maximum potential loss is the aggregate face value in U.S. dollars at the time the contract was opened. These transactions are entered in order to hedge risks from foreign currency rate fluctuation and to facilitate trade settlement of foreign security transactions. Forwards carry foreign currency risk resulting from adverse fluctuations in foreign exchange rates.

The System had the following foreign currency forwards at June 30, 2016:

	Pay	Receive	Notional Value	Market Value	Unrealized Gain/Loss
Japanese Yen	JPY	USD	\$ (7,284,062)	\$ (8,156,055)	\$ (871,992)
Chinese Yuan Renminbi	CNY	USD	(14,426,147)	(14,241,035)	185,112
British Pound Sterling	GBP	USD	(1,866,724)	(1,714,065)	152,659
			\$ (23,576,934)	\$ (24,111,155)	\$ (534,221)
	Pay	Receive	Notional Value	Market Value	Unrealized Gain/Loss
 Chinese Yuan Renminbi	Pay USD	Receive CNY	Notional Value \$ 2,197,486	Market Value \$ 2,193,700	
Chinese Yuan Renminbi British Pound Sterling					Gain/Loss
	USD	CNY	\$ 2,197,486	\$ 2,193,700	Gain/Loss\$ (3,786)

Figures are APERS and ASPRS combined. Totals may not add due to rounding.

### **Financial Futures**

A financial future is an agreement to purchase or sell a specific amount of an asset at a specified delivery or maturity date for an agreed upon price. These derivative securities are used to improve yield, adjust duration of the portfolio, circumvent changes in interest rates, or to replicate an index. Futures contracts are standardized and traded on organized exchanges, thereby reducing credit risk.

The System had the following financial futures at June 30, 2016:

Futures Contracts	Expiration	Notional Value	Fair Value	Unrealized Gain/(Loss)
	LXPIIation			Gain/(LUSS)
U.S. 2-year Treasury Note	Sept 2016	\$ (85,172,860)	\$ (85,757,297)	\$ (584,437)
U.S. 2-year Treasury Note	Sept 2016	(79,300,812)	(79,835,437)	(534,625)
U.S. 5-year Treasury Note	Sept 2016	19,585,398	19,668,414	83,016
U.S. 5-year Treasury Note	Sept 2016	14,040,000	14,293,195	253,195
U.S. 10-year Treasury Note	Sept 2016	(18,310,507)	(18,617,812)	(307,305)
U.S. 10-year Treasury Note	Sept 2016	(17,231,820)	(17,686,921)	(455,101)
U.S. 30-year Treasury Bond	Sept 2016	13,861,640	14,649,218	787,578
U.S. 30-year Treasury Bond	Sept 2016	(12,690,135)	(13,442,812)	(752,677)
		\$ (165,219,096)	\$ (166,729,452)	\$ (1,510,356)

### Mortgage-Backed To Be Announced (TBA)

The phrase "to be announced" (TBA) is used to describe forward MBS trades. The term is derived from the fact that the actual mortgage-backed security that will be delivered to fulfill a TBA trade is not designated at the time the trade is made. The securities are announced 48 hours prior to the established trade settlement date.

The System had the following mortgage-backed TBA at June 30, 2016:

Mortgage-Backed TBA	CUSIP	Notional	Fai	r Market Value	Duration	Credit Rating
FGLMC 3.00% 07/01/2046	02R030673	\$ 2,069,474	\$	2,094,033	3.20	AA+/Aaa
FNMA 3.50% 07/01/2046	01F032674	13,064,248		13,157,845	2.00	AA+/Aaa
FNMA 4.00% 07/01/2046	01F040677	8,311,228		8,341,404	1.70	AA+/Aaa
FNMA 4.50% 07/01/2046	01F042673	6,094,195	\$	6,101,820	2.30	AA+/Aaa
		\$ 29,539,145		29,695,102		

### Fair Value Measurements

The Arkansas Public Employees Retirement System categorizes their fair value measurements within the fair value hierarchy by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets of liabilities (Level 1 measurements) and the lower priority to unobservable inputs (Level 3 measurements).

- Level 1 Unadjusted quoted prices for identical instruments in active markets.
- Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.
- Level 3 Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The System assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The table(s) on the following pages shows the fair value leveling of the investments for the System.

Assets classified in Level 1 of the fair value hierarchy are valued directly from a predetermined primary external pricing vendor. Assets classified in Level 2 are subject to pricing by an alternative pricing source due to lack of information available by the primary vendor. Real estate, timberland, and Partnership assets classified in Level 3, due to lack of an independent pricing source, are valued using an internal fair value as provided by the investment manager.

The categorization of investments within the hierarchy is based upon the pricing transparency of the instrument(s) and should not be perceived as the particular investment's risk.

Financial

nvestments and Derivative Ins	struments Measu	ired at Fair value	as of June 30,	, 2016)
	Fair Value	Level 1	Level 2	Level 3
Investments at Fair Value				
U.S. Domestic Equities	\$ 2,115,226,728	\$ 2,115,226,728	\$ 0	\$0
Convertible Securities	220,363,703	41,523,441	178,840,261	0
International Equities	1,340,269,773	1,336,294,491	0	3,975,282
Preferred Securities	1,463,538	1,463,538	0	0
Fixed Income	0	0	0	0
U.S. Government Securities	282,165,387	157,065,484	125,099,903	0
Futures	(1,510,356)	(1,510,356)	0	0
Equity Securities	327,918	327,918	0	0
Corporate Bonds	460,897,486	0	460,897,486	0
Loans/JV interest	12,869,534	0	0	12,869,534
Total Investments	4,432,073,711	3,650,391,245	764,837,650	16,844,816
Securities Lending Collateral Investn	nents At Fair Value			
Receivables	65,548	0	65,548	0
Repurchase Agreements	83,407,646	0	83,407,646	0
Time Deposits	72,870,000	0	72,870,000	0
Corporate Floating Rate Notes	579,527,161	0	579,527,161	0
Asset Backed Floating Rate Notes	194,578,329	0	194,578,329	0
Total Securities Lending Collateral	930,448,683	0	930,448,684	0
Total Investments at Fair Value	5,362,522,394	3,650,391,245	1,695,286,334	16,844,816
nvestments at the Net Asset Value (I	NAV)			
High Yield Income Fund	62,058,724			
Domestic Equity Index Funds	704,852,537			
Core Plus Bond Fund	446,062,859			
Timberland	137,024,677			
Global Equity Pooled Funds				
Lazard	89,647,945			
Invesco Global REITS	154,535,920			
Pyramis	342,998,720			
Real Estate				
Invesco Core	372,923,057			
Heitman	296,969,714			
TA Fund X	31,649,054			
TA Fund VI	12 500 000			

#### Investments and Derivative Instruments Measured at Fair Value (as of June 30, 2016)

 Invesco Global REITS
 154,535,920

 Pyramis
 342,998,720

 Real Estate
 372,923,057

 Heitman
 296,969,714

 TA Fund X
 31,649,054

 TA Fund XI
 12,500,000

 LaSalle Fund Fund VI
 31,178,223

 Diversified Strategies
 AQR Global Risk Premium
 110,280,724

 Newton Global Real Return
 110,706,781
 Blackstone

 Total Investments at the NAV
 \$\_3,055,878,395

Investments classified as level 1 in the preceding table are exchange-traded securities whose values are based on published market prices and quotations from either national security exchanges or active markets for those securities.

Investments classified as level 2 in the preceding table include publicly traded debt securities and exchange traded stocks in inactive markets. Investments in this category are sourced from reputable pricing vendors using pricing matrix models and techniques. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by APERS custodian bank which maintains the book of record for all investments.

Investments classified as level 3 in the preceding table are unobservable, meaning that the assets lack an independent pricing source. Values are provided by the investment manager or an external pricing source such as an independent appraiser.

### Investments Measured at the Net Asset Value (NAV)

The fair value of investments that are organized as commingled funds or limited partnerships have no readily ascertainable fair value. The value is determined by using the net asset value per share or its equivalent. Commingled fund values are based on each investor's proportionate share of the total underlying assets in the fund less any liabilities for client withdrawals, investment purchases or other accrued expenses. Limited partnership values are based on the capital account balance the general partner reports at the end of each reporting period, adjusted by subsequent contributions, distributions, management fees, and changes in values of foreign currency and published market prices for certain securities. Even though the limited partnerships and commingled funds issue annual financial statements audited by independent auditors, the year-end for the state and these entities do not always agree. There are inherent uncertainties in estimating fair values for these types of investments, and it is possible that the estimates will change in the near-term or the subsequent sale of assets will be different from the reported net asset value. With certain exceptions, mainly the equity and the fixed income funds, these investments cannot be redeemed, or, have certain restrictions regarding redemption. The real estate investment distributions are through the liquidation of the underlying assets or net operating cash flows. Each investment has a different redemption frequency and notice period as noted in the following table:

## Investments Measured at the Net Asset Value (NAV)

		Fair Value	Strategy Type	Fund Life of Non- redeemable Mandates	Unfunded Commitments	Redemption Frequency (if currently eligible)	Redemption Notice Period	Other Redemption Restrictions	Restriction Time Remaining
High Yield Income Fund	\$	62,058,724	Active High Yield Fixed Income	N/A	none	monthly	T + 3	N/A	N/A
Equity Index Funds		704,852,537	S & P 500 Index	N/A	none	daily	T + 3	N/A	N/A
Core Plus Bond Fund		446,062,859	Active Global Fixed Income	N/A	none	daily	T + 3	N/A	N/A
Timberland		137,024,677	Timber	N/A	none	none	N/A	N/A	Partnership terminates in December 2027
International Equity Pooled Funds									
Invesco Global REITS		154,535,920	Global Real Estate Securities	N/A	none	daily	T + 1	N/A	N/A
Fidelity		342,998,720	International Equities	N/A	none	daily	T + 1	N/A	N/A
Lazard		89,647,945	Emerging Market Equities	N/A	none	daily	T + 1	N/A	N/A
Real Estate									
Invesco		372,923,057	Core Real Estate	N/A	none	quarterly	T + 45	N/A	N/A
Heitman		296,969,714	Core Real Estate	N/A	none	quarterly	T + 90	N/A	N/A
TA Fund X		31,649,054	Value Add Real Estate	N/A	none	7-year lock up	N/A	N/A	Currently in capital redistribution phase
TA Fund XI		12,500,000	Value Add Real Estate	N/A	\$37,500,000	7-year lock up	N/A	N/A	The lock up period starts on the day of the last capital call
LaSalle Fund Fund VI		31,178,223	Value Add Real Estate	N/A	none	7-year lock up	N/A	N/A	Currently in capital redistribution phase
LaSalle Fund Fund VII		TBD	Value Add Real Estate	N/A	\$ 50,000,000	7-year lock up	N/A	N/A	The lock up period starts on the day of the last capital call
Diversified Strategies	5								
AQR Global Risk Premium		110,280,724	Risk Premia	N/A	none	weekly and monthly	T + 2	N/A	N/A
Newton Global Real Return		110,706,781	Global Real Return	N/A	none	daily	T + 3	N/A	N/A
Blackstone		152,489,460	Fund of Funds	N/A	none	last day of each quarter	1yr; 2yrs; 3yrs; >3yrs	55% liquidity; then 20%; then 15%; then 10%	N/A
Total	ć	3 055 878 395			\$ 87 500 000	-			

Total

### High Yield Income Fund

The High Yield Active Core philosophy is centered on the belief that the best risk-adjusted returns and, ultimately, the best absolute returns are generated by a strategy of yield capture and error avoidance.

### **Equity Index Funds**

This is an S&P 500 Index fund.

### **Core Plus Bond Fund**

The Core Plus Fixed Income Strategy seeks excess return from multiple sources, including sector allocation and subsector and security selection. Duration, yield curve, and currency positioning is moderate. The largest component of the Core Plus Fixed Income risk budget is allocated to portfolio strategies that have consistently generated the highest return for the lowest unit of risk over time, such as sector allocation and subsector/security selection. The Core Plus Fixed Income portfolios may emphasize spread product in the sector allocation process and therefore may hold larger-than-benchmark allocations to corporate bonds, structured product, high yield bonds, and emerging markets debt. As a result, the Strategy would likely outperform in a 'risk on' environment where corporate bonds, for example, are outperforming. The reverse would also likely be true. The Core Plus Fixed Income portfolios take an actively-managed, relative-value driven approach. The Strategy is expected to perform best in markets with excess spread dislocations that it can capitalize on through relative value trading.

#### Timberland

An objective of a timber investment is to provide the fund with diversification from traditional asset classes. The goal of the timber investment is to get a stable core-type return with very low or little volatility.

#### International Equity Pooled Funds

- Invesco Global REITs The objective of this collective trust fund is to achieve higher than market return with average market risk over the long-term by investing in the universe of global real estate securities.
- Fidelity Select International Strategy The Select International strategy utilizes a disciplined investment approach that capitalizes on fundamental research by combining qualitative stock selection with quantitative risk control. The available investment universe is comprised of stocks in Japan, the United Kingdom, Europe ex UK, and Asia Pacific ex Japan rated attractive by Fidelity's analysts. The strategy uses a quantitative model to match the regional weights of the portfolio to the index. This approach is designed to diversify specific risk, reduces tracking error and factor risk, and controls transaction costs.
- Lazard Emerging Markets Equity The Lazard Emerging Markets Equity Portfolio seeks long-term

capital appreciation by investing in companies with strong, sustainable financial productivity at attractive valuations. The Portfolio invests primarily in equity securities, principally common stocks, of non-U.S. companies whose principal activities are located in emerging market countries and that we believe are undervalued based on their earnings, cash flow or asset values. The Portfolio's returns are compared to the MSCI Emerging Markets Index.

### **Real Estate**

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This asset class provides diversification to the total portfolio and strives to reduce total fund volatility while also enhancing the total return of the portfolio. Real estate has a low, and in some cases, negative, correlation with other major investment asset classes. The following are the strategies that comprise the Real Estate asset class and are explained in greater detail:

- Invesco Core Real Estate (ICRE) The ICRE strategy is a portfolio of U.S. properties diversified by
  property type and geographic location, with an emphasis on attractive current income returns
  and the opportunity for both income and capital growth. It is based on top-down economic
  fundamentals combined with bottom-up local market intelligence.
- Heitman America Real Estate Trust (HART) The HART strategy creates a high-quality, low-risk
  portfolio of stabilized, income-producing assets diversified by property type and economic
  exposure through acquiring assets in infill locations within major metropolitan areas, focusing on
  strong site attributes such as proximity to amenities and transportation networks, and ensuring
  that assets are well constructed with features that will appeal to tenants over long periods of time.
- TA Realty Funds X and XI TA Realty has managed value-add, commingled real estate funds for approximately 30 years. They have investments in 35 markets, and 4 property types (office, industrial, multifamily, and retail). The firm has developed and refined a consistent approach focused on creating diversified real estate portfolios that can generate strong cash flow, benefit from an intensive asset management approach and result in the long-term creating of value of the life of the fund(s).
- LaSalle Funds V and VI The Funds pursue non-core properties that exhibit strong fundamentals and are expected to generate both income and appreciation. The sectors that are focused on are office, multifamily, retail, industrial, and specialty.

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### **Diversified Strategies**

This asset class provides diversification to the total portfolio and strives to reduce total fund volatility while also enhancing the total return of the portfolio. The following are the strategies that comprise the Diversified Strategies asset class and are explained in greater detail:

- Global Risk Premium Tactical Fund (GRPT) The AQR Global Risk Premium Tactical Fund seeks to efficiently deliver exposure to a broadly diversified set of global risk premia. In many institutional portfolios, equity risk is the predominant risk, a concentration driven by the need for high expected return that cannot be satisfied in a traditionally constrained, well-diversified portfolio. Rather than diversifying by capital, this strategy seeks to diversify based on risk across global equities, global nominal bonds, inflation sensitive assets, and credit/default related assets. Starting from this strategic risk-parity base, GRPT then employs modest tactical tilts across sub-sectors and across individual exposures, attempting to exploit temporary opportunities which may arise within markets. Following basic financial theory, AQR designed its Risk Parity strategies based on what they believe to be the most optimal liquid portfolio of global market betas, and AQR offers that same portfolio at various levels of leverage to target a desired amount of risk as approximated by ex-ante volatility. AQR's approach employs modest leverage to scale up a lower-risk, broadly-diversified portfolio.
- Newton Global Real Return (US\$) Newton's global real return US\$ strategy is an actively managed, unconstrained, multi-asset strategy, which aims to achieve a return of one-month USD LIBOR +4 % p.a. over rolling five-year periods. The strategy seeks to add value through security selection and asset type flexibility and it also has an emphasis on capital preservation. The strategy is long only, does not use leverage or short securities and is daily valued.
- Blackstone (Fund of Funds) The System hired Blackstone to manage a fund-of-funds strategy. As the name suggests Blackstone invests APERS funds in other hedge funds. The number of funds that APERS invests in varies on market conditions. The types of strategies that are contained within the APERS portfolio also vary. For full disclosure purposes on June 30 there were fundamental equity strategies, event driven strategies, fundamental credit strategies, credit trading strategies, distressed credit strategies, RMBS strategies, structured ABS strategies, multi-strat strategies, commodity strategies, macro rates strategies, thematic macro strategies, quantitative strategies, CTA strategies, and special situation strategies in the portfolio.



## Note 4: Other Post Employment Benefits (OPEB)

GASB Statement No. 45, Accounting and Financial Reporting by Employers for Post Employment Benefits Other Than Pensions, requires that OPEB expense of proprietary and fiduciary funds be recognized on the accrual basis in the fund financial statements. APERS is considered a fiduciary fund in the state-wide comprehensive annual financial report.

The 2016 charge of \$433,830 is a prorated amount from the Arkansas Department of Finance and Administration based on a state-wide actuarial study. The amount charged to APERS is based on budgeted employees of the agency and is composed of (1) the annual required contribution (ARC) which is the normal cost and 1/30 of the unfunded actuarial accrued liability (UAAL), (2) one year's interest on the net OPEB, (3) adjustments to the ARC to offset the effect of actuarial amortization of past under or over contributions, and (4) minus actual contributions. The State of Arkansas 2016 Comprehensive Annual Financial Report will contain the complete OPEB footnote required by GASB Statement No. 45.

### Note 5: Legally Required Reserves

By law, APERS must maintain reserve accounts showing each division's equity in the System's net position restricted for benefits. Act 308 of 1999 consolidated county, municipal, school and other non-state employers into the Local Government Division. Significant reserve accounts and a brief description of those accounts are as follows:

The Members' Deposit Account (MDA) represents members' contributions held in trust until member retirement, at which time contributions are transferred to the Retirement Reserve Account, described below.

The MDA Interest Reserve Account represents the accumulated interest paid on the MDA held in trust until member retirement, at which time interest on member contributions is transferred to the Retirement Reserve Account, described below.

The Employers' Accumulation Account accumulates employers' contributions to be used in providing the reserves required for transfer to the Retirement Reserve Account as members retire or become eligible for disability benefits.

The Retirement Reserve Account is the account to which member contributions, interest on those contributions, and employer contributions are transferred upon member retirement.

The Deferred Annuity Account is the amount set up to cover estimated retirement benefits to inactive vested members who are not currently receiving benefit payments.

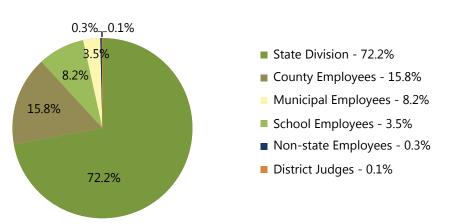
As a by-product of achieving level contribution financing, actuarial accrued liabilities usually become increasingly well funded over a period of years. Funded ratios in the 75% to 95% range are common in public sector retirement plans.

The reserve strength of APERS remains strong both by absolute and relative measures. Sufficient assets were available to pay estimated retirement benefits applicable to retired individuals or beneficiaries currently receiving benefits and inactive vested individuals who are not currently receiving benefits.

### Reserve Balances\* by Division (on June 30, 2016)

	State Division	County Employers	Municipal Employers	School Employers	Non-State Employers	District Judges	System Total
Members' Deposit Account	\$ 198,097,210	\$ 64,649,214	\$ 31,744,335	\$ 442,990	\$ 2,061,768	\$ 1,834,914	\$ 298,830,430
MDA Interest Reserve	27,858,413	8,815,255	4,807,029	(320,437)	469,638	440,229	42,070,127
Employer Accumulation Account	1,552,796,322	306,012,309	184,935,210	(113,359,955)	9,070,108	(6,943,458)	1,932,510,536
Retirement Reserve	3,162,640,154	705,978,012	347,059,869	317,839,671	7,278,183	(7,651,681)	4,533,144,208
Deferred Annuity	290,677,792	91,700,409	43,267,522	15,776,251	1,637,562	0	443,059,536
DROP Reserve	80,845,759	8,335,037	6,417,929	4,737,570	0	0	100,336,295
Delinquent Receivable Reserve	65	9	0	0	0	0	73
Refund Overpayment Receivable Reserve	351	0	0	0	0	0	351
Outlawed Warrants	76,009	6,148	3,318	9,324	0	0	94,799
Partial Purchase of Service Reserve	14,450	0	0	3,017	0	0	17,467
Dec 31, 2004 Accrued Liability Reserve	(	0	0	0	0	20,260,296	20,260,296
Petty Cash Reserve	200	0	0	0	0	0	200
Total	\$ 5,313,006,725	\$ 1,185,496,392	\$618,235,213	\$ 225,128,430	\$ 20,517,259	\$ \$7,940,301	\$ 7,370,324,320

\*Before recommended actuarial transfers. Totals may not add due to rounding.



### Percentage of Reserves by Division

## Note 6: Net Pension Liability

The components of the net pension liability of the System on June 30, 2016 were as follows:

	FY 2016	FY 2015
Total Pension Liability	\$ 9,762,106,222	\$ 9,391,975,712
Fiduciary Net Position	\$ 7,370,758,150	\$ 7,550,242,341
Net Pension Liability	\$ 2,391,348,072	\$ 1,841,733,371
Fiduciary Net Position as a Percentage of Total Pension Liability	75.50%	80.39%



### **Actuarial Assumptions**

The total pension liability was determined by an actuarial valuation as of June 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Notes to Schedule of Contributions

Valuation Date	June 30, 2016
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage-of-Payroll, Closed (Level Dollar, Closed for District Judges New Plan and Paid-Off Old Plan and District Judges Still-Paying Old Plan)
Remaining Amortization Period	21 years (12 years for District Judges New Plan/Paid-Off Old Plan and 19 years for District Judges Still-Paying Old Plan)
Asset Valuation Method	4-Year smoothed market; 25% corridor (Market Value for Still- Paying Old Plan)
Inflation	3.25% wage inflation and 2.5% price inflation
Salary Increases	3.25% to 9.85%, including inflation (3.25% to 6.96% including inflation for District Judges)
Investment Rate of Return	7.50%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	Based on RP-2000 Combined Healthy mortality table, projected to 2020 using Projection Scale BB, set forward 2 years for males and 1 year for females

# Financial

### Long-Term Expected Return on Plan Assets

The System's policy in regard to the allocation of its invested assets was established by the Board and is reviewed at least annually to determine if the asset allocation is consistent with an acceptable level of risk and volatility.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the current asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for the 10-year period from 2015 to 2024 were based upon capital market assumptions provided by the System's investment consultants. For each major asset class that is included in the pension plan's current asset allocation as of June 30, 2016, these best estimates are summarized in the following table:

\_

Asset Class	Current Allocation	Long-Term Expected Real Rate of Return		
Broad Domestic Equity	38%	6.82%		
International Equity	24	6.88		
Real Assets	16	3.07		
Absolute Return	5	3.35		
Domestic Fixed	17	0.83		
Total	100.00%			
Total Real Rate of Return		5.04%		
Plus: Price Inflation - Actuary's Assumption		2.50		
Net Expected Return		7.54%		

For the year ended June 30, 2016, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was a negative 0.06%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

# Financial

### **Discount Rate**

A single discount rate of 7.5% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.5%. The projection of cash flows used to determine this single discount rate 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 actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

### Sensitivity of the Net Pension Liability

The following presents the net pension liability of the System, calculated using the discount rate of 7.5%, as well as what the System's net pension liability would be if it were calculated using a discount rate of one percentage point lower (6.5%) or one percentage point higher (8.5%) than the current rate:

	1% Decrease		Current Discount Rate	1% Increase
	6.5%		7.5%	8.5%
APERS	\$ 3,619,902,338	Ś	2,391,348,072	\$ 1,368,895,725

### Note 7: Deferred Retirement Option Plan

A Deferred Retirement Option Plan (DROP) is available to members of the System as authorized by A.C.A. §§ 24-4-801 - 24-4-806. In lieu of terminating employment and accepting a retirement benefit under the System, any member who has at least 28 years of actual service in the System can elect to participate in the DROP. The DROP allows a member to defer the receipt of retirement benefits for a maximum of seven years. During that time, a percentage of a member's chosen benefit is deposited into an account that accrues interest at a rate of 2.5% annually. The System had a balance of \$100,336,295 in the DROP reserve as of June 30, 2016.



## Note 8: Capital Assets

Capital asset activity for the fiscal year ended June 30, 2016, was as follows:

	Beginning Balance		Additions		Retirements		Ending Balance	
Fixed Assets	\$	221,192	\$	11,872	\$	(21,622)	\$	211,442
Assets Under Construction*		10,326,302		5,285,556		0		15,611,858
Less Accumulated Depreciation		(174,825)		(7,140)		21,547		(160,418)
Total	\$	10,372,669	\$	5,290,288	\$	(75)	\$	15,662,882

\*These costs represent design, construction, and testing for a new pension administration system called COMPASS. The completion of this new system is expected during the latter half of fiscal year 2017.

# Financial

## **REQUIRED SUPPLEMENTARY INFORMATION**

The following data on historical trends indicate the System's progress in accumulating sufficient assets to pay benefits when due. It is required supplemental information.

### Schedule of Employer Contributions

(in millions)

Year Ended June 30	D	Actuarially etermined ontribution	Actual htribution*	De	ntribution eficiency Excess)	Covered Payroll	 ontribution as overed Payroll
2007	\$	165.0	\$ 165.0	\$	0	\$ 1,306	12.63%
2008		175.0	175.0		0	1,384	12.65
2009		160.8	160.8		0	1,437	11.19
2010		171.5	171.5		0	1,527	11.24
2011		197.6	197.6		0	1,626	12.15
2012		231.4	231.4		0	1,689	13.70
2013		251.4	251.4		0	1,696	14.82
2014		264.1	264.1		0	1,748	15.11
2015		263.3	263.3		0	1,757	14.98
2016	\$	264.2	\$ 264.2	\$	0	\$ 1,795	14.72%

\*Actual contributions are based on covered payroll at the time of the contribution. This payroll is not reported to the actuary. The covered payroll shown in the schedule above is the valuation payroll. Based on the limitations of this schedule, the final column cannot be compared to the contribution rates actually charged to APERS participating employers.



# Schedule of Changes in Net Pension Liability and Related Ratios

Year Ended June 30	2016	2015
Total Pension Liability		
Service Cost	\$ 169,112,934	\$ 168,811,990
Interest	692,210,941	682,217,546
Benefit Changes	0	0
Differences Between Expected And Actual Experience	2,912,566	(137,672,890)
Assumption Changes	0	192,273,597
Benefit Payments, including refunds of employee contributions	(494,105,931)	(464,111,187)
Net Change In Total Pension Liability	\$ 370,130,510	\$ 441,519,056
Total Pension Liability, Beginning Of Year	9,391,975,712	8,950,456,656
Total Pension Liability, End Of Year (A)	\$ 9,762,106,222	\$ 9,391,975,712
Fiduciary Net Position		
Contributions - Employer	\$ 264,216,252	\$ 263,332,831
Contributions - Member	55,000,117	50,750,458
Net Investment Income	(4,260,175)	168,929,698
Benefit Payments, including refunds of employee contributions	(494,105,931)	(464,111,187)
Administrative Expense	(6,929,103)	(6,949,282)
Other Additions	6,594,649	6,745,403
Net Change In Fiduciary Net Position	 (179,484,191)	 18,697,921
Fiduciary Net Position, Beginning Of Year	\$ 7,550,242,341	\$ 7,531,544,420
Fiduciary Net Position, End Of Year (B)	\$ 7,370,758,150	\$ 7,550,242,341
Net Pension Liability, End Of Year (A) - (B)	\$ 2,391,348,072	\$ 1,841,733,371
Fiduciary Net Position As A Percentage Of The Total Pension Liability	75.50%	80.39%
Covered-Employee Payroll	\$ 1,795,174,463	\$ 1,757,056,813
Net Pension Liability As A Percentage Of Covered-Employee Payroll	133.21%	104.82%

# Schedule of Net Pension Liability

FY Ending June 30	Total Pension Liability	Fiduciary Net Position	Net Pension Liability	Fiduciary Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 8,950,456,656	\$ 7,531,544,420	\$ 1,418,912,236	84.15%	\$ 1,748,350,136	81.16%
2015	\$ 9,391,975,712	\$ 7,550,242,341	\$ 1,841,733,371	80.39%	\$ 1,757,056,813	104.82%
2016	\$ 9,762,106,222	\$ 7,370,758,150	\$ 2,391,348,072	75.50%	\$ 1,795,174,463	133.21%

## Schedule of Investment Returns

Annual money-weighted rate of return, net of investment expense

2014	18.97%
2015	2.28%
2016	(0.06)%

# NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

### Schedule of Administrative Expenses

(for the fiscal year ended june 30, 2016)

	2016	2015
Personnel Services		
Salaries and Wages	\$ 3,267,859	\$ 3,263,014
Employee Benefits	702,434	717,364
Post Employment Benefits	433,830	249,103
Insurance	413,280	403,440
Other	15,592	6,866
Total Personnel Services	4,832,996	4,639,788
Communications		
Postage	147,424	181,695
Telecommunications	46,767	51,185
Printing and Advertising	24,042	30,772
Freight and Express	688	589
Subscriptions and Publications	2,759	3,668
Total Communications	221,680	267,908
Purchases		
Office Supplies	56,594	58,608
Equipment	53,754	78,297
Total Purchases	110,347	136,905
Services and Charges		
Professional Fees and Services	210,700	202,860
Rent Expense	778,926	747,411
Travel and Conference Fees	21,821	26,794
Taxes, Licenses and Permits	284	283
Repairing and Servicing	84,455	80,573
Insurance and Surety Bonds	5,743	5,746
Bank and Federal Service Charges	45,463	47,030
Data Processing Charges	894,750	927,882
Other Services and Charges	152,334	110,504
Total Services and Charges	2,194,476	2,149,082
Depreciation Expense	7,140	7,461
Total Administrative Expenses	\$ 7,366,640	\$ 7,201,144

### Schedule of Investment Expenses

(for the fiscal year ended June 30, 2016)

	2016	2015
Investment Consultant Fee	\$ 258,268	\$ 243,709
Money Manager Fees*	29,122,816	29,476,217
Custodian Bank Fees	493,808	516,809
Other Investment Expenses	845,115	(1,069,637)
Total Investment Expenses#	\$ 30,720,006	\$ 29,167,098

\*For fees paid to investment managers, please see the schedule of investment fees shown on page 93 in the Investments Section of this report.

#Total investment expenses include international withholding taxes, which are not included in the schedule of investment fees referenced above.

## Payments for Professional Consultants

For the fiscal year ended June 30, 2016

	2016			2015		
Gabriel, Roeder, Smith & Company	\$	210,700	\$	202,860		
Linea Solutions*		0		0		
ICON		0		0		
Total Payments for Professional Consultants	\$	210,700	\$	202,860		

\*Fees paid to Linea in FY16 have been capitalized into construction in progress in connection with the design, construction, and testing of a new pension administration system called COMPASS. See the table on capital asset activity in "Note 8: Capital Assets" on page 68 for further information.

# INVESTMENTS



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# Investments

## CHIEF INVESTMENT OFFICER'S REPORT

#### Dear Members,

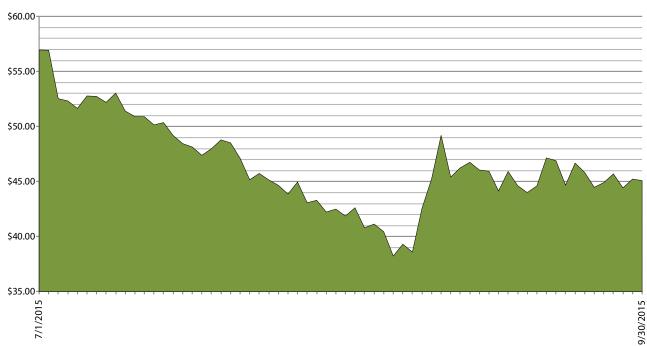
On behalf of the investment department of the Arkansas Public Employees Retirement System (APERS), it is my pleasure to present the Investment Section of the APERS' Annual Financial Report for the fiscal year ended June 30, 2016.

### Performance and Stability

For fiscal year 2016, the APERS investment portfolio closed with total investments of \$7,352,051,285. The investment return for the fiscal year was 0.30%.

### Fiscal Year 2016 Financial Market Recap

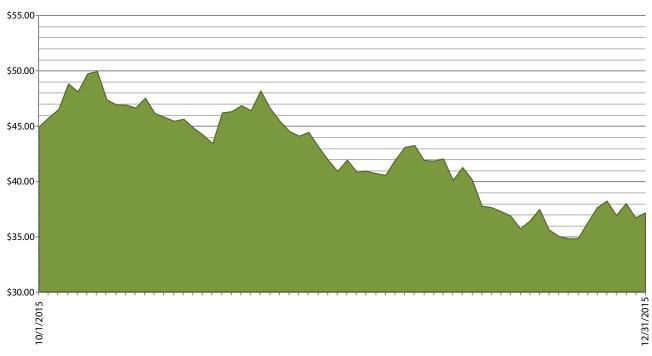
One of the last paragraphs that I wrote last year stated that the third quarter of 2015 (the first quarter of the fiscal year) did not start off well as uncertainty continued and the timing of any Federal Reserve interest rate hike weakened market sentiment. The financial markets watched the price of West Texas Intermediate (WTI) crude plummet from \$56.96 per barrel to a multi-year low of \$38.24.



#### West Texas Intermediate Prices

China devalued its currency and the surprise move sparked a panic-like sell off across all world markets. However the U.S. economy seemed to be insulated from the economic developments in China as the U.S. labor market continued to show improvement, the housing market data was showing momentum, and consumer spending behavior seemed to remain healthy. When the Federal Reserve did not raise rates on September 17th, concerns regarding the timing of a rate hike only fueled market anxiety. The Federal Reserve cited global financial conditions as the reason for not raising interest rates.

Risk aversion and investor anxiety spiked during the final quarter of 2015. Tragic terror attacks in Paris and intensifying tensions between Russia and Turkey helped dampen the holiday season. Oil prices continued to decline. The drop in energy prices was viewed as a function of oversupply rather than poor demand.



West Texas Intermediate Prices

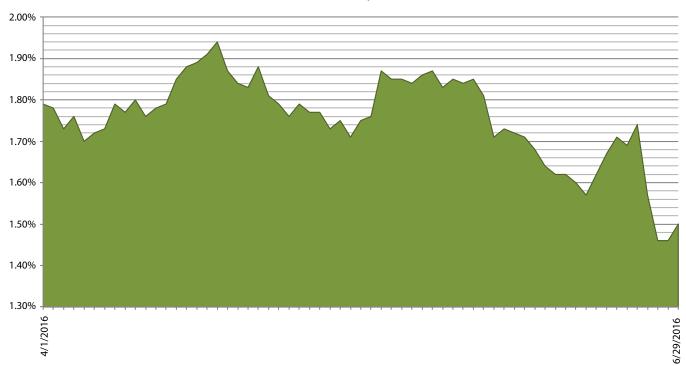
The probability of reduced supply was low, and the markets started to adopt a "lower for longer" outlook regarding energy prices. The positive news was that lower energy prices are considered to be a stimulant for global consumers. Adding to the market anxiety, Third Avenue blocked redemptions from its Credit Fund and placed some of the assets in a liquidating trust that would seek to sell them over time. It was a very unusual step for a mutual fund, which offered daily liquidity to its investors. The Federal Reserve did increase the Federal Funds target for the first time in nearly a decade.

### Investments

The slowdown in China continued to be viewed as most acute for other countries and for companies with deep economic ties to the country. The U.S. economy is relatively independent of the economic developments in China other than via the transmission mechanism of cheaper commodities.

The first quarter of 2016 witnessed a variety of positive catalysts emerge to alleviate major concerns around central bank activity, weak commodity prices, and global growth. The FOMC minutes dampened fears that the pace of future rate hikes were on autopilot as the minutes cited "global economic and financial developments." The European Central Bank (ECB) announced additional QE by increasing their monthly bond purchase limit from €60 billion to €80 billion. They also expanded the program to include investment grade Euro-denominated non-bank corporate debt for the first time. They also took additional steps to alleviate the strain of negative interest rates on commercial banks and stimulate lending. West Texas Intermediate oil prices rebounded from a quarter low of \$26.21, which helped the prices of other major industrial commodity prices rebound as well. Anxiety over the drain on China's foreign exchange reserves and the potential for a devaluation of the yuan abated, and fears of a U.S. recession faded as economic results in the U.S. remained positive.

Without a doubt, the big news in the second quarter of 2016 was the surprise advisory vote in the UK to leave the EU. It will not take effect until Parliament actually votes to invoke Article 50 of the Lisbon Treaty. This may happen after the UK holds new elections in the third quarter. Regardless, the vote to leave the EU upset many risk markets and propelled "safe-haven" sovereign yields lower.



#### U.S. 10-Year Treasury Note Yield

In Japan, JGB yields dropped to a record low, and the flight to quality pushed the total of global sovereign debt with negative yields to \$11.7 trillion according to the Financial Times. The U.K. joined the "negative yield club" as the yield on its 2-year gilt reached 0.003%. The U.S. 10-year note hit 1.43% and closed June 30th at 1.47%, some 80 basis points lower since the beginning of the year. The German 10-year Bund closed the quarter with a yield of -0.11%.

The third quarter of 2016 saw a number of significant geopolitical events, but the markets were not rattled. There was a failed coup d'etat in Turkey, the impeachment of Dilma Rouseff in Brazil, and political turmoil in Venezuela. The European Central Bank announced bond purchases that reached a total of €1.06 trillion by the end of the quarter. The U.S. Federal Reserve signaled the possibility of a December rate hike, but they remain data dependent. The "Brexit" vote became less feared. The Bank of Japan did not cut rates but it did introduce a plan to anchor the ten-year JGB at 0%.

#### Conclusion

The past fiscal year has definitely been volatile. Economic uncertainty and significant geopolitical events as well as volatility across all asset classes, all major indices, and the currency markets have made the past fiscal year and the beginning of the upcoming fiscal year challenging. The Brexit vote and its repercussions are the most materially exogenous shock to the global economy since the beginning of the post 2008 recovery. Many believe the impact will be most acute in Europe and the EU. I am not so sure that I agree with that view. As I write this conclusion, the U.S. has had its Presidential election, and Donald Trump is the President-elect. The new President-elect's economic platform has the equity markets very optimistic as Mr. Trump has stated that he will withdraw from NAFTA as well as the Trans-Pacific Partnership. Time will tell how everything eventually plays out, but right now, since the election, the domestic equity markets have rallied, but bond yields have moved higher.

I would like to thank each member of the Board of Trustees, the ultimate fiduciaries of APERS, for embracing the current investment structure that allowed APERS to achieve strong results for our members and the Arkansas taxpayers. APERS' staff is committed to placing the System in the best position to continue to face the challenges of the global financial markets and to ensure that the APERS assets are positioned to provide long-term financial stability for you, the members.

Respectfully yours,

losbalaomeo

Carlos Borromeo Chief Investment Officer

Arkansas Public Employees Retirement System Annual Financial Report 2016

# 1 Financial Report 2016 Investments

# INVESTMENT CONSULTANT'S REPORT

Callan Associates Inc. 120 North LaSalle Street Suite 2400 Chicago, IL 60602

# Main 312.346.3536 Fax 312.346.1356

www.callan.com

August 24, 2016

Dear Trustees:

We are pleased to provide a brief review of the progress of the APERS Retirement Plan for the fiscal year ending June 30, 2016.

#### Introduction and Background

As with all retirement plans, there are three factors which influence performance:

- Manager Investment Strategies
- Investment Policy adopted by the Fund, and
- The Investment Environment

During the fiscal year ending June 30, 2016, fixed income posted positive returns, while both domestic and international equity returns were negative. The Russell 3000 Index, a broad-based U.S. equity index, had a 2.14% return for the year while the MSCI EAFE Index, an international index, was down -10.16%. Fixed income markets, as measured by the Barclays Capital Aggregate Index, rose 6.00% over the fiscal year.

#### Fund Progress and Results

The APERS portfolio structure is based on the Fund's Investment Policy. The target asset mix is established based on an analysis of the financial needs of the Fund and the Trustees' tolerance for investment risk. The target asset mix and the actual allocation as of June 30, 2016, are listed below:

	<u>Target</u>	<u>Actual</u>
Domestic Equity	37%	38%
International Equity	24%	23%
Domestic Fixed	18%	18%
Diversified Strategies	5%	5%
Real Assets	16%	16%

For fiscal year ended June 30, 2016, the total fund rate of return, including gains, losses and income was 0.30%. The performance calculations presented above were prepared by Callan Associates using a time-weighted rate of return methodology based upon the market value of assets and are GIPS compliant.

Over the past five years, the Fund has had an annualized return of 7.29%. The return was below the actuarially assumed interest rate of 7.75%.

# Callan

At the beginning of the fiscal year, the assets of the fund totaled \$7.82 billion; at June 30, 2016, the Fund assets totaled \$7.62 billion. The Fund experienced a modest decrease in value due to negative returns from domestic and international equities during the fiscal year.

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#### Summary

The operations of the investment program continue to function within the *long-term* guidelines established by the Board of Trustees.

Sincerely,

R. Ryan Ball, CFA Senior Vice President

### Investments

### INVESTMENT POLICY SUMMARY

The investment objective of the Arkansas Public Employees Retirement System (APERS) shall be to

- 1. Protect the APERS fund (the fund) so that its assets are preserved for providing benefits to participants and their beneficiaries, and
- 2. Maximize total return either in the form of income or capital appreciation or both in a manner that is consistent with prudent risk taking on the amounts available to provide such benefits.

For this purpose, short-term fluctuations in value shall be considered secondary to long-term investment results. The long-term return objective for the fund shall be to achieve a real rate of return of 4.5%. This is the return over the rate of inflation (as measured by the Consumer Price Index). This objective is not to be a goal from year to year but is intended as a long-term guideline to those involved in investing the fund's assets.

An additional overall investment objective will be to achieve a total fund return of at least the actuarial rate of 7.5%. The investments of the fund shall be so diversified as to minimize the risk of large losses, unless under particular circumstances it is clearly prudent not to do so. Investments will be further diversified by hiring an appropriate number of managers whose investment styles are varied enough to provide a balance to the overall risk of the fund.

### ASSET ALLOCATION

Market Value Expective

To avoid extreme exposure to investment risk, the following percentages represent the minimum and maximum portion at market of the portfolio that may be invested by types:

Market value Exposure		
Asset Allocation	Target	Lower and Upper Limits
Equities	37%	32% - 42%
International Equities	24	19% - 29%
Fixed Income	18	13% - 23%
Diversified Strategies	5	0% - 10%
Real Assets	16	11% - 21%

The APERS Board of Trustees (the Board) shall review its asset allocation at least annually to determine if the asset allocation is consistent with an acceptable level of risk and volatility acceptable to the fund.

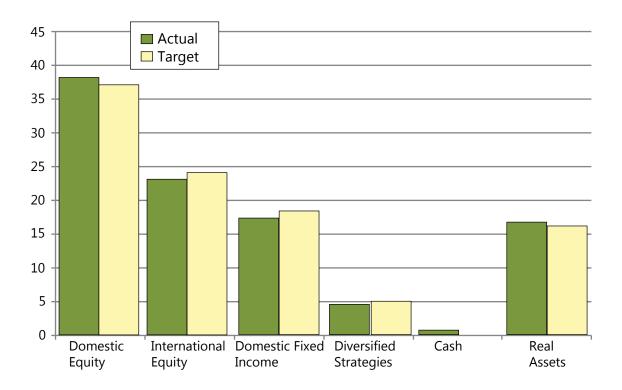
### **Review of Investment Process**

- 1. On a timely basis, at least twice a year, the Board will review actual results achieved by the investment managers (with a perspective toward a three to five-year period or a peak-to-peak or trough-to-trough market cycle) to determine whether their performance
  - a. followed APERS' investment philosophy and policy guidelines,
  - b. achieved the investment objectives, and
  - c. compared satisfactorily with the performance of other similarly managed funds.
- 2. In addition to reviewing each investment manager's results, the Board will periodically reevaluate its progress in achieving its objectives for the total fund and its equity, fixed-income, and international equity segments.
- 3. The periodic re-evaluation will also consider the continuing appropriateness of
  - a. the manager structure,
  - b. the allocation of assets among the managers, and
  - c. the investment objectives for the fund's assets.
- 4. The Board may appoint investment consultants to assist in the ongoing evaluation process. The consultants selected by the Board are expected to be familiar with the investment practices of other similar retirement plans and will be responsible for suggesting appropriate changes in the fund's investment program over time.

### ASSET ALLOCATION

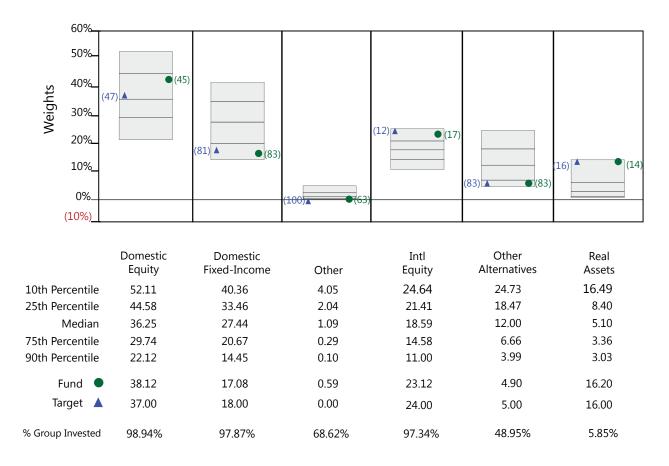
Actual vs. Target Allocation (as of June 30, 2016)

The current target and new target are as follows:



	\$000s						\$000s
Asset Class	Actual	APERS	ASPRS	Actual	Target	Difference	Difference
Domestic Equity	\$ 2,906,257	\$ 2,804,517	\$ 101,740	38.1%	37.0%	1.10%	\$ 85,131
International Equity	1,763,147	1,701,424	61,723	23.1	24.0	(0.90)	(66,773)
Fixed Income	1,301,914	1,256,338	45,576	17.1	18.0	(0.90)	(70,526)
<b>Diversified Strategies</b>	373,477	360,403	13,074	4.9	5.0	(0.14)	(7,756)
Cash	44,740	37,477	7,263	0.6	0.0	0.60	44,740
Real Assets	1,235,130	1,191,892	43,238	16.2	16.0	0.20	15,183
Total	\$ 7,624,665	\$ 7,352,051	\$ 272,614	100%	100%		

The illustration below shows the average percentage of asset allocations by asset type for the Public Plan Sponsor Database. Due to different asset allocations of public plans, percentages will not equal 100%.



#### Asset Class Weights vs Public Fund Sponsor Database

### Investments

Manager Distribution

### SCHEDULE OF MANAGER DISTRIBUTION

As of June 30, 2016

(\$ Thousands) \$ 704,852,732 373,910,181 152,729,014 330,270,585 262,222,084 140,935,984 255,600,028 139,041,609	of Total 9.24% 4.90 2.00 4.33 3.44 1.85 3.35	APERS \$ 680,177,861 360,820,659 147,382,410 318,708,760 253,042,441 136,002,220	2016
373,910,181 152,729,014 330,270,585 262,222,084 140,935,984 255,600,028	4.90 2.00 4.33 3.44 1.85	360,820,659 147,382,410 318,708,760 253,042,441	5%
152,729,014 330,270,585 262,222,084 140,935,984 255,600,028	2.00 4.33 3.44 1.85	147,382,410 318,708,760 253,042,441	
330,270,585 262,222,084 140,935,984 255,600,028	4.33 3.44 1.85	318,708,760 253,042,441	
262,222,084 140,935,984 255,600,028	3.44 1.85	253,042,441	16%
140,935,984 255,600,028	1.85		16%
255,600,028		136.002.220	
	3.35		
139,041,609		246,652,205	38%
· · · · · · · · · · · · · · · · · · ·	1.82	134,174,161	
226,736,240	2.97	218,798,855	17%
96,106,652	1.26	\$92,742,234	17%
223,852,209	2.94	216,015,786	
\$ 2,906,257,318	38.12%	\$ 2,804,517,590	23%
\$ 376,287,979	4.94%	\$ 363,115,217	
. , ,	4.85		
	4.61		
			2215
			2015
<i>\</i>	23.12/0	<i>Q 1</i> , <i>7</i> <b>0</b> <i>1</i> , <i>1</i> <b>2</b> <i>1</i> , <i>1 2</i>	5%
			12%
1			
			42%
\$  1,301,914,272	17.08%	\$  1,256,337,990	16%
. , ,			25%
		12,062,411	
		58,892,428	
296,969,714	3.89		2014
31,178,223	0.41		
\$ 1,235,129,890	16.20%	\$ 1,191,891,537	5%
			12%
			41%
\$ 110,280,724	1.45%	\$ 106,420,112	4170
152,489,460	2.00	147,151,242	1.00
110,706,781	1.45	106,831,254	16%
\$ 373,476,965	4.90%	\$ 360,402,608	
			26%
	223,852,209 \$ 2,906,257,318 \$ 376,287,979 370,167,275 351,131,930 322,561,002 342,998,719 \$ 1,763,146,905 \$ 1,763,146,905 \$ 1,763,146,905 \$ 1,763,146,905 \$ 1,301,914,272 \$ 376,032,638 154,535,920 31,649,054 12,500,000 61,028,874 134,210,790 137,024,677 296,969,714 31,178,223 \$ 1,235,129,890 \$ 110,280,724 152,489,460 110,706,781	$\begin{array}{c ccccc} 223,852,209 & 2.94 \\ \hline $ 2,906,257,318 & 38.12\% \\ \hline \\ $ 376,287,979 & 4.94\% \\ 370,167,275 & 4.85 \\ 351,131,930 & 4.61 \\ 322,561,002 & 4.23 \\ 342,998,719 & 4.50 \\ \hline \\ $ 1,763,146,905 & 23.12\% \\ \hline \\ $ 1,763,146,905 & 23.12\% \\ \hline \\ $ 1,763,146,905 & 23.12\% \\ \hline \\ $ 376,032,638 & 4.93\% \\ 154,535,920 & 2.03 \\ 31,649,054 & 0.42 \\ 12,500,000 & 0.16 \\ 61,028,874 & 0.80 \\ 134,210,790 & 1.76 \\ 137,024,677 & 1.80 \\ 296,969,714 & 3.89 \\ 31,178,223 & 0.41 \\ \hline \\ $ 1,235,129,890 & 16.20\% \\ \hline \\ $ 110,280,724 & 1.45\% \\ 152,489,460 & 2.00 \\ 110,706,781 & 1.45 \\ \hline \end{array}$	$\begin{array}{c cccccc} & 2.23,852,209 \\ \hline $ 2,906,257,318 \\ \hline 38,12\% \\ \hline $ 2,804,517,590 \\ \hline $ 2,804,517,590 \\ \hline $ 2,804,517,590 \\ \hline $ 376,287,979 \\ 370,167,275 \\ 370,167,275 \\ 4.85 \\ 351,131,930 \\ 351,131,930 \\ 322,561,002 \\ 4.23 \\ 311,269,067 \\ \hline $ 342,998,719 \\ \hline $ 4.50 \\ 330,991,318 \\ \hline $ 1,763,146,905 \\ \hline $ 23.12\% \\ \hline $ 1,701,424,192 \\ \hline $ 1,701,424,192 \\ \hline $ 1,701,424,192 \\ \hline $ 1,701,424,192 \\ \hline $ 1,301,914,272 \\ \hline $ 1,301,914,272 \\ \hline $ 1,301,914,272 \\ \hline $ 1,301,914,272 \\ \hline $ 1,256,337,990 \\ \hline $ 1,235,129,890 \\ \hline $ 16,20\% \\ \hline $ 1,191,891,537 \\ \hline $ 1,235,129,890 \\ \hline $ 16,20\% \\ \hline $ 1,191,891,537 \\ \hline $ 1,0,280,724 \\ 1,45 \\ \hline $ 106,831,254 \\ \hline $ 106,811,256 \\ \hline $ 1,256,81 \\ \hline $ 1,256$

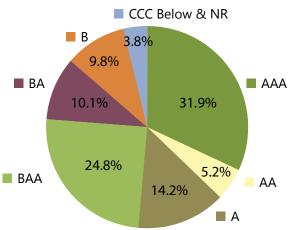
\*Includes UBS receivables. Totals may not add due to rounding. The APERS and ASPRS manager distribution - combined statement can be found on page 133.

### PORTFOLIO CHARACTERISTICS

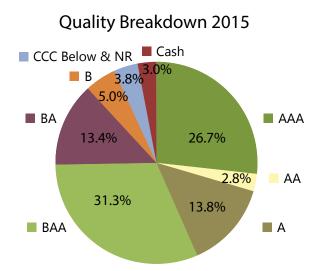
(for fiscal years ended June 30, 2015 - 2016)

	2016	2015
Selected Bond Characteristics		
Yield to Maturity (Market)	3.50%	3.62%
Current Yield	5.06%	3.82%
Average Coupon Rate	3.82%	3.92%
Average Maturity	7.54 yrs.	7.5 yrs.
Quality Breakdown		
AAA (Includes Govts. & Agencies)	31.9%	26.74%
AA	5.2%	2.80%
A	14.2%	13.85%
BAA	24.8%	31.32%
BA	10.1%	13.40%
В	9.8%	5.02%
CCC Below & NR	3.8%	3.84%
Cash*		3.02%
Selected Stock Characteristics		
Average P/E Ratio	24.17x	22.15x
Estimated Earnings Growth Rate (Next 5 Years)	13.14%	12.76%
Current Yield	1.70%	1.60%

\* Includes short term investment fund



### Quality Breakdown 2016



### Investments

### SCHEDULE OF COMPARATIVE INVESTMENT RESULTS BY YEAR

(for fiscal years ended on June 30, 2012 - 2016)

	2016	2015	2014	2013	2012
Total Fund					
Arkansas Public Employees Retirement System	0.30%	2.67%	19.68%	15.58%	(0.17)%
Callan Total Public Fund Median	0.54	3.24	16.30	11.98	1.22
Inflation (Consumer Price Index)	0.64	(0.38)	2.04	1.75	1.58
Equities					
Arkansas Public Employees Retirement System	(0.38)%	7.25%	24.48%	20.99%	2.30%
Callan Total Equity Database Median	(1.58)	7.17	25.26	22.83	0.47
Russell 3000 Index	2.14	7.29	25.22	21.46	3.84
International Equities					
Arkansas Public Employees Retirement System	(6.88)%	(2.38)%	24.43%	20.88%	(12.75)%
Callan Total Non-U.S. Equities Database Median	(8.20)	(1.80)	23.34	18.85	(12.81)
MSCI-EAFE Index	(10.16)	(4.22)	23.57	18.62	(13.83)
Fixed Income					
Arkansas Public Employees Retirement System	5.06%	1.32%	7.03%	3.51%	8.07%
Callan Total Fixed Income Database Median	4.48	1.59	5.54	0.91	7.28
Barclays Capital Aggregate Index	6.00	1.86	4.37	(0.69)	7.47
Diversified Strategies					
Arkansas Public Employees Retirement System	2.86%	1.97%	13.91%	9.73%	n/a
Callan Int'l/Global Balanced Database Median	(1.73)	0.59	13.59	7.76	
Real Assets					
Arkansas Public Employees Retirement System	8.29%	0.19%	14.51%	10.26%	n/a
Consumer Price Index - U + 4%	5.01	4.13	6.07	5.76	

### SCHEDULE OF COMPARATIVE ANNUALIZED INVESTMENT RESULTS

(for the fiscal year ended June 30, 2016 and the preceding 3-year and 5-year rates of return)

	2016	3-Year Annualized	5-Year Annualized
Total Fund			
Arkansas Public Employees Retirement System	0.30%	7.21%	7.29%
Callan Total Public Fund Median	0.54	6.39	6.42
Inflation (Consumer Price Index)	0.64	0.76	1.12
Equities			
Arkansas Public Employees Retirement System	(0.38)%	9.97%	10.48%
Callan Total Equity Database Median	(1.58)	9.89	10.58
Russell 3000 Index	2.14	11.13	11.60
International Equities			
Arkansas Public Employees Retirement System	(6.88)%	4.19%	3.59%
Callan Total Non-U.S. Equities Database Median	(8.20)	3.86	3.21
MSCI-EAFE Index	(10.16)	2.06	1.68
Fixed Income			
Arkansas Public Employees Retirement System	5.06%	4.44%	4.97%
Callan Total Fixed Income Database Median	4.48	4.05	4.19
Barclays Capital Aggregate Index	6.00	4.06	3.76
Diversified Strategies			
Arkansas Public Employees Retirement System	2.86%	6.11%	n/a
Callan Int'l/Global Balanced Database Median	(1.73)	3.59	
Real Assets			
Arkansas Public Employees Retirement System	8.29%	7.50%	n/a
Consumer Price Index - U + 4%	5.01	5.07	

Source: Callan Associates Inc. (CAI database contains returns of over 115 Public retirement funds.) Returns are reported gross of fees.

### TOP TEN LARGEST HOLDINGS\*

(as of June 30, 2016)

Domestic Fixed Income Holdings	Par	Market Value	APERS
U.S. Treasury 2.875% 05/15/2043	13,610,000	\$ 15,304,309	\$ 14,768,549
U.S. Treasury 2.125% 08/31/2020	13,020,000	13,655,767	13,177,717
Commit to Pur FNMA SF MTG 3.50% 07/01/2046	12,470,000	13,157,845	12,697,227
U.S. Treasury CPI-Inflation 1.125% 01/15/2021	10,389,010	11,111,670	10,722,682
U.S. Treasury 2.00% 08/31/2021	10,220,000	10,703,099	10,328,415
U.S. Treasury 2.875% 08/15/2045	9,490,000	10,656,226	10,283,182
U.S. Treasury 2.125% 05/15/2025	9,490,000	10,024,192	9,673,274
U.S. Treasury 2.25% 11/15/2024	8,775,000	9,360,468	9,032,785
U.S. Treasury 3.00% 11/15/2045	7,455,000	8,572,057	8,271,974
Commit to Pur FNMA SF MTG 4.00% 07/01/2046	7,780,000	8,341,405	8,049,396
Total		\$ 110,887,038	\$ 107,005,202

Domestic Equity Holdings	Shares	Market Value	APERS
Apple Inc.	350,891	\$ 33,545,180	\$ 32,370,859
Facebook Inc.	249,852	28,553,087	27,553,525
The Home Depot Inc.	219,976	28,088,735	27,105,429
Amazon.Com Inc.	38,371	27,459,055	26,497,792
UnitedHealth Group Inc.	169,671	23,957,545	23,118,860
Microsoft Corp.	462,456	23,663,874	22,835,469
General Electric Co.	599,423	18,869,836	18,209,257
Bank of America Corp.	1,264,221	16,776,213	16,188,926
Altria Group Inc.	231,081	15,935,346	15,377,495
EOG Resources Inc.	187,160	15,612,887	15,066,325
Total		\$ 232,461,757	\$ 224,323,939

International Equity Holdings	Shares	Market Value	APERS
Baidu Inc.	174,981	\$ 28,898,112	\$ 27,886,472
Medtronic PLC	312,138	27,084,214	26,136,074
Compass Group PLC	1,347,614	25,617,193	24,720,409
Samsung Electronics Co. Ltd.	19,925	24,650,031	23,787,104
Unilever PLC	509,005	24,377,154	23,523,780
Carlsberg A/S	235,467	22,309,732	21,528,732
Novartis AG	255,693	21,073,535	20,335,811
Japan Tobacco Inc.	485,515	19,417,761	18,738,001
Anheuser-Busch Inbev	145,383	18,993,957	18,329,034
Aon PLC	146,268	15,976,854	15,417,550
Total		\$ 228,398,543	\$ 220,402,966

\*By market value.

Totals may not add due to rounding. The APERS and ASPRS ten largest holdings - combined statement can be found on page 134.

### SCHEDULE OF BROKERAGE COMMISSIONS

(as of June 30, 2016)

	Number of	Total	Commission	
Brokerage Firm	Shares Traded	Commission	Per Share	APERS
Credit Suisse	6,279,386	\$ 168,926	\$ 0.03	\$ 163,012
Goldman Sachs & Co.	5,276,956	155,810	0.03	150,356
J.P. Morgan Securities	5,494,090	141,875	0.03	136,908
Investment Technology Group	4,257,383	118,006	0.03	113,875
Instinet Corp	4,001,796	111,938	0.03	108,019
Citigroup Global Markets Inc.	3,663,782	106,462	0.03	102,735
Citation Group	2,255,637	105,810	0.05	102,106
Jefferies & Co. Inc	3,576,423	99,377	0.03	95,898
Capital Institutional Services Inc.	2,068,776	92,895	0.04	89,643
Deutsche Bank Securities Inc.	3,456,226	92,723	0.03	89,477
Morgan Stanley & Co. Inc.	2,792,169	75,840	0.03	73,185
Sanford Bernstein & Co.	3,235,516	74,211	0.02	71,613
ISI Group Inc.	2,339,198	71,078	0.03	68,590
Barclays Capital	3,035,903	70,091	0.02	67,637
Bloomberg Tradebook LLC	2,535,739	69,215	0.03	66,792
BTIG LLC	3,366,559	67,236	0.02	64,882
UBS Securities LLC	2,142,400	58,750	0.03	56,693
Rosenblatt Securities LLC	2,010,714	58,455	0.03	56,409
BMO Capital Markets Corp.	2,008,497	53,222	0.03	51,359
Scotia Capital (USA) Inc.	1,739,381	52,051	0.03	50,229
Simmons & Co. International	1,577,108	47,616	0.03	45,949
Stifel Nicholaus	1,286,236	47,088	0.04	45,440
Merrill Lynch Pierce Fenner Smith Inc.	1,854,115	45,179	0.02	43,597
CDH Securities LLC	1,498,500	44,955	0.03	43,381
Piper Jaffray & Co.	1,360,419	42,831	0.03	41,332
Others (including 98 brokerage firms)	24,611,494	743,361	0.03	717,338
	97,724,403	\$ 2,815,001		\$ 2,716,456

Totals may not add due to rounding.

The APERS and ASPRS brokerage commissions - combined statement can be found on page 135.

### Investments

### SCHEDULE OF INVESTMENT FEES

(as of June 30, 2016)

					Basis		APERS			
		Market Value		Fee	Points		Market Value		Fee	
Equities										
SSI Investment Mgmt Convertible Securities	\$	226,736,240	\$	896,347	40	\$	218,798,855	\$	864,91	
Lazard Asset Mgmt Value		255,600,028		762,991	30		246,652,205		736,23	
Golden Capital Mgmt Growth		152,729,014		336,351	22.5		147,382,410		324,55	
Westwood Mgmt SMID Cap		140,935,984		880,385	25		136,002,220		849,51	
MCM S&P 500 Index Fund		704,852,732		149,191	3.5		680,177,861		143,95	
INTECH - Growth		330,270,585		1,380,669	48		318,708,760		1,332,25	
CastleArk Mgmt Growth		373,910,181		1,202,725	35		360,820,659		1,160,55	
Wellington Mgmt. Co Value		262,222,084		779,609	30		253,042,441		752,27	
Stephens Investment Mgmt Growth		223,852,208		1,496,495	77		216,015,785		1,444,02	
*State Street Global Advisors - 130/30		0		152,835	50		0		147,46	
Lombardia Capital - Small Cap		139,041,609		943,123	70		134,174,161		910,05	
Horrell Capital Mgmt AR Index Fund		96,106,652		164,091	27		92,742,234		158,33	
Lazard Asset Mgmt Int'l Equity		376,287,979		1,210,394	65		363,115,217		1,167,94	
Manning & Napier Advisors - Int'l Equity		322,561,002		1,618,574	50		311,269,067		1,561,82	
#Fidelity Institutional Asset Mgmt Int'l Equity		342,998,719		865,379	25		330,991,318		835,07	
Baillie Gifford - Int'l Equity		351,131,930		1,501,036	44		338,839,809		1,448,40	
Artisan Partners - Int'l Equity		370,167,275		2,112,684	55		357,208,781		2,038,61	
Total Equities	\$	4,669,404,222	\$	16,452,876		\$	4,505,941,781	\$	15,876,00	
Diversified Strategies										
AQR Capital	\$	110,280,724	\$	697,023	72	\$	106,420,112	\$	672,56	
Blackstone Hedge		152,489,460		1,529,661	100		147,151,242		1,475,99	
Newton Capital		110,706,781		657,226	70		106,831,254		634,18	
Total Diversified Strategies	\$	373,476,965	\$	2,883,910		\$	360,402,608	\$	2,782,74	
Fixed Income										
MacKay Shields - Core Plus I	\$	419,138,803	\$	805,890	20	\$	404,465,956	\$	777,63	
MacKay Shields - Core Plus II		436,631,144		631,119	15		421,345,941		608,98	
Prudential Investments - Core Plus		446,144,325		849,933	20		430,526,093		820,14	
Total Fixed Income	\$	1,301,914,272	\$	2,286,942		\$	1,256,337,990	\$	2,206,76	
Real Assets										
INVESCO Real Estate - Core & Global REITS	\$	530,568,558	\$	2,118,302	65	\$	511,994,876	\$	2,043,97	
#TA Associates Realty Fund X		44,149,054		1,229,979	120		42,603,522		1,186,83	
#LaSalle Inc & Growth VI LP		31,178,223		337,961	135		30,086,763		326,10	
Heitman Real Estate Trust - Core		296,969,714		1,923,974	65		286,573,657		1,856,42	
CastleArk Mgmt AR Energy Fund		61,028,874		688,425	125		58,892,428		664,28	
CastleArk Mgmt Global Energy Fund		134,210,790		1,030,356	100		129,512,455		994,23	
Pinnacle Forest Investments – Timberland		137,024,677		1,228,522	90		132,227,836		1,185,45	
Total Real Assets	\$	1,235,129,890	\$	8,557,520		\$	1,191,891,537	\$	8,257,30	
Other Investment Services				Fee						
Bank of New York Mellon (Custodian)			\$	511,753				\$	493,80	
Callan Associates (Consultant)				267,665					258,26	
Total Other Services			\$	779,418				\$	752,07	
			\$	30,960,666				\$	29,874,89	

\*Terminated manager # Management fee is a base fee plus a performance fee The APERS and ASPRS investment fees - combined statement can be found on page 136.

### ACTUARIAL

Actuary's Certificate Letter
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### ACTUARY'S CERTIFICATE LETTER



Gabriel Roeder Smith & Company Consultants & Actuaries One Towne Square Suite 800 Southfield, MI 48076-3723 248.799.9000 phone 248.799.9020 fax www.gabrielroeder.com

November 21, 2016

The Board of Trustees Arkansas Public Employees Retirement System Little Rock, Arkansas

Dear Board Members:

The basic financial objective of the Arkansas Public Employees Retirement System (APERS) as provided in the Arkansas Code is to establish and receive contributions which, expressed as percents of active member payroll, will remain approximately level from generation to generation of Arkansas citizens and when combined with present assets and future investment return will be sufficient to meet the financial obligations of APERS to present and future benefit recipients. The progress towards meeting this financial objective is illustrated in the Schedule of Funding Progress and the Schedule of Employer Contributions.

We performed an actuarial valuation and issued an actuarial valuation report for APERS as of June 30, 2016. The purpose of the June 30, 2016 annual actuarial valuation was to determine the contribution requirements for the year beginning July 1, 2017 (July 1, 2016 for the old plan still paying District Judges portion of APERS) and to measure the System's funding progress. The actuarial valuation report should not be relied upon for any other purpose. The valuation process develops contribution rates that are sufficient to fund the plan's normal cost (i.e., the cost assigned by the valuation method to the year of service about to be rendered) as well as to fund unfunded actuarial accrued liabilities as a level percent of active member payroll (level dollar for the District Judges portion of APERS) over a period of up to thirty years. The most recent valuations were completed based upon population data, asset data, and plan provisions as of June 30, 2016. In addition, a separate report was issued (dated November 1, 2016) to provide actuarial information for GASB Statement No. 67 and GASB Statement No. 68.

The APERS administrative staff provides the actuary with data for the actuarial valuation. The actuary relies on the data after reviewing it for internal and year-to-year consistency. The actuary summarizes and tabulates population data in order to analyze longer term trends. The plan's external auditor also audits the actuarial data annually. We are not responsible for the accuracy or completeness of the data provided by staff.

The actuarial valuation report and GASB Statement Nos. 67 and 68 report contain the following supporting schedules for use in the Actuarial and Financial Sections of the Comprehensive Annual Financial Report:

#### **Actuarial Section**

Summary of Assumptions Used Summary of Actuarial Methods and Assumptions Active Member Valuation Data Short Condition Test Analysis of Financial Experience Analysis of Financial Experience – Gains and Losses by Risk Area The Board of Trustees November 21, 2016 Page 2

**Financial Section** 

Schedule of Funding Progress Schedule of Changes in Net Pension Liability and Related Ratios Schedule of the Net Pension Liability Schedule of Contributions Notes to Schedule of Contributions

For actuarial valuation purposes, assets are valued on a market related basis that recognizes each year's difference between actual and assumed investment return over a closed four-year period with the exception of the old plan still paying District Judges portion of APERS, where assets are valued on a market basis.

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. These assumptions are adopted by the Board after considering the advice of the actuary and other professionals. The assumptions and the methods comply with the requirements of the Actuarial Standards of Practice. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. The June 30, 2016 valuations were based upon assumptions that were recommended in connection with a study of experience covering the period 2007-2012 and a subsequent economic assumption study. The investment return, price inflation and wage inflation assumptions were changed for the June 30, 2015 valuations.

# On the basis of the June 30, 2016 actuarial valuations and the benefits and contribution rates then in effect, it is our opinion that the Arkansas Public Employees Retirement System continues to satisfy the general financial objective of level contribution financing.

Future actuarial measurements may differ significantly from those presented in the annual valuations due to such factors as experience differing from that anticipated by actuarial assumptions, or changes in plan provisions, actuarial assumption/methods or applicable law. Due to the limited scope of the assignment, we did not perform an analysis of the potential range of future measurements.

The signing individuals are independent of the plan sponsor.

Mita D. Drazilov and Heidi Barry are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

The Irapilo

Mita D. Drazilov, ASA, MAAA MDD:mrb

Heidi & Barry

Heidi G. Barry, ASA, MAAA

David L. Hoffmar

Gabriel Roeder Smith & Company

### SUMMARY OF ACTUARIAL ASSUMPTIONS\*

#### **Economic Assumptions**

The investment return rate used in making the valuation was 7.50% per year, compounded annually (net after investment expenses). This rate of return is not the assumed real rate of return. The real rate of return is the portion of investment return which is more than the wage inflation rate. Considering the assumed wage inflation rate of 3.25%, the 7.50% investment return rate translates to an assumed net real rate of return of 4.25%. This assumption was first used for the June 30, 2015 valuation, including also the District Judges division.

Pay increase assumptions for individual active members are shown on pages E-8 and E-10. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.25% recognizes wage inflation. The wage inflation assumption consists of 2.50% for price inflation and 0.75% for real wage growth. These assumptions were first used for the June 30, 2015 valuation and for the District Judges division for the June 30, 2015 valuation.

Total active member payroll is assumed to increase 3.25% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. This assumption was first used for the June 30, 2015 valuation and for the District Judges division for the June 30, 2015 valuation.

The number of active members is assumed to continue at the present number.

#### Non-Economic Assumptions

The mortality table used to measure retired life mortality was the RP-2000 Combined Healthy mortality table, projected to 2020 using Projection Scale BB, set-forward 2 years for males and 1 year for females. Related values are shown on page E-3. Based upon the experience observed during the most recent experience study, it appears that at the time of the study the current table provides for an approximate 15% margin for future mortality improvement. This assumption was first used for the June 30, 2013 valuation.

The probabilities of retirement for members eligible to retire are shown on pages E-4 through E-7. These probabilities were first used for the June 30, 2013 valuation and for the June 30, 2007 valuation for the District Judges division.

The probabilities of withdrawal from service, death-in-service and disability are shown for sample ages on pages E-8 through E-10. These probabilities were first used for the June 30, 2013 valuation and for the District Judges division for the June 30, 2013 valuation.

<sup>\*</sup>The data referenced in this section is taken from the actuary's report, *Arkansas Public Employees Retirement System Actuarial Valuation and Experience Gain/(Loss) Analysis June 30, 2016*, prepared by Gabriel Roeder Smith & Co. A PDF copy of the report is available for download at www.apers.org.

The individual entry-age normal actuarial cost method of the valuation was used in determining liabilities and normal cost.

Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce contribution amounts (principal and interest) which are level percent-of-payroll contributions. For the District Judges division, unfunded actuarial accrued liabilities are amortized as a level dollar contribution.

Recognizing the special circumstances of the General Assembly division, modifications of the above assumptions were made where appropriate.

Present assets (cash & investments) were valued on a market related basis in which differences between actual and assumed returns are phased-in over a four-year period (including District Judges New Plan and Paid Off Old Plan). The funding value of assets may not deviate from the market value of assets by more than 25%. District Judges Still Paying Old Plan present assets (cash & investments) were valued on a market value basis.

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

The actuarial valuation computations were made by or under the supervision of a member of the American Academy of Actuaries (MAAA).

### SINGLE LIFE RETIREMENT VALUES

Sample Attained Ages	Present Value of \$1.00 Monthly for Life				Present Value of \$1.00 Monthly for Life Increasing 3% Annually			Future Life Expectancy (Years)		
	Men		Women		Men	١	Nomen	Men	Women	
40	\$ 152.73	\$	155.50	\$	\$221.02	\$	228.64	40.56	44.21	
45	148.14		151.73		209.34		218.29	35.81	39.39	
50	142.02		146.73		195.44		205.97	31.13	34.64	
55	134.13		140.11		179.30		191.41	26.58	29.98	
60	124.36		131.56		161.13		174.51	22.23	25.44	
65	112.66		121.10		141.22		155.67	18.14	21.14	
70	98.84		108.87		119.72		135.45	14.35	17.16	
75	83.43		95.07		97.62		114.39	10.95	13.56	
80	67.17		79.89		76.00		92.98	8.02	10.35	
85	\$ 51.06	\$	64.05	\$	56.01	\$	72.24	5.60	7.59	

Sample Attained	Benefit Increasing	Portion of Age 60 Lives Still Alive			
Ages	3.0% Yearly	Men	Women		
60	\$100	100%	100%		
65	116	96	97		
70	134	90	92		
75	155	80	84		
80	180	66	72		

The mortality table was set forward 10 years for disabilities.

Based on RP-2000 Combined Healthy mortality table, projected to 2020 using Projection Scale BB, set-forward 2 years for males and 1 year for females.



### STATE AND LOCAL GOVERNMENT DIVISION

Separations from Active Employment Before Service Retirement (as of June 30, 2016)

	Years	Percentage of Active Members Separating Within the Next Year							Pay Increase Assumptions For An Individual Employee		
Sample Ages	of Service	Witho	drawal	Dea	th	Disa	bility	Merit & Seniority	Base (Economy)	Increase Next Year	
		Men	Women	Men	Women	Men	Women				
	0	40.0%	40.0%								
	1	25.0	25.0								
	2	20.0	20.0								
	3	15.0	15.0								
	4	12.0	12.0								
20	5+	10.0	10.0	0.02%	0.01%	0.01%	0.01%	6.60%	3.25%	9.85%	
25		10.0	10.0	0.02	0.01	0.05	0.05	5.10	3.25	8.35	
30		8.8	8.8	0.03	0.01	0.08	0.08	3.20	3.25	6.45	
35		6.2	6.2	0.04	0.02	0.10	0.10	2.30	3.25	5.55	
40		4.4	4.4	0.06	0.03	0.15	0.15	1.90	3.25	5.15	
45		3.4	3.4	0.08	0.05	0.20	0.20	1.50	3.25	4.75	
50		2.7	2.7	0.13	0.08	0.40	0.40	1.10	3.25	4.35	
55		1.9	1.9	0.22	0.12	0.70	0.70	0.80	3.25	4.05	
60		1.2	1.2	0.37	0.21	1.00	1.00	0.70	3.25	3.95	

Pay increase rates are age based only and not service based.



### STATE AND LOCAL PROBABILITIES OF RETIREMENT FOR MEMBERS ELIGIBLE TO RETIRE

Percentage of Eligible Active Members Retiring Within Next Year (as of June 30, 2016)

Retirement Ages (with less than 28 years of	Percentage of Eligible Active Members Retiring Within Next Year				
service)	Unreduced	Reduced			
55		2%			
56		2			
57		3			
58		3			
59		4			
60		5			
61		5			
62		18			
63		17			
64		13			
65	23%				
66	23				
67	23				
68	15				
69	15				
70	17				
71	17				
72	17				
73	17				
74-75	20				
76-78	15				
79-84	20				
85 & Over	100				

A member was assumed eligible for unreduced retirement after attaining age 65 with 5 years of service or 28 years regardless of age. A member was assumed eligible for reduced retirement after attaining age 55 with 10 or more years of service.



### PROBABILITIES OF RETIREMENT FOR MEMBERS ELIGIBLE TO RETIRE

General Assembly Division (as of June 30, 2016)

Retirement Ages	Percentages of Eligible Active Members Retiring Within Next Year
50	30 %
51	30
52	30
53	30
54	30
55	30
56	30
57	30
58	30
59	30
60	30
61	30
62	50
63	30
64	30
65	50
66	30
67-79	20
80 & Over	100

Members may retire at age 50 with 20 or more years of service, age 60 with 16 or more years of service, or age 65 with 8 or more years of service.

### SHORT CONDITION TEST

The APERS funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due -- the ultimate test of financial soundness. Testing for level contribution rates is the long-term condition test.

A short condition test is one means of checking a system's progress under its funding program. In a short condition test, the system's present assets (cash and investments) are compared with

- Active member contributions on deposit;
- The liabilities for future benefits to present retired lives; and
- The liabilities for service already rendered by active members.

In a system that has been following the discipline of level percent-of-payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in unusual circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system. Liability 3 being fully funded is uncommon.

### TEN-YEAR COMPARATIVE STATEMENT

(dollars in millions)

	Entry Age	Accrued Liabilit	τ <b>γ</b>		-		D	
Valuation	(1) Active	(2) Retirees	(3) Active Members	M.L. C.		Portion of Values Cov Present	vered By	
Date: June 30	Member Contributions	and Beneficiaries	(Employer Financed Portion)	Valuation Assets	(1)	(2)	(3)	Total
STATE DIVISI	ON (Including su	ıb-divisions)						
1998@	\$ 17.2	\$ 640.3	\$1,395.9	\$2,328.5	100%	100%	119%	113%
1999@#	16.9	784.0	1,634.2	2,637.1	100	100	112	108
2000	15.8	747.5	1,865.7	2,943.3	100	100	117	112
LOCAL GOVE	ERNMENT DIVISIO	NC						
1998@	\$ 8.8	\$ 337.9	\$ 501.1	\$ 968.1	100%	100%	124%	114%
1999#	8.8	446.9	587.9	1,074.7	100	100	105	103
2000	7.6	440.0	706.0	1,178.1	100	100	103	102
	OCAL GOVERNM							
2007#	29.7	\$ 2,268.5	\$ 3,856.7	\$ 5,489.3	100%	100%	83%	89%
2008@	45.8	2,463.9	4,014.9	5,858.1	100	100	83	90
2009	66.4	2,750.3	4,059.9	5,406.8	100	100	64	79
2009#	66.4	2,750.3	4,103.5	5,406.8	100	100	63	78
2010	92.8	2,928.7	4,266.1	5,403.5	100	100	56	74
2011@	119.2	3,268.3	4,327.8	5,462.6	100	100	48	71
2012	122.1	3,518.7	4,521.9	5,625.4	100	100	44	69
2013@	147.9	3,855.2	4,281.1	6,159.3	100	100	50	74
2014@	176.3	4,246.7	4,440.6	6,894.9	100	100	56	78
2015@	201.1	4,654.5	4,439.2	7,351.7	100	100	56	79
2016	228.4	4,929.2	4,505.1	7,768.9	100	100	58	80

# After legislated changes in benefit provisions.

@ After changes in actuarial assumptions.

### ANALYSIS OF EXPERIENCE

Purpose of Gain/(Loss) Analysis. Regular actuarial valuations give valuable information about the composite change in unfunded actuarial accrued liabilities – whether or not the liabilities are increasing or decreasing and by how much.

But valuations do not show the portion of the change attributable to each risk area within the System: the rate of investment return which plan assets earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases; and the ages at actual retirement. In an actuarial valuation, assumptions must be made as to what these rates will be, for the next year and for decades in the future.

The objective of a gain and loss analysis is to determine the portion of the change in actuarial condition (unfunded actuarial accrued liabilities) attributable to each risk area.

The fact that actual experience differs from assumed experience is to be expected – the future cannot be predicted with precision. The economic risk areas (particularly investment return and pay increases) are volatile. Inflation directly affects economic risk areas, and inflation seems to defy reliable prediction.

Changes in the valuation assumed experience for a risk area should be made when the differences between assumed and actual experience have been observed to be sizable and persistent. A gain and loss analysis covering a relatively short period may or may not be indicative of long-term trends, which are the basis of actuarial assumptions.

_		(\$ ir	Total n millions)
1.	UAAL* at Beginning of Year	\$	1,943.1
2.	Normal Cost from Last Valuation		133.5
3.	Actual Employer Contributions		262.4
4.	Interest Accrual: [(1) + ½[(2) - (3)]] x .0750		140.9
5.	Expected UAAL Before Changes: $(1) + (2) - (3) + (4)$		1,955.1
6.	Increase from Benefit Changes		0.0
7.	Changes from Revised Actuarial Assumptions and Methods		0.0
8.	New Entrant Liabilities		42.7
9.	Expected UAAL After Changes: $(5) + (6) + (7) + (8)$		1,997.8
10.	Actual UAAL at End of Year		1,893.8
11.	Gain/(Loss): (9) - (10)	\$	104.0

\* Unfunded actuarial accrued liability

### ANALYSIS OF EXPERIENCE - GAINS/(LOSSES) BY RISK AREA

Type of Risk Area	Total (\$ in millions)	% of Accrued Liabilities
ECONOMIC RISK AREAS		
Pay Increases. If there are smaller pay increases		
than assumed, there is a gain. If greater increases,		
a loss.	\$ (10.8)	(0.1)%
Investment Return. If there is greater investment return than assumed, there is a gain. If less return,		
a loss.	47.7	0.5
NON-ECONOMIC RISK AREAS Non-Casualty Retirements. If members retire at older ages or with lower final average pays than assumed, there is a gain. If younger ages or higher average pays, a loss.	18.7	0.2
	10.7	0.2
Disability Retirements. If there are fewer disabilities than assumed, there is a gain. If more, a loss.	1.2	0.0
Death-in-Service Benefits. If there are fewer claims than assumed, there is a gain. If more, a loss.	(0.3)	0.0
Withdrawal. If more liabilities are released by other separations than assumed, there is a gain. If smaller releases, a loss.	11.5	
	14.6	0.2
Total Active Member Actuarial Gains/(Losses)	\$ 71.1	0.8%
Retired Life Mortality. Other. Includes data adjustments at retirement, timing of financial transactions, and miscellaneous	39.0	0.4
unidentified sources.	(6.1)	(0.1)
Total Actuarial Gains/(Losses)	\$ 104.0	1.1%

### SUMMARY OF PLAN PROVISIONS

The Old Contributory Plan is available to persons who became members of APERS before January 1, 1978. The Non-Contributory Plan applies to all persons first hired after January 1, 1978 and before July 1, 2005 in APERS-covered employment. The New Contributory Plan applies to all persons hired after July 1, 2005 in APERS-covered employment or Non-Contributory members who elected to participate in the New Contributory Plan.

#### New Contributory Plan

Non-Contributory Plan

Actuarial

With a full benefit, after either (a) age 65 with 5 years of service, or (b) 28 years of actual service, regardless of age. For sheriff and public safety members, the age 65 requirement is reduced 1 month for each 2 months of actual service, but not below age 55 (age 52 for sheriff members with a minimum of 10 years of actual service).

With a full benefit, after either (a) age 65 with 5 years of service, or (b) 28 years of actual service, regardless of age. For sheriff and public safety members, the age 65 requirement is reduced 1 month for each 2 months of actual service, but not below age 55 (age 52 for sheriff members with a minimum of 10 years of actual service).

With a reduced benefit, after age 55 with 5 years of service or any age with 25 years of service. The reduction is equal to  $\frac{1}{2}$  of 1% for each month retirement proceeds normal retirement age or 1% for each month below 28 years of actual service, whichever is less.

With a reduced benefit, after age 55 with 5 years of service or any age with 25 years of service. The reduction is equal to  $\frac{1}{2}$  of 1% for each month retirement proceeds normal retirement age or 1% for each month below 28 years of actual service, whichever is less.

#### Final Average Compensation (FAC)

Average of highest 36 calendar months of covered compensation.

Average of highest 36 calendar months of covered compensation.

#### Voluntary Retirement

### New Contributory Plan

### Non-Contributory Plan

#### Full Age and Service Retirement Benefit

2.00% of FAC times years of service (2.03% for service prior to July 1, 2007), plus .5% of FAC times years of service over 28 years for service after July 1, 2009. The minimum monthly benefit is \$150 minus any age and beneficiary option reductions. 1.72% of FAC times years and months of credited service (1.75% for service prior to July 1, 2007), plus .5% of FAC times years of service over 28 years for service after July 1, 2009. If retirement is prior to age 62, an additional .33% of FAC times years of service will be paid until age 62. The portion of the APERS benefit based on service before 1978 cannot be less than the amount provided by contributory provisions in effect at the time of retirement. The minimum monthly benefit is \$150 minus any age and beneficiary option reductions.

#### Benefit Increases After Retirement

Annually, there will be a cost-of-living adjustment equal to 3% of the current benefit.

Annually, there will be a cost-of-living adjustment equal to 3% of the current benefit.

#### Member Contribution Rates

5% of covered compensation (pre-tax). Member contributions are refundable if APERS-covered employment terminates before a monthly benefit is payable. Members will earn interest on the contributions at a rate of 4% annually.

No employee contributions for service after January 1, 1978. If there is service before January 1, 1978, contributions for that period are refundable later in the same manner as under the Contributory Plan.

### Vested Retirement Benefits

5 years service, and leaving APERS-covered employment before full retirement age. Deferred full retirement benefit, based on service and pay at termination, begins at age 65. A death benefit is payable to surviving spouse of member who dies before benefit commencement.

In place of deferred full benefit, at age 55 or older a qualifying member can elect an immediate reduced benefit. 5 years service and leaving APERS-covered employment before full retirement age. Deferred full retirement benefit, based on service and pay at termination, begins at age 65. A death benefit is payable to surviving spouse of member who dies before benefit commencement.

In place of deferred full benefit, at age 55 or older a qualifying member can elect an immediate reduced benefit.

Non-Contributory Plan Total and Permanent Disability Disabled after 5 years service, including credit for Disabled after 5 years service, including credit for 18 of the 24 months preceding disability. 18 of the 24 months preceding disability.

Amount is computed as an age & service benefit, based on service and pay at disability.

If death occurs before total monthly benefit payments equal member's accumulated contributions, the difference is refunded.

A retiring member can also elect an optional form of benefit, which provides beneficiary protection paid for by reducing the retired member's benefit amount. Should the member elect a straight life benefit and decease within 12 months of the date of retirement, a benefit may be payable to the surviving spouse under certain conditions.

### Member contributions before 1978 are protected in the same manner as under the Contributory Plan.

Amount is computed as an age & service benefit,

A retiring member can also elect an optional form of benefit, which provides beneficiary protection paid for by reducing the retired member's benefit amount. Should the member elect a straight life benefit and decease within 12 months of the date of retirement, a benefit may be payable to the surviving spouse under certain conditions.

### Death While in APERS-Covered Employment

Member's	accumulated	contributions	are	Member's accumulated contributions before 1978
refundable.				are refundable.

If the member had 5 years service, monthly benefits are payable instead. Surviving spouse receives a benefit computed as if member had retired and elected the Joint & 75% Survivor Option. Payment begins immediately.

Each dependent child receives benefit of 10% of compensation (maximum of 25% for all children).

Dependent parents benefits are payable if neither spouse nor children's benefits are payable.

If the member had 5 years service, monthly benefits are payable instead. Surviving spouse receives a benefit computed as if member had retired and elected the Joint & 75% Survivor Option. Payment begins immediately.

Each dependent child receives benefit of 10% of compensation (maximum of 25% for all children).

Dependent parents benefits are payable if neither spouse nor children's benefits are payable.

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### Actuarial

### based on service and compensation at disability. **Death after Retirement**

New Contributory Plan



Membership Group	Service Credits
Public Safety Members (including State Capitol Police and Wildlife Sub-Division members) hired before July 1, 1997	1-1/2 times regular rate with 5 years actual service required to meet benefit eligibility rules.
Governor (hired before July 1, 1999)	3 times regular rate with 5 years actual service required to meet death-in-service eligibility and 4 years actual service required for other benefit eligibility.
Elected State Constitutional Officers (hired before July 1, 1999)	2-1/2 times regular rate with 5 years actual service required to meet benefit eligibility.
General Assembly	Regular crediting rate with 5 years of actual service required to meet death-in-service eligibility and 10 years of actual service required for other benefit eligibility.
Other Elected Public Officials (municipal and county officials)	2 times regular rate with 5 years actual service required to meet benefit eligibility.
All Other Members	Poquilar rate

All Other Members

Regular rate.

### Arkansas Public Employees Deferred Retirement Option Plan

Members with 28 years of actual service in APERS or in combination with a reciprocal System are eligible to participate.

Members, for a maximum of 7 years, may continue employment and have 75% of their accrued benefit (at date of participation with 30 or more years of service) paid into the Deferred Retirement Option Plan in lieu of any further benefit accruals.

The payments into the Deferred Retirement Option Plan accumulate with interest at a rate established by the Board. The interest is paid on the mean balance and is paid to the member at termination of active membership in either a lump sum or as an annuity.

Employer contributions continue for members participating in the DROP.

### STATISTICAL



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### STATEMENT OF FIDUCIARY NET POSITION - 10 YEAR SCHEDULE

	2016		2015	2014
ASSETS				
Cash and Cash Equivalents	\$ 239,355,424	\$	230,352,583	\$ 212,880,111
Receivables				
Contributions	4,538,850		4,157,178	4,111,080
Dec 2004 Actuarial Liability Receivable	8,890,840		8,978,643	9,612,705
Investment Principal Receivable	52,383,622		40,842,637	38,741,350
Accrued Investment Income Receivable	16,918,109		15,984,105	32,846,584
Termination Agreement Receivable	0		5,281,099	0
Allowance for Doubtful Accounts	0		(1,922,440)	0
Other Receivables	 0		0	 0
otal Receivables	82,731,421		73,321,222	85,311,719
nvestments At Fair Value				
Government Securities				
U.S. Government Securities	151,567,072		98,546,504	126,810,589
Futures	(1,457,483)		(855,875)	290,751
Government Agency Securities	120,720,514		103,244,018	116,887,114
Corporate Securities				
Collateralized Obligations	32,341,769		41,338,642	164,723,838
Corporate Bonds	390,159,487		416,500,311	553,666,403
Convertible Bonds	150,159,963		188,699,681	211,537,280
Convertible Preferred Stock	62,489,439		49,132,761	41,420,248
Common Stock	2,291,993,978		2,524,285,757	2,522,287,242
Equity Index Funds	680,177,673		641,002,358	648,733,806
Equity Commingled	0		88,137,673	81,917,142
High Yield Income Fund	59,886,227		60,023,193	60,544,471
Options			0	0
International Securities				
Global Fixed Income Fund	0		0	9,740,932
Government Fixed Obligations			0	0
Corporate Fixed Income	26,623,673		28,458,972	49,192,340
Equity Securities	956,342,319		1,144,990,165	1,175,864,056
Global Preferred Stock	1,412,303		1,224,203	0
Equity Pooled Fund Units	566,627,008		708,532,111	724,622,479
Global Equity Index Funds	0		0	0
Global Collateralized Obligations	0		0	1,055,030
Emerging Markets	0		1,523,537	32,873,981
Emerging Markets Collateralized Obligations	0		0	197,328
Forward Contracts	(527,453)		345,529	(188,150)
Core Plus Bond Fund	430,447,478		402,136,164	0
Interest Rate Swaps	0		0	(18,837)
Real Estate	719,132,033		386,947,368	315,211,143
Diversified Strategies	360,402,608		254,613,311	250,259,491
Timberland	132,227,836		157,231,753	167,689,287
Municipal Bonds	0		0	8,424,105
Commercial Loans	12,419,009		5,138,520	21,619,217
Total Investments	 7,143,145,454		7,301,196,656	 7,285,361,286
Securities Lending Collateral Investments, At Fair Value	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,200,001,200
Repurchase Agreements	00 107 701		190 245 050	175 243 502
	80,487,784		180,345,059	175,342,583
Asset Backed Floating Rate Notes	187,766,700		249,063,773 0	174,398,971
U.S. Agencies U.S. Governments	0		0	0
Certificates of Deposit	0		0	33,883,375
•	0		0	50,374,214
Commercial Paper	•		-	
Corporate Floating Rate Notes Corporate Bonds	559,302,831 0		510,360,541 0	481,267,908 0
Time Deposits	•		•	•
•	70,319,030		53,240,634	102,322,066
Fixed Rate Notes	0 0		0 0	23,746,442
Bank Obligations				0
Asset Backed Securities	 0		0	 0
otal Securities Lending Collateral Investments	897,876,345		993,010,007	1,041,335,559
Prepaids and Other Assets	21,013		29,906	15,947
ixed Assets, Net	 15,662,882		10,372,669	 5,959,437
OTAL ASSETS	8,378,792,539		8,608,283,042	8,630,864,059
IABILITIES				
Accrued Expenses and Other Liabilities	8,338,000		9,050,136	9,448,802
Compensated Absences Payable	0		296,754	298,007
Investment Principal Payable	96,542,343		49,935,802	42,757,637
Other Post Employment Benefits	2,707,649		2,273,819	2,024,716
Securities Lending Liability	900,880,227		996,629,718	1,045,145,270
Due to Other Agencies	 0		103,574	 0
		_	103,574 1,058,289,804 7,549,993,238	\$ 0 1,099,674,432 7,531,189,627

### Statistical

### Arkansas Public Employees Retirement System Annual Financial Report 2016

 2013		2012	2011			2010	 2009		2008		2007
\$ 197,005,448	\$	177,086,939	\$ 141,892,5	17	\$	119,233,185	\$ 144,370,189	\$	164,106,333	\$	161,350,604
4,026,944		3,122,202	3,312,7	90		2,214,443	2,230,764		2,064,104		2,490,030
10,145,451		10,313,641	11,354,3			11,949,695	11,063,510		11,016,019		2,120,000
19,706,894		19,366,624	41,840,0			27,293,510	45,728,778		56,734,490		71,265,845
19,891,358		16,065,808	15,686,8	96		14,878,479	12,486,745		13,410,220		15,771,613
0		0		0		0	0		0		0
0		0		0		0	0		0		0
 843,783		840,687	-	0		0	 0		0		0
54,614,430		49,708,962	72,194,1	53		56,336,127	71,509,797		83,224,833		89,527,488
103,365,196		84,322,856	75,992,8			56,692,011	79,110,077		155,857,122		75,283,764
633,126		(315,569)	(272,7			1,089,585	1,247,843		120,796		0
135,034,237		153,440,708	164,262,8	51		200,033,915	372,632,738		350,522,222		334,234,608
166,864,026		177,548,338	203,593,5			181,322,952	126,099,722		196,931,595		228,739,239
492,099,617		505,472,866	557,868,2			497,737,991	301,391,448		244,945,286		257,249,675
170,566,983		150,231,542	182,943,8			173,917,850	135,055,273		163,374,858		175,316,139
39,474,969		38,337,186	55,552,3			35,097,199	39,503,362		37,915,127		44,318,594
2,038,116,530		1,810,412,751	2,058,851,4			1,570,950,462	1,499,257,304		1,970,881,463		1,999,739,571
551,082,519		469,596,060	634,286,9			494,513,356	337,125,950		455,441,280		487,951,829
64,776,089		53,821,018	44,039,5			32,510,013	30,033,865		43,094,014		244,991,960
55,765,901		51,017,497	56,570,7			50,850,253	42,208,121		35,465,720		37,831,944
0		0		0		0	0		20,349		0
10,770,871		1,232,473	133,5	98		3,840,549	0		10,904,054		8,739,267
0		0		0		0	13,469,217		13,826,156		15,211,812
36,101,993		9,200,336	9,014,9			0	5,156,065		2,747,129		5,331,865
715,367,311		592,247,709	438,567,6			9,212,260	264,903,613		554,482,483		634,645,370
0		0		0		0	0		0		0
610,149,121		880,417,052	649,710,4	60		281,549,155	448,929,500		686,835,703		799,248,572
296,199,571		0	2 5 4 7 0	0		0	0		0		0
5,481,114		6,841,714	2,517,0			500,233,798	0		0		0
26,175,846		20,049,577 0	19,223,1	33 0		18,109,421 0	15,783,408 0		38,575,304 0		47,477,880 0
235,133 785,881		137,066	230,3			79,024	(81,302)		(349,553)		141,184
0		0	250,5	0		79,024 0	(81,302)		0		0
4,238		(42,893)	36,0	-		0	0		0		0
259,578,181		224,390,805	206,850,5			166,155,640	188,073,758		268,845,235		219,680,821
217,372,992		0		0		0	0		0		0
204,819,735		267,475,739	296,638,7	71		294,495,311	294,367,676		240,170,440		216,638,186
5,167,044		5,184,736	4,609,3			5,221,420	6,961,524		9,163,935		13,904,836
 21,572,758		18,452,665	24,900,0	31		34,220,712	 43,914,142		26,595,311		19,595,697
6,227,560,982		5,519,472,231	5,686,121,4	36		4,607,832,877	4,245,143,304		5,506,366,028		5,866,272,812
131,976,556		125,979,775	149,532,6	50		80,043,105	112,640,635		5,759,924		0
105,713,712		94,209,913		0		0	0		0		0
11,103,225		5,980,790		0		0	0		0		0
0		9,689,267		0		0	0		0		0
43,061,345		59,482,209		0		0	0		0		0
70,407,711		38,754,223		0		0	0		0		0
290,949,419		233,283,293		0		0	0		0		0
0		0	268,890,2	.91		182,188,563	249,979,379		292,941,710		204,943,347
0		0		0		0	0		0		0
0		0	00 1 46 2	0		0	0		0		0
94,783,855 0		0	80,146,2			130,270,736	0		378,952,302		77,499,382 193,286,465
 747,995,823		567,379,472	<u> </u>			<u>38,751,500</u> 431,253,904	 <u>60,640,313</u> 423,260,327		<u>111,001,863</u> 788,655,800		475,729,195
29,640		23,672	46,3			129,340	423,200,327 127,404		1,764,984		1,505,559
44,592		54,917	66,1			71,899	79,562		50,808		44,577
 7,227,250,915		6,313,726,193	6,450,486,5			5,214,857,332	 4,884,490,583		6,544,168,786		6,892,962,606
7,799,664		7,682,381	7,520,4	15		6,687,309	6,304,171		8,140,996		7,990,755
327,572		302,132		0		0	0		0		0
34,914,852		44,545,629	76,495,8			47,661,684	104,638,383		108,712,061		127,507,745
1,669,923		1,322,763	1,038,0			754,059	475,017		208,009		0
747,995,823		567,379,471	550,165,9			431,253,904	423,260,327		788,655,799		774,261,565
72,580		77,955		0		0	 0		0		12,958,488
		621,310,331	635,220,2	27		486,356,956	534,677,898		905,716,865		922,718,553
 <u>792,780,414</u> 6,434,470,500	-	5,692,415,862	\$ 5,815,266,3		~	4,728,500,377	 4,349,812,686	-	5,638,451,921	~	5,970,244,053

### STATEMENT OF CHANGES IN FIDUCIARY NET POSITION - 10 YEAR SCHEDULE

	2016	2015	2014
ADDITIONS			
Contributions			
Employer	\$ 263,141,390	\$ 262,327,561	\$ 264,477,703
Plan Members	55,944,132	51,596,001	48,237,869
Supplemental	404,433	392,653	381,216
Total Contributions	319,489,954	314,316,215	313,096,788
Investment Income			
Interest	72,456,583	73,075,336	51,082,662
Dividends	78,971,953	80,542,075	91,368,004
Investment Gain/(Loss)	(130,702,730)	42,240,341	1,090,192,683
Security Lending Income	4,494,855	2,930,365	3,672,418
Real Estate Income	0	0	0
Other	1,322,030	0	0
Total Investment Income	26,542,692	198,788,117	1,236,315,766
Less: Investment Expense	30,720,006	29,167,098	27,885,272
Net Investment Income	(4,177,314)	169,621,019	1,208,430,494
Other Additions			
Miscellaneous Additions	952,597	1,029,024	1,031,360
Transfer from Other Public Employee Retirement Systems	5,051,635	5,267,700	5,433,053
Miscellaneous Transfers from State Agencies	266,835	261,739	255,251
Transfer from Teachers Retirement System	0	0	0
Transfer of Arkansas District Judges Retirement System	0	0	0
Total Other Additions	6,271,067	6,558,462	6,719,664
OTAL ADDITIONS	321,583,707	490,495,697	1,528,246,947
DEDUCTIONS			
Benefits	480,913,495	451,912,791	414,548,645
Refunds of Contributions	13,188,729	12,195,637	9,455,348
Administrative Expenses	7,366,640	7,201,144	7,209,769
TOTAL DEDUCTIONS	501,468,864	471,309,572	431,213,761
ADJUSTMENTS			
Actuarial Adjustment to DJ Unfunded Liability	216,239	(382,513)	(314,059)
NET INCREASE (DECREASE)	(179,668,919)	18,803,612	1,096,719,127
NET POSITION RESTRICTED FOR PENSION BENEFITS			
Beginning of Year	7,549,993,238	7,531,189,627	6,434,470,500
	,,,	, , ,	.,,,

# Statistical

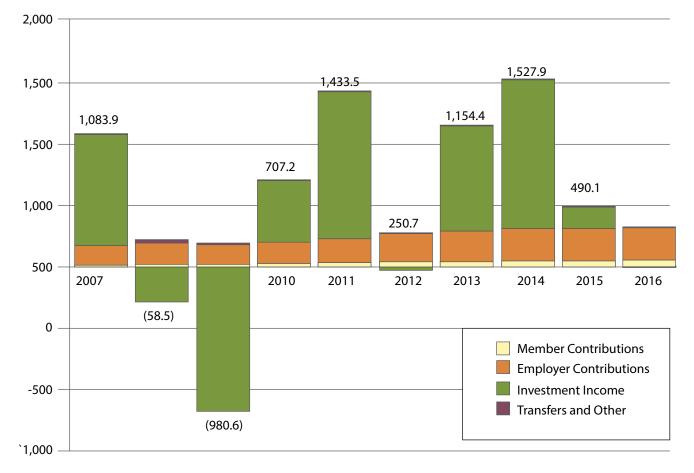
	2013	2012	2011	2010		2009	2008	2007
Ş	249,062,186	\$ 230,495,674	\$ 196,428,733	\$ 170,186,564	\$	159,827,501	\$ 174,119,820	\$ 163,888,295
	44,549,911	41,361,523	34,639,544	30,334,716		23,722,994	18,443,261	12,192,289
	1,863,992	1,481,214	0	0		0	0	0
	295,476,089	 273,338,411	 231,068,277	 200,521,280		183,550,495	 192,563,081	 176,080,584
	52,116,606	59,199,267	62,101,600	62,331,626		62,046,908	65,706,695	66,813,293
	72,457,239	59,575,384	53,508,558	43,820,724		45,164,566	48,798,880	57,456,683
	749,543,679	(129,527,282)	1,097,554,466	410,511,458		(1,269,800,874)	(380,924,989)	794,931,551
	1,776,316	729,793	1,031,841	2,050,050		10,670,818	37,091,199	41,743,197
	0	(34,602)	(55,267)	(7,588)		(70,140)	(65,458)	186,527
	0	0	0	7,620		(62,078	0	(20,520)
_	875,893,840	 (10,057,440)	 1,214,141,198	 518,713,890		(1,152,050,800)	 (229,393,673)	 961,110,731
	23,973,149	20,084,815	20,643,587	18,080,990		21,680,124	54,209,025	61,777,033
	851,920,691	 (30,142,255)	 1,193,497,611	 500,632,900		(1,173,730,924)	 (283,602,698)	 899,333,698
	1,203,348	191,882	2,557,261	(331,483)		3,165,392	2,040,614	2,265,261
	5,848,612	0	0	0		0	0	0
	0	0	78,023	75,737		71,997	74,462	190,035
	0	7,307,481	6,331,031	6,355,482		6,344,427	6,367,268	6,389,677
	0	 0	 0	 0		0	 24,081,555	 0
_	7,051,960	 7,499,363	 8,966,315	 6,099,736	_	9,581,816	 32,563,899	 8,844,973
_	1,154,448,740	 250,695,519	 1,433,532,203	 707,253,916	_	(980,598,613)	 (58,475,718)	 1,084,259,255
	396,607,128	359,330,673	344,140,357	318,998,006		299,896,780	266,296,562	244,137,717
	8,446,701	7,420,785	6,123,910	3,586,861		2,661,289	1,919,767	632,790
	7,340,273	6,794,526	6,374,379	5,981,358		5,482,554	5,100,085	4,747,840
	412,394,102	 373,545,984	 356,638,646	 328,566,225		308,040,623	 273,316,414	 249,518,347
	742,054,638	(122,850,465)	1,076,893,557	378,687,691		(1,288,639,236)	(331,792,132)	834,740,908
	5,692,415,862	 5,815,266,327	 4,738,372,770	 4,349,812,685	_	5,638,451,921	 5,970,244,053	 5,135,503,145
\$	6,434,470,500	\$ 5,692,415,862	\$ 5,815,266,327	\$ 4,728,500,376	\$	4,349,812,685	\$ 5,638,451,921	\$ 5,970,244,053

## SCHEDULE OF REVENUES BY SOURCE

(for the fiscal year ended June 30, 2016)

Year Ended June 30	Co	Member ontributions	С	Employer Contributions	Investment Income	-	ransfers nd Other	Total
2007	\$	12,192,289	\$	163,888,295	\$ 899,333,698	\$	8,844,973	\$ 1,084,259,255
2008		18,443,261		174,119,820	(283,602,698)		32,563,899	(58,475,718)
2009		23,722,994		159,827,501	(1,173,730,924)		9,581,816	(980,598,613)
2010		30,334,716		170,186,564	500,632,900)		6,099,736	707,253,916
2011		34,639,544		196,428,733	1,193,497,611		8,966,315	 1,433,532,203
2012		40,220,553		231,511,392	(30,142,255)		9,105,829	250,695,519
2013		44,549,911		249,062,186	851,920,691		8,915,952	1,154,448,740
2014		48,237,869		264,477,703	1,208,430,494		6,786,822	 1,527,932,888
2015		51,596,001		262,720,214	169,621,019		6,558,462	490,495,697
2016	\$	55,944,132	\$	263,545,822	\$ (4,177,314)	\$	6,271,067	\$ 321,583,707

### Schedule of Revenue by Source (Millions)



# Statistical

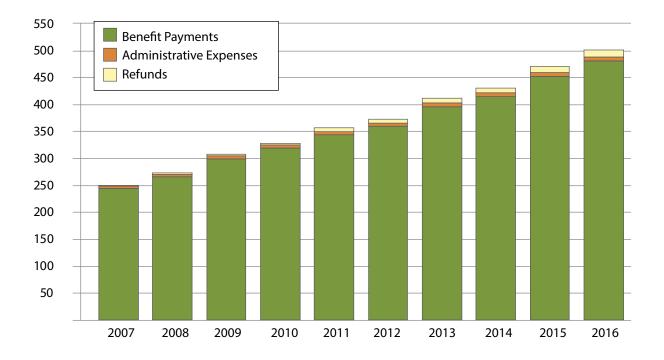
### SCHEDULE OF EXPENSES BY TYPE

(for the fiscal year ended June 30, 2016)

Year Ended	Benefit	Administrative			
June 30	Payments*	Expenses	Refunds	Total	
2007	\$ 244,137,717	\$ 4,747,840	\$ 632,790	\$ 249,518,347	
2008	266,301,400	4,892,076	1,900,783	273,094,259	
2009	299,896,780	5,482,554	2,661,289	308,040,623	
2010	318,998,006	5,981,358	3,586,861	328,566,225	
2011	344,140,357	6,374,379	6,123,910	356,638,646	
2012	359,330,673	6,794,526	7,420,785	373,545,984	
2013	396,607,128	7,340,273	8,446,701	412,394,102	
2014	414,548,645	7,209,769	9,455,348	431,213,761	
2015	451,912,791	7,201,144	12,195,637	471,309,572	
2016	\$ 480,913,495	\$ 7,366,640	\$ 13,188,729	\$ 501,468,864	

\*Includes DROP and PAW distributions.

### Schedule of Expenses by Type (Millions)



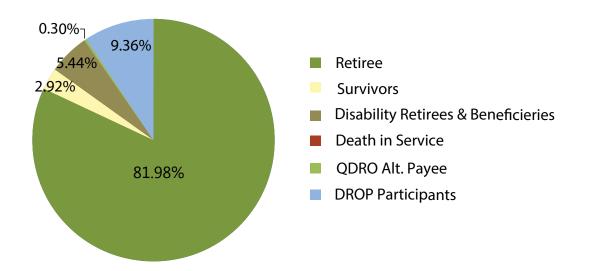
## SCHEDULE OF BENEFIT EXPENSES BY TYPE $^{\ast}$

(for the fiscal year ended June 30, 2016)

	Age and Service		ervice	_	Disability			QDRO			
Year Ended June 30	Retirees		Beneficiaries		Retirees & Beneficiaries		Death in Service	Alternative Payees	DROP Participants		
2007	206,975,784		2,598,444		14,215,140		577,224				
2008	224,223,624		2,639,616		15,937,188		534,252	**			
2009	248,677,584		2,733,372		17,426,148		507,672				
2010	265,728,720		2,797,848		18,793,560		440,964	***			
2011	288,680,604		10,136,820		20,302,152		408,348				
2012	309,980,256		10,502,736		21,950,568		347,292				
2013	333,567,174		11,125,082		26,158,872		336,180	**			
2014	363,644,841		12,006,363		27,648,624		320,928				
2015	392,995,993		13,555,679		26,854,608		7,428	1,346,409	49,188,840		
2016	\$ 417,856,215	\$	14,859,185	\$	27,738,864	\$	41,088	\$ 1,549,793	\$ 47,686,116		

\*Expenses are based on annualized June 30 benefits amounts.

Prior to 2015, disability beneficiaries were reported in the same category as death-in-service beneficiaries.



# Statistical

Age & Service

## SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT

(as of June 30, 2016)

Type of Annuity	Number	Annual Annuities	11%
Age & Service Retirees			5%
Life	19,638	\$ 298,739,748	9%
Option A-60 (5 years certain)	1,403	18,682,622	70%
Option A-120 (10 years certain)	2,549	31,182,442	5%
Option B-50 (joint and 50% survivor)	1,341	26,510,244	
Option B-75 (joint and 75% survivor)	2,943	41,354,523	
Option B-100 (joint and 100% survivor)	56	1,386,636	
Total	27,930	417,856,215	
Beneficiaries of Age & Service Retirees			Beneficiaries
Life	281	2,225,775	beneficialies
Option A-60	39	396,066	2%
Option A-120	211	2,011,081	18%
Option B-50	345	3,051,106	
Option B-75	615	6,402,837	3%
Option B-100	35	772,320	40%
Total	1,526	14,859,185	1470
Total Age & Service Retirees & Beneficiaries	29,456	432,715,400	23%
Disability Retirees			
Life	2,084	19,452,732	
Option A-60	157	1,337,964	
Option A-120	364	3,231,864	Disability
Option B-50	156	1,477,332	
Option B-75	260	2,238,972	9%
Option B-100	0	0	5%
Total	3,021	27,738,864	12%
Death-in-Service Beneficiaries	8	41,088	69%
Total Death and Disability Retirees & Beneficiaries	3,029	27,779,952	5%
QDRO Alternate Payees	203	1,549,793	
Total Retirees & Beneficiaries	32,688	462,045,145	
DROP Participants	1,526	47,686,116	
Total Including DROP Participants	34,214	\$ 509,731,261	Life
			Option A-60

Option A-120Option B-50Option B-75Option B-100

## SCHEDULE OF AVERAGE BENEFIT PAYMENTS

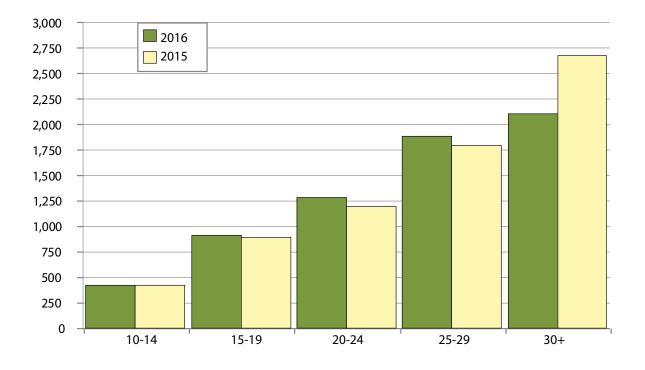
(for fiscal years ended June 30, 2007 - June 30, 2016)

	Years of Credited Service				
	10-14	15-19	20-24	25-29	30+
Retirement Effective Dates - July 1, 2015 to June 30, 2016					
Average Monthly Benefit	\$ 420.34	\$ 911.03	\$ 1,281.45	\$1,887.00	\$2,099.87
Average Monthly Final Average Salary	2,413.56	3,195.80	3,656.73	3,828.65	4,028.25
Number of Active Retirees	678	201	137	240	119
Retirement Effective Dates - July 1, 2014 to June 30, 2015					
Average Monthly Benefit	426.99	897.29	1,193.16	\$1,792.53	2,671.37
Average Monthly Final Average Salary	2,471.46	3,181.51	3,302.20	3,537.38	4,301.26
Number of Active Retirees	704	217	172	261	152
Retirement Effective Dates - July 1, 2013 to June 30, 2014					
Average Monthly Benefit	388.26	825.79	1,242.74	1,830.60	2,628.91
Average Monthly Final Average Salary	2,263.88	2,899.83	3,371.98	3,520.40	3,925.18
Number of Active Retirees	646	203	146	264	107
Retirement Effective Dates - July 1, 2012 to June 30, 2013					
Average Monthly Benefit	400.14	826.20	1,229.95	1,931.07	2,817.45
Average Monthly Final Average Salary	2,295.27	2,771.14	3,249.64	3,656.93	4,159.36
Number of Active Retirees	677	185	159	271	139
Retirement Effective Dates - July 1, 2011 to June 30, 2012					
Average Monthly Benefit	376.35	862.30	1,184.69	2,083.89	2,609.37
Average Monthly Final Average Salary	2,118.61	2,884.05	3,121.76	3,728.01	3,783.00
Number of Active Retirees	611	182	161	266	105
Retirement Effective Dates - July 1, 2010 to June 30, 2011					
Average Monthly Benefit	382.27	775.84	1,146.35	2,024.70	2,944.21
Average Monthly Final Average Salary	2,093.49	2,628.94	2,994.48	3,488.85	4,144.64
Number of Active Retirees	525	167	154	266	153
Retirement Effective Dates - July 1, 2009 to June 30, 2010					
Average Monthly Benefit	356.78	742.92	1,011.33	1,979.18	2,572.18
Average Monthly Final Average Salary	1,916.66	2,525.25	2,576.35	3,368.01	3,790.53
Number of Active Retirees	513	147	135	228	106
Retirement Effective Dates - July 1, 2008 to June 30, 2009					
Average Monthly Benefit	358.46	730.79	1,040.96	2,150.67	2,709.62
Average Monthly Final Average Salary	1,780.37	2,520.70	2,676.18	3,313.57	3,746.01
Number of Active Retirees	528	178	165	431	246
Retirement Effective Dates - July 1, 2007 to June 30, 2008					
Average Monthly Benefit	389.06	830.62	972.27	2,063.50	2,764.80
Average Monthly Final Average Salary	1,897.15	2,531.92	2,465.04	3,276.65	3,688.20
Number of Active Retirees	416	146	129	392	142
Retirement Effective Dates - July 1, 2006 to June 30, 2007					
Average Monthly Benefit	401.91	820.09	1,144.14	2,244.73	3,086.06
Average Monthly Final Average Salary	1,882.95	2,489.80	2,670.83	3,318.32	3,782.64
Number of Active Retirees	415	162	146	393	182
Retirement Effective Dates - July 1, 2006 to June 30, 2016					
Average Monthly Benefit	391.89	1,518.69	2,325.85	2,485.21	5,740.61
Average Monthly Final Average Salary	1,345.55	1,654.90	1,715.79	1,578.42	1,742.60
Number of Active Retirees	5,713	1,788	1,504	3,012	1,451

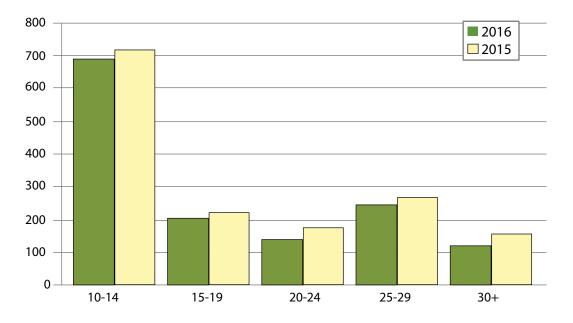
# Statistical

## STATISTICAL GRAPHS

### Comparison of Monthly Annuity by Credited Years of Service



### Comparison of Retirees by Credited Years of Service

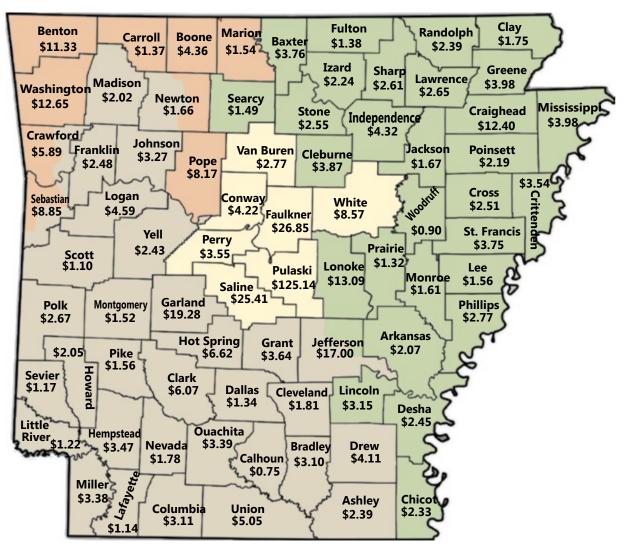


## APPENDIX



Schedule of Retirees and Benefits Paid by County $oldsymbol{1}$	29
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(The figures shown are benefits paid by county in millions of dollars)

	Total Retirees	Total Amount
1st District	7,973	\$ 94,475,338
2nd District	11,253	\$ 196,503,449
3rd District	3,951	\$ 51,340,985
4th District	9,288	\$ 117,821,055
Out of State	2,379	\$ 24,124,974
<b>Total Retirees and Benefits</b>	34,844	\$ 484,265,800

## SCHEDULE OF RETIREES AND BENEFITS PAID BY COUNTY $^{\ast}$

(for the fiscal year ended June 30, 2016)

District I			District II				
Total Retirees 7,973		Total Retirees	11,253				
Total Amount	\$94	1,475,338	Total Amount	\$196,503,449			
County	Retirees	Benefits Paid	County	Retirees	Benefits Paid		
Arkansas	192	\$ 2,072,501	Conway	312	\$ 4,223,26		
Baxter	327	\$ 3,756,043	Faulkner	1,716	\$ 26,845,03		
Chicot	201	\$ 2,332,807	Perry	245	\$ 3,552,35		
Clay	181	\$ 1,746,711	Pulaski	6,547	\$ 125,140,80		
Cleburne	294	\$ 3,873,502	Saline	1,482	\$ 25,409,13		
Craighead	1007	\$ 12,402,315	Van Buren	226	\$ 2,765,41		
Crittenden	310	\$ 3,541,376	White	725	\$ 8,567,44		
Cross	233	\$ 2,511,286					
Desha	206	\$ 2,450,128	<b></b>				
Fulton	138	\$ 1,384,728	District III				
Greene	350	\$ 3,975,200	Total Retirees		3,951		
Independence	398	\$ 4,324,362	Total Amount	\$51,340,985			
Izard	201	\$ 2,242,834					
Jackson	145	\$ 1,665,980	County	Retirees	Benefits Pai		
Jefferson**	25	\$ 182,611	Benton	887	\$ 11,331,71		
Lawrence	216	\$ 2,654,880	Boone	390	\$ 4,361,73		
Lee	140	\$ 1,562,119	Carroll	148	\$ 1,365,49		
Lincoln	253	\$ 3,150,709	Crawford**	280	\$ 3,848,22		
Lonoke	829	\$ 13,087,914	Marion	147	\$ 1,541,45		
Mississippi	374	\$ 3,981,194	Newton**	45	\$ 366,24		
Monroe	127	\$ 1,607,043	Pope	569	\$ 8,167,23		
Phillips	261	\$ 2,770,599	Sebastian**	586	\$ 7,704,86		
Poinsett	231	\$ 2,189,984	Washington	899	\$ 12,654,03		
Prairie	120	\$ 1,319,646			,,,,		
Randolph	199	\$ 2,390,139					
Searcy	131	\$ 1,488,728					
Sharp	231	\$ 2,608,009					
St. Francis	329	\$ 3,749,118					
Stone	230	\$ 2,549,761					
Woodruff	94	\$ 903,111					

\*Does not include DROP or PAW lump sum payments. Totals may not add due to rounding. \*\*County totals divided over two districts.

## SCHEDULE OF RETIREES AND BENEFITS PAID BY COUNTY\*

(for the fiscal year ended June 30, 2016)

#### **District IV**

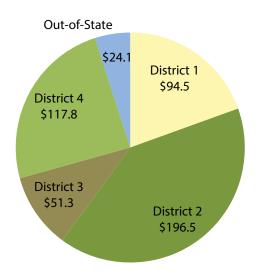
Total Retirees		0 288					
	9,288						
Total Amount	\$11	7,821,055					
County	Retirees	Benefits Paid					
Ashley	232	\$ 2,391,145					
Bradley	253	\$ 3,101,382					
Calhoun	85	\$ 753,912					
Clark	480	\$ 6,074,224					
Cleveland	155	\$ 1,809,460					
Columbia	278	\$ 3,114,233					
Crawford**	152	\$ 2,044,741					
Dallas	137	\$ 1,336,040					
Drew	293	\$ 4,111,635					
Franklin	189	\$ 2,476,353					
Garland	1297	\$ 19,284,177					
Grant	251	\$ 3,644,510					
Hempstead	274	\$ 3,465,527					
Hot Spring	585	\$ 6,617,177					
Howard	176	\$ 2,049,767					
Jefferson**	1101	\$ 16,819,611					
Johnson	227	\$ 3,269,590					
Lafayette	111	\$ 1,140,638					
Little River	145	\$ 1,224,864					
Logan	410	\$ 4,586,758					
Madison	152	\$ 2,018,770					
Miller	314	\$ 3,381,666					
Montgomery	131	\$ 1,517,864					
Nevada	160	\$ 1,780,503					
Newton**	89	\$ 1,294,286					
Ouachita	297	\$ 3,389,629					
Pike	133	\$ 1,563,774					
Polk	255	\$ 2,665,404					
Scott	121	\$ 1,101,393					
Sebastian**	82	\$ 1,140,822					
Sevier	116	\$ 1,165,498					
Union	390	\$ 5,054,615					
Yell	217	\$ 2,431,088					

### **Benefits By District**

(for the fiscal year ended June 30, 2016)

	Total		_
	Retirees	Т	otal Amount
1st District	7,973	\$	94,475,338
2nd District	11,253	\$	196,503,449
3rd District	3,951	\$	51,340,985
4th District	9,288	\$	117,821,055
Out of State	2,379	\$	24,124,974
Total Retirees and Benefits	34,844	\$	484,265,800

### Benefits Paid by District (In MIllions)





# APERS AND ASPRS COMBINED STATEMENT OF FIDUCIARY NET POSITION (as of June 30, 2016)

Arreste	Combined		ACDDC
Assets Cash and Cash Equivalents	Combined \$ 254,636,990	APERS \$ 239,355,424	ASPRS \$ 15,281,566
Cash and Cash Equivalents	\$ 254,050,550	\$ 237,333,727	\$ 15,201,500
Receivables			
Contributions	4,616,530	4,538,850	77,680
Dec 2004 Actuarial Liability Receivable	8,890,840	8,890,840	0
Investment Principal Receivable	54,283,947	52,383,622	1,900,325
Accrued Investment Income Receivable	17,531,835	16,918,109	613,726
Total Receivables	85,323,152	82,731,421	2,591,731
Investments, At Fair Value			
Government Securities			
U.S. Government Securities	157,065,484	151,567,072	5,498,412
Futures Government Agency Securities	(1,510,356) 125,099,903	(1,457,483) 120,720,514	(52,873) 4,379,389
Corporate Securities	123,033,903	120,720,511	1,57 5,505
Collateralized Obligations	33,515,034	32,341,769	1,173,265
Corporate Bonds	404,313,337	390,159,487	14,153,850
Convertible Bonds	155,607,329	150,159,963	5,447,366
Convertible Preferred Stock	64,756,374	62,489,439	2,266,935
Common Stock	2,375,140,842	2,291,993,978	83,146,864
Equity Index Funds	704,852,537	680,177,673	24,674,864
Equity Commingled	0	0	0
High Yield Income Fund International Securities	62,058,725	59,886,227	2,172,498
Global Fixed Income Fund	0	0	0
Corporate Fixed Income	27,589,502	26,623,673	965,829
Equity Securities	991,035,632	956,342,319	34,693,313
Global Preferred Stock	1,463,537	1,412,303	51,234
Equity Pooled Fund Units	587,182,585	566,627,008	20,555,577
Global Collateralized Obligations	0	0	0
Emerging Markets	0	0	0
Emerging Markets Collateralized Obligations	0	0	0
Forward Contracts	(546,587)	(527,453)	(19,134)
Core Plus Bond Fund	446,062,858	430,447,478	15,615,380
Interest Rate Swaps	0	0	0
Real Estate Diversified Strategies	745,220,048	719,132,033	26,088,015
Timberland	373,476,965 137,024,677	360,402,608 132,227,836	13,074,357 4,796,841
Municipal Bonds	0	132,227,030	4,790,041
Commercial Loans	12,869,534	12,419,009	450,525
Total Investments	7,402,277,960	7,143,145,454	259,132,507
Securities Lending Collateral Investments, At Fair Value			
Repurchase Agreements	83,407,646	80,487,784	2,919,862
Asset Backed Floating Rate Notes	194,578,329	187,766,700	6,811,629
U.S. Agencies	0	0	0,011,025
U.S. Governments	0	0	0
Certificates of Deposit	0	0	0
Commercial Paper	0	0	0
Corporate Floating Rate Notes	579,592,708	559,302,831	20,289,877
Corporate Bonds	2,550,970	0	2,550,970
Time Deposits	70,319,030	70,319,030	0
Fixed Rate Notes Bank Obligations	0 0	0	0
Asset Backed Securities	0	0	0
Total Securities Lending Collateral Investments	930,448,683	897,876,345	32,572,338
-		21,013	0
Prepaids and Other Assets Fixed Assets. Net	21,013 15,662,882	15,662,882	0
Total Assets	8,688,370,680	8,378,792,539	309,578,142
Liabilitian		. , . ,	
Liabilities Accrued Expenses and Other Liabilities	0 8,812,545	8,338,000	474,545
Compensated Absences Payable	0,012,545 0	8,558,000 0	474,545
Investment Principal Payable	100,044,618	96,542,343	3,502,275
Other Post Employment Benefits	2,707,649	2,707,649	0
Securities Lending Liability	933,561,537	900,880,227	32,681,310
Due to Other Agencies	0	0	0
Total Liabilities	1,045,126,349	1,008,468,219	36,658,130
Net Position Restricted for Pension Benefits	\$ 7,643,244,332	\$ 7,370,324,320	\$ 272,920,012
			1



### APERS AND ASPRS COMBINED STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

(as of June 30, 2016)

Additions	Combined	APERS	ASPRS
Contributions			
Employer	\$ 269,728,601	\$ 263,141,390	\$ 6,587,211
Plan Member	55,974,302	55,944,132	30,170
Supplemental	6,632,570	404,433	6,228,137
Court Fees	974,516	0	974,516
Driver's License Reinstatement Fees	1,231,566	0	1,231,566
Motor Vehicle Title Fees	4,661,683	0	4,661,683
Total Contributions	339,203,239	319,489,955	19,713,284
Investment Income			
Interest	75,092,432	72,456,583	2,635,849
Dividends	81,842,974	78,971,953	2,871,021
Investment Gain/(Loss)	(135,489,703)	(130,702,730)	(4,786,973)
Security Lending Income	4,681,319	4,494,855	186,464
Other	1,322,030	1,322,030	0
Total Investment Income	27,449,052	26,542,691	906,361
Less: Investment Expense	31,836,412	30,720,006	1,116,406
Net Investment Income	(4,387,360)	(4,177,315)	(210,045)
Other Additions			
Miscellaneous Additions	952,608	952,597	11
Transfers from Other Public Employees Retirement Systems	5,051,635	5,051,635	0
Miscellaneous Transfers from State Agencies	266,835	266,835	0
Total Other Additions	6,271,078	6,271,067	11
Total Additions	341,086,957	321,583,707	19,503,250
Deductions			
Benefits	506,948,961	480,913,495	26,035,466
Refunds of Contributions	13,188,729	13,188,729	0
Administrative Expenses	7,571,982	7,366,640	205,342
Total Deductions	527,709,672	501,468,864	26,240,808
Adjustments			
Actuarial Adjustment to DJ Unfunded Liability	216,239	216,239)	0
Net Increase (Decrease)	(186,406,476)	(179,668,918)	(6,737,558)
Net Position Restricted for Pension Benefits			
Beginning of Year	7,829,650,808	7,549,993,238	279,657,570
End of Year	\$ 7,643,244,332	\$ 7,370,324,320	\$ 272,920,012

Totals may not add due to rounding. See notes to financial statements. The APERS Statement Of Changes In Fiduciary Net Position can be found on page 32.



### APERS AND ASPRS MANAGER DISTRIBUTION - COMBINED STATEMENT

(as of June 30, 2016)

Asset Allocation	Market Value (\$ Thousands)		Percent of Total		APERS		ASPRS	
	(3 1100	isanus)	OFTOLAT		AFLING		AJENJ	
Domestic Equity; 38.12% MCM S&P Index Fund	\$ 704	,852,732	9.24%	Ś	680,177,861	Ś	24,674,871	
CastleArk Management	-	,910,181	4.90	Ŷ	360,820,659	Ŷ	13,089,522	
Golden Capital Mgmt.		,729,014	2.00		147,382,410		5,346,604	
INTECH		,270,585	4.33		318,708,760		11,561,825	
Wellington Mgmt. Co.		,222,084	3.44		253,042,441		9,179,643	
Westwood Mgmt.		,935,984	1.85		136,002,220		4,933,764	
Lazard Asset Mgmt.	255	,600,028	3.35		246,652,205		8,947,823	
Lombardia Capital	139	,041,609	1.82		134,174,161		4,867,448	
SSI Investment Mgmt	226	,736,240	2.97		218,798,855		7,937,385	
Horrell Capital Mgmt.	96	,106,652	1.26		\$92,742,234		3,364,418	
Stephens Inv. Mgmt. Group	223	,852,209	2.94		216,015,786		7,836,423	
	\$ 2,906	,257,318	38.12%	\$	2,804,517,590	\$ 1	01,739,728	
International Equity; 23.12%								
Lazard Asset Mgmt.	\$ 37	5,287,979	4.94%	\$	363,115,217	\$	13,172,762	
Artisan Partners	37	0,167,275	4.85		357,208,781		12,958,494	
Baillie Gifford	35	1,131,930	4.61		338,839,809		12,292,121	
Manning & Napier	32	2,561,002	4.23		311,269,067		11,291,935	
Fidelity Institutional Asset Mgmt.	34	2,998,719	4.50		330,991,318		12,007,401	
	\$ 1,76	3,146,905	23.12%	\$	1,701,424,192	\$	61,722,713	
Fixed Income; 17.08%	\$ 85	5,769,947	11.23%	\$	075 011 007	Ś	20.059.050	
MacKay Shields Prudential Investments	-	5,144,325	5.85	Ş	825,811,897 430,526,093	Ş	29,958,050 15,618,232	
		1,914,272	17.08%	\$	1,256,337,990	\$	45,576,282	
Real Assets; 16.20%	¢ 270	022 (20	4.020/	÷	262.060.015	÷	12 1 62 022	
INVESCO Real Estate		,032,638	4.93%	\$	362,868,815	\$	13,163,823	
INVESCO Global REITS TA Associates Realty Fund X		,535,920 ,649,054	2.03 0.42		149,126,061 30,541,111		5,409,859	
TA Associates Realty Fund X		,500,000	0.42		12,062,411		1,107,943 437,589	
CastleArk Mgmt AR Energy Fund		,028,874	0.80		58,892,428		2,136,446	
CastleArk Mgmt Global Energy Fund		,210,790	1.76		129,512,455		4,698,335	
Pinnacle Forest Investments		,024,677	1.80		132,227,836		4,796,841	
Heitman Real Estate Trust LP		,969,714	3.89		286,573,657		10,396,057	
LaSalle Inc & Growth VI LP		,178,223	0.41		30,086,763		1,091,460	
		,129,890	16.20%	\$	1,191,891,537	\$	43,238,353	
Diversified Strategies; 4.90%								
AQR Capital		,280,724	1.45%	\$	106,420,112	\$	3,860,612	
Blackstone Hedge		,489,460	2.00		147,151,242		5,338,218	
Newton Capital		,706,781	1.45		106,831,254		3,875,527	
	\$ 373	,476,965	4.90%	\$	360,402,608	\$	13,074,357	
Short-term Investment Fund*		4,740,096	0.59%	\$	\$37,477,368	\$	7,262,728	
Composite Fund	\$ 7,62	4,665,446	100.00%	\$	7,352,051,285	\$	272,614,161	

\*Includes UBS receivables. Totals may not add due to rounding. The APERS schedule of manager distribution can be found on page 87.



## APERS AND ASPRS TEN LARGEST HOLDINGS<sup>\*</sup>- COMBINED STATEMENT

(as of June 30, 2016)

Domestic Fixed Income Holdings	Par	Market Value	APERS	ASPRS
U.S. Treasury 2.875% 05/15/2043	13,610,000	\$ 15,304,309	\$ 14,768,549	\$ 535,760
U.S. Treasury 2.125% 08/31/2020	13,020,000	13,655,767	13,177,717	478,049
Commit to Pur FNMA SF MTG 3.50% 07/01/2046	12,470,000	13,157,845	12,697,227	460,618
U.S. Treasury CPI-Inflation 1.125% 01/15/2021	10,389,010	11,111,670	10,722,682	388,988
U.S. Treasury 2.00% 08/31/2021	10,220,000	10,703,099	10,328,415	374,685
U.S. Treasury 2.875% 08/15/2045	9,490,000	10,656,226	10,283,182	373,044
U.S. Treasury 2.125% 05/15/2025	9,490,000	10,024,192	9,673,274	350,918
U.S. Treasury 2.25% 11/15/2024	8,775,000	9,360,468	9,032,785	327,683
U.S. Treasury 3.00% 11/15/2045	7,455,000	8,572,057	8,271,974	300,083
Commit to Pur FNMA SF MTG 4.00% 07/01/2046	7,780,000	8,341,405	8,049,396	292,009
Total		\$ 110,887,038	\$ 107,005,202	\$ 3,881,837
Domestic Equity Holdings	Shares	Market Value	APERS	ASPRS
Apple Inc.	350,891	\$ 33,545,180	\$ 32,370,859	\$ 1,174,320
Facebook Inc.	249,852	28,553,087	27,553,525	999,562
The Home Depot Inc.	219,976	28,088,735	27,105,429	983,306
Amazon.Com Inc.	38,371	27,459,055	26,497,792	961,263
UnitedHealth Group Inc.	169,671	23,957,545	23,118,860	838,685
Microsoft Corp.	462,456	23,663,874	22,835,469	828,404
General Electric Co.	599,423	18,869,836	18,209,257	660,579
Bank of America Corp.	1,264,221	16,776,213	16,188,926	587,287
Altria Group Inc.	231,081	15,935,346	15,377,495	557,851
EOG Resources Inc.	187,160	15,612,887	15,066,325	546,562
Total		\$ 232,461,757	\$ 224,323,939	\$ 8,137,819
International Equity Holdings	Shares	Market Value	APERS	ASPRS
Baidu Inc.	174,981	\$ 28,898,112	\$ 27,886,472	\$ 1,011,640
Medtronic PLC	312,138	27,084,214	26,136,074	948,141
Compass Group PLC	1,347,614	25,617,193	24,720,409	896,784
Samsung Electronics Co. Ltd.	19,925	24,650,031	23,787,104	862,927
Unilever PLC	509,005	24,377,154	23,523,780	853,374
Carlsberg A/S	235,467	22,309,732	21,528,732	781,000
Novartis AG	255,693	21,073,535	20,335,811	737,724
Japan Tobacco Inc.	485,515	19,417,761	18,738,001	679,760
Anheuser-Busch Inbev	145,383	18,993,957	18,329,034	664,924
Aon PLC	146,268	15,976,854	15,417,550	559,304
Total		\$ 228,398,543	\$ 220,402,966	\$ 7,995,578

\*By market value.

Totals may not add due to rounding.

The APERS schedule of top ten largest holdings can be found on page 91.



## APERS AND ASPRS BROKERAGE COMMISSIONS - COMBINED STATEMENT

(for the fiscal year ended 2016)

	Number of	Total	Commission		
Brokerage Firm	Shares Traded	Commission	Per Share	APERS	ASPRS
Credit Suisse	6,279,386	\$ 168,926	\$ 0.03	\$ 163,012	\$ 5,914
Goldman Sachs & Co.	5,276,956	155,810	0.03	150,356	5,454
J.P. Morgan Securities	5,494,090	141,875	0.03	136,908	4,967
Investment Technology Group	4,257,383	118,006	0.03	113,875	4,131
Instinet Corp	4,001,796	111,938	0.03	108,019	3,919
Citigroup Global Markets Inc.	3,663,782	106,462	0.03	102,735	3,727
Citation Group	2,255,637	105,810	0.05	102,106	3,704
Jefferies & Co. Inc	3,576,423	99,377	0.03	95,898	3,479
Capital Institutional Services Inc.	2,068,776	92,895	0.04	89,643	3,252
Deutsche Bank Securities Inc.	3,456,226	92,723	0.03	89,477	3,246
Morgan Stanley & Co. Inc.	2,792,169	75,840	0.03	73,185	2,655
Sanford Bernstein & Co.	3,235,516	74,211	0.02	71,613	2,598
ISI Group Inc.	2,339,198	71,078	0.03	68,590	2,488
Barclays Capital	3,035,903	70,091	0.02	67,637	2,454
Bloomberg Tradebook LLC	2,535,739	69,215	0.03	66,792	2,423
BTIG LLC	3,366,559	67,236	0.02	64,882	2,354
UBS Securities LLC	2,142,400	58,750	0.03	56,693	2,057
Rosenblatt Securities LLC	2,010,714	58,455	0.03	56,409	2,046
BMO Capital Markets Corp.	2,008,497	53,222	0.03	51,359	1,863
Scotia Capital (USA) Inc.	1,739,381	52,051	0.03	50,229	1,822
Simmons & Co. International	1,577,108	47,616	0.03	45,949	1,667
Stifel Nicholaus	1,286,236	47,088	0.04	45,440	1,648
Merrill Lynch Pierce Fenner Smith Inc.	1,854,115	45,179	0.02	43,597	1,582
CDH Securities LLC	1,498,500	44,955	0.03	43,381	1,574
Piper Jaffray & Co.	1,360,419	42,831	0.03	41,332	1,499
Others (including 98 brokerage firms)	24,611,494	743,361	0.03	717,338	26,023
	97,724,403	\$ 2,815,001		\$ 2,716,456	\$ 98,545

Totals may not add due to rounding. The APERS schedule of brokerage commissions can be found on page 92

## APERS AND ASPRS INVESTMENT FEES - COMBINED STATEMENT

(for the fiscal year ended 2016)

· · · · · · · · · · · · · · · · · · ·			Basis	APE	ERS	ASPRS	
	Market Value	Fee	Points	Market Value	Fee	Market Value	Fee
Equities							
SSI Investment Mgmt Convertible Securities	\$ 226,736,240	\$ 896,347	40	\$ 218,798,855	\$ 864,916	\$ 7,937,385	\$ 31,431
Lazard Asset Mgmt Value	255,600,028	762,991	30	246,652,205	736,237	8,947,823	26,754
Golden Capital Mgmt Growth	152,729,014	336,351	22.5	147,382,410	324,557	5,346,604	11,794
Westwood Mgmt SMID Cap	140,935,984	880,385	25	136,002,220	849,515	4,933,764	30,870
MCM S&P 500 Index Fund	704,852,732	149,191	3.5	680,177,861	143,958	24,674,871	5,233
INTECH - Growth	330,270,585	1,380,669	48	318,708,760	1,332,256	11,561,825	48,413
CastleArk Mgmt Growth	373,910,181	1,202,725	35	360,820,659	1,160,552	13,089,522	42,173
Wellington Mgmt. Co Value	262,222,084	779,609	30	253,042,441	752,272	9,179,643	27,336
Stephens Investment Mgmt Growth	223,852,208	1,496,495	77	216,015,785	1,444,020	7,836,423	52,475
*State Street Global Advisors - 130/30	0	152,835	50	0	147,464	0	5,370
Lombardia Capital - Small Cap	139,041,609	943,123	70	134,174,161	910,054	4,867,448	33,070
Horrell Capital Mgmt AR Index Fund	96,106,652	164,091	27	92,742,234	158,337	3,364,418	5,753
Lazard Asset Mgmt Int'l Equity	376,287,979	1,210,394	65	363,115,217	1,167,949	13,172,762	42,444
Manning & Napier Advisors - Int'l Equity	322,561,002	1,618,574	50	311,269,067	1,561,827	11,291,935	56,748
Fidelity Institutional Asset Mgmt Int'l Equity	342,998,719	865,379	25	330,991,318	835,072	12,007,401	30,306
Baillie Gifford - Int'l Equity	351,131,930	1,501,036	44	338,839,809	1,448,406	12,292,121	52,629
Artisan Partners - Int'l Equity	370,167,275	2,112,684	55	357,208,781	2,038,612	12,958,494	74,072
Total Equities	\$ 4,669,404,222	\$ 16,452,876		\$ 4,505,941,781	\$ 15,876,004	\$ 163,462,441	\$ 576,872
Diversified Strategies							
AQR Capital	\$ 110,280,724	\$ 697,023	72	\$ 106,420,112	\$ 672,568	\$ 3,860,612	\$ 24,455
Blackstone Hedge	152,489,460	1,529,661	100	147,151,242	1,475,991	5,338,218	53,671
Newton Capital	110,706,781	657,226	70	106,831,254	634,181	3,875,527	23,044
Total Diversified Strategies	\$ 373,476,965	\$ 2,883,910		\$ 360,402,608	\$ 2,782,740	\$ 13,074,357	\$ 101,170
Fixed Income							
MacKay Shields - Core Plus I	\$ 419,138,803	\$ 805,890	20	\$ 404,465,956	\$ 777,633	14,672,847	28,258
MacKay Shields - Core Plus II	436,631,144	631,119	15	421,345,941	608,989	15,285,203	22,129
Prudential Investments - Core Plus	446,144,325	849,933	20	430,526,093	820,145	15,618,232	29,788
Total Fixed Income	\$ 1,301,914,272	\$ 2,286,942		\$ 1,256,337,990	\$ 2,206,767	\$ 45,576,282	\$ 80,175
Real Assets							
INVESCO Real Estate - Core & Global REITS	\$ 530,568,558	\$ 2,118,302	65	\$ 511,994,876	\$ 2,043,973	\$ 18,573,682	\$ 74,329
#TA Associates Realty Fund X	44,149,054	1,229,979	120	42,603,522	1,186,830	1,545,532	43,149
#LaSalle Inc & Growth VI LP	31,178,223	337,961	135	30,086,763	326,105	1,091,460	11,856
Heitman Real Estate Trust - Core	296,969,714	1,923,974	65	286,573,657	1,856,427	10,396,057	67,547
CastleArk Mgmt AR Energy Fund	61,028,874	688,425	125	58,892,428	664,286	2,136,446	24,138
CastleArk Mgmt Global Energy Fund	134,210,790	1,030,356	100	129,512,455	994,230	4,698,335	36,127
Pinnacle Forest Investments – Timberland	137,024,677	1,228,522	90	132,227,836	1,185,453	4,796,841	43,069
Total Real Assets	\$ 1,235,129,890	\$ 8,557,520		\$ 1,191,891,537	\$ 8,257,304	\$ 43,238,353	\$ 300,216
Other Investment Services		Fee					
Bank of New York Mellon (Custodian)		\$ 511,753			\$ 493,808		\$ 17,945
Callan Associates (Consultant)		267,665			258,268		9,397
Total Other Services		\$ 779,418			\$ 752,075		27,342
Total Investment Service Fees		\$ 30,960,666			\$ 29,874,891		\$1,085,775

\*Terminated manager

# Management fee is a base fee plus a performance fee.

The APERS schedule of investment fees can be found on page 93.

## SUMMARY OF ACTIVE MEMBER VALUATION

(for state and local government divisions as of June 30, 2016)

		Active Members				Reti	red Lives	
_		Valuation Payroll				Annual Benefits		
Valuation					ļ	Active per		As a %
Date	Number	\$ Millions	Average	% Increase	Number	Retired	\$ Millions	of Pay
6/30/84	0	0	0	0	7,036	0	\$ 19.1	4.4%
6/30/85	0	0	0	0	7,331	0	22.0	4.8
6/30/86	0	0	0	0	7,649	0	24.1	4.9
6/30/87	0	0	0	0	8,074	0	30.2	6.0
6/30/88	0	0	0	0	9,155	0	39.6	7.5
6/30/89	0	0	0	0	9,418	0	42.9	7.6
6/30/90	0	0	0	0	9,747	0	44.9	7.4
6/30/91	0	0	0	0	10,110	0	49.2	7.6
6/30/92	39,752	\$ 698.2	\$ 17,564	NA	10,456	3.8	51.9	7.4
6/30/93	39,849	733.4	18,404	4.8%	10,840	3.7	56.8	7.7
6/30/94	40,940	778.7	19,021	3.3	11,213	3.7	60.7	7.8
6/30/95	42,041	834.5	19,850	4.4	11,683	3.6	70.1	8.4
6/30/96	42,712	889.3	20,821	4.9	12,073	3.5	76.2	8.6
6/30/97	43,068	938.5	21,791	4.7	12,644	3.4	84.8	9.0
6/30/98	43,047	974.7	22,644	3.9	13,480	3.2	94.6	9.7
6/30/99	43,064	1,008.9	23,427	3.5	14,688	2.9	119.3	11.8
6/30/00	43,121	1,050.0	24,351	3.9	15,544	2.8	133.6	12.7
6/30/01	42,556	1,070.1	25,146	3.3	16,643	2.6	150.0	14.0
6/30/02	42,230	1,111.5	26,320	4.7	17,748	2.4	167.6	15.1
6/30/03	42,879	1,147.9	26,772	1.7	18,838	2.3	186.0	16.2
6/30/04	42,826	1,175.8	27,455	2.6	19,872	2.2	203.4	17.3
6/30/05	42,938	1,214.9	28,295	3.1	21,080	2.0	232.9	19.2
6/30/06	43,453	1,267.1	29,159	3.1	22,234	2.0	254.7	20.1
6/30/07	43,630	1,302.6	29,855	2.4	22,409	1.9	274.8	21.1
6/30/08	44,357	1,379.8	31,106	4.2	23,555	1.9	297.0	21.5
6/30/09	44,702	1,433.7	32,073	3.1	24,972	1.8	323.1	22.5
6/30/10	45,394	1,522.7	33,544	4.6	25,880	1.8	342.2	22.5
6/30/11	45,145	1,542.9	34,177	1.9	28,137	1.6	375.7	24.3
6/30/12	45,937	1,606.1	34,962	2.3	29,282	1.6	399.5	24.9
6/30/13	45,707	1,612.7	35,285	0.9	30,533	1.5	426.2	26.4
6/30/14	45,841	1,638.0	35,735	1.3	31,914	1.4	457.1	27.9
6/30/15	45,722	1,645.0	35,979	0.7	33,106	1.4	483.9	29.4
6/30/16	45,676	\$ 1,686.5	\$ 36,923	2.6%	34,214	1.3	\$ 509.7	30.2%

The above valuation payroll results do not include DROP payroll.

## SCHEDULE OF PARTICIPATING EMPLOYERS

(as of June 30, 2016)

### State Agencies

10th Judicial Drug Task Force 13th Judicial Drug Task Force 14th Judicial Drug Task Force 15th Judicial Drug Task Force 15th Judicial Victim Witness Office 16th Judicial Drug Task Force 1st Judicial Drug Task Force 21st Judicial Drug Task Force 3rd Judicial Drug Task Force 5th Judicial Drug Task Force 8th Judicial Drug Task Force-South Central Administrative Office of the Courts Agriculture Department Appraiser Licensing and Certification Board Arkansas Abstractors Board Arkansas Attorney General Arkansas Auctioneers Licensing Board Arkansas Commissioner of State Lands Arkansas Contractors Licensing Board Arkansas County Conservation District Arkansas Court of Appeals Arkansas Crime Information Center Arkansas Development Finance Authority Arkansas Economic Development Commission Arkansas Educational Television Network Arkansas Ethics Commission Arkansas Fair Housing Commission Arkansas Fire Protection Licensing Board Arkansas Geographic Information Office Arkansas Geological Survey Arkansas Health Services Permit Agency Arkansas History Commission Arkansas Home Inspector Registration Board Arkansas Insurance Department Arkansas Legislative Audit Arkansas Liquefied Petroleum Gas Board Arkansas Minority Health Commission Arkansas Motor Vehicle Commission Arkansas Natural Resources Commission Arkansas Northeastern College Arkansas Office of Health Information Technology Arkansas Oil and Gas Commission Arkansas Parole Board Arkansas Public Employees Retirement System Arkansas Public Service Commission Arkansas Real Estate Commission Arkansas Rehabilitation Services Arkansas School for the Blind Arkansas School for the Deaf **Arkansas Securities Department** Arkansas Sentencing Commission Arkansas Social Work Licensing Board Arkansas Spinal Cord Commission Arkansas State Auditor

Arkansas State Bank Department Arkansas State Capitol Police Arkansas State Library Arkansas State Police (Non-Troopers) Arkansas State University Arkansas State University-Beebe Arkansas State University-Newport Arkansas Tech University Arkansas Waterways Commission Ashley County Conservation District Assessment Coordination Department Baxter County Conservation District **Benton County Conservation District** Black River Technical College **Board of Architects Board of Dispensing Opticians** Board of Examiners in Counseling Board of Examiners in Speech-Language Board of Licensure for Professional Engineers Board of Psychology **Boone County Conservation District** Buffalo Conservation District (Searcy County) Bureau of Legislative Research **Burial Association Board** Calhoun County Conservation District **Capitol Zoning District Commission Carroll County Conservation District Chicot County Conservation District Clark County Conservation District Clay County Conservation District Cleburne County Conservation District Cleveland County Conservation District** College of the Ouachitas **Columbia County Conservation District** Commission on Law Enforcement Standards Constitutional Officers **Conway County Conservation District** Cossatot Community College of the U of A **Cossatot Conservation District Craighead County Conservation District Crawford County Conservation District Crittenden County Conservation District** Crooked Creek Conservation District **Cross County Conservation District** Crowley's Ridge Technical Institute **Dallas County Conservation District** Department of Aeronautics Department of Arkansas Heritage Department of Community Correction Department of Correction Department of Emergency Management Department of Environmental Quality Department of Finance and Administration Department of Health

#### State Agencies (continued)

**Department of Higher Education Department of Human Services** Department of Information Systems Department of Labor Department of Parks and Tourism Department of Veterans Affairs **Department of Workforce Services Deputy Prosecuting Attorneys Desha County Conservation District Dietetics Licensing Board** Disability Determination for Social Security Administration **Disabled Veterans Service Office** Drew County Conservation District Drug Court Juvenile Probation and Intake Office East Arkansas Community College Faulkner County Conservation District Franklin County Conservation District **Fulton County Conservation District** Game and Fish Commission Game and Fish Commission - Wildlife Office **Garland County Conservation District** General Assembly - House of Representatives-Regular **General Assembly - Senate** General Assembly - Senate-Regular Governor's Office **Greene County Conservation District** Hempstead County Conservation District Henderson State University Hot Spring County Conservation District House Speaker's Office Independence County Conservation District Izard County Conservation District Jackson County Conservation District Jefferson County Conservation District Johnson County Conservation District Judicial Discipline and Disability Commission Lafayette County Conservation District Lawrence County Conservation District Lee County Conservation District Lieutenant Governor's Office Lincoln County Conservation District Little River Conservation District Logan County Conservation District Lonoke County Conservation District Madison County Conservation District Manufactured Home Commission Martin Luther King, Jr. Commission Medicaid Inspector General **Miller County Conservation District** Mine Creek Conservation District Mississippi County Conservation District Monroe County Conservation District Montgomery County Conservation District National Park College

Nevada County Conservation District Newton County Conservation District North Arkansas College-South Campus Northwest Arkansas Community College Office of the Prosecutor Coordinator **Ouachita Conservation District** Ozarka College Phillips Community College of the U of A **Phillips County Conservation District Pike County Conservation District** Poinsett County Conservation District Pope County Conservation District Poteau River Conservation District Prairie County Conservation District Professional Bail Bondsman Licensing Board **Prosecuting Attorney Public Defender Commission Pulaski County Conservation District** Pulaski Technical College **Randolph County Conservation District Rich Mountain Community College Rich Mountain Conservation District** Sebastian County Conservation District Secretary of State's Office Senate Clerk Sharp County Conservation District South Arkansas Community College Southeast Arkansas College Southern Arkansas University Southern Arkansas University Tech St. Francis County Conservation District State Board of Barber Examiners State Board of Chiropractic Examiners State Board of Collection Agencies State Board of Dental Examiners State Board of Election Commissioners State Board of Embalmers and Funeral Directors State Board of Massage Therapy State Board of Nursing State Board of Optometry State Board of Pharmacy State Board of Physical Therapy State Board of Public Accountancy State Child Abuse and Neglect Prevention Board State Claims Commission State Crime Laboratory State District Judges State Medical Board State Military Department State Treasurer's Office Stone County Conservation District Student Loan Authority Supreme Court Supreme Court - Bar of Arkansas

### State Agencies (continued)

**Tobacco Control Board Tobacco Settlement Commission** Towing and Recovery Board U of A Community College at Batesville U of A Community College at Hope U of A Community College at Morrilton U of A Cooperative Extension Service U of A Fayetteville U of A for Medical Sciences U of A Ft. Smith U of A Little Rock U of A Monticello U of A Pine Bluff **Union County Conservation District** University of Central Arkansas Van Buren County Conservation District Veterans Child Welfare Service Veterinary Medical Examining Board War Memorial Stadium Commission Washington County Conservation District White County Conservation District Woodruff County Conservation District Workers' Compensation Commission Yell County Conservation District

### **County Agencies**

Arkansas River Valley Regional Library Arkansas County Ashley County Association of Counties **Baxter County Baxter County Library Benton County Boone County Bradley County Calhoun County Carroll County** Chicot County **Clark County Clay County Clay County - Western District Cleburne County Cleveland County Columbia County Conway County Craighead County Crawford County Crittenden County Cross County Dallas** County Desha County Drew County East Central Arkansas Regional Library Faulkner County Franklin County **Fulton County** Garland County Grant County Grassy Lake-Tyronza Drainage Greene County Hempstead County Hot Spring County Howard County Independence County Izard County Jackson County Jefferson County Johnson County Lafayette County Lawrence County Lee County Lincoln County Little River County Logan County Lonoke County Madison County Marion County **Miller County Mississippi County** Monroe County Montgomery County Nevada County Newton County **Ouachita County** Perry County

**Phillips County Pike County** Poinsett County Polk County Pope County **Prairie County** Pulaski County **Randolph County Randolph County Nursing Home** Saline County Saline County Library Scott County Searcy County Sebastian County Sevier County Sharp County St. Francis County Stone County Union County Van Buren County Washington County White County White County Public Library White River Regional Library Woodruff County Yell County Yell County Library Montgomery County Nevada County Newton County **Ouachita County** Perry County **Phillips County Pike County** Poinsett County Polk County Pope County **Prairie County** Pulaski County **Randolph County Randolph County Nursing Home** Saline County Saline County Library Scott County Searcy County Sebastian County Sevier County Sharp County St. Francis County Stone County Union County Van Buren County Washington County White County White County Public Library White River Regional Library Woodruff County Yell County Yell County Library

### **Municipal Agencies**

Alma Water and Sewer Department Arkansas Municipal League **Batesville Water Works** Bradford Water and Sewer System Brinkley Municipal Water and Sewer **Camden Water and Utilities** Central Arkansas Water City of Alma City of Arkadelphia City of Ash Flat City of Ashdown City of Augusta City of Austin City of Batesville City of Beebe City of Bentonville **City of Bethel Heights** City of Biscoe City of Bono City of Bradford City of Brinkley City of Bryant City of Cabot City of Caddo Valley City of Calico Rock City of Cammack Village City of Carlisle City of Cave City **City of Cave Springs** City of Cedarville City of Centerton City of Charleston City of Cherry Valley City of Clarksville City of Clinton City of Corning City of Cotter City of Crawfordsville City of Crossett City of Decatur City of Des Arc City of Dewitt City of Dierks City of Dover **City of Elm Springs** City of England City of Eudora **City of Farmington** City of Flippin City of Fordyce City of Foreman **City of Forrest City** City of Gassville City of Gentry City of Goshen City of Gravette **City of Green Forest** City of Greenland City of Hackett

City of Hamburg City of Hampton City of Hardy City of Harrisburg City of Harrison City of Haskell City of Hazen **City of Heber Springs** City of Helena-West Helena City of Holly Grove City of Hope City of Horatio **City of Hot Springs City of Huntington** City of Huntsville City of Huttig City of Jacksonville City of Jasper City of Kibler City of Knoxville City of Lamar City of Lavaca City of Lepanto City of Leslie City of Lewisville City of Lincoln City of Lockesburg City of Lowell City of Magnolia City of Malvern City of Mammoth Spring City of Marked Tree City of Marshall City of Marvell City of McRae City of Melbourne City of Mena City of Monette City of Monticello City of Morrilton City of Mountain Home City of Mountain Pine City of Mountain View City of Mt. Ida City of Nashville City of Ola **City of Pangburn** City of Paragould City of Paris City of Perryville **City of Piggott City of Plumerville** City of Prairie Grove City of Prescott City of Quitman City of Ravenden City of Rison **City of Rogers** City of Russellville

City of Salem City of Searcy City of Shannon Hills City of Sheridan City of Smackover **City of Stamps** City of Star City City of Strong **City of Stuttgart** City of Summit City of Van Buren City of Vilonia City of Waldron City of Ward City of Warren City of West Fork City of Wilmar City of Wynne City of Yellville Clinton Water and Sewer **Crossett Public Library** Crossett Water Commission El Dorado Waterworks Fordyce Water and Sewer Forrest City Water Utility Fort Smith Public Library Harrisburg Water and Gas Division Hope Water and Light Company Hot Springs Advertising and Promotion Comm. Huntsville Water and Sewer Jacksonville Wastewater Utility Jacksonville Water Commission Little Rock Wastewater Utility Malvern Waterworks McGehee Water and Sewer System Mena Water and Sewer Mt. Pleasant Water Department Mountain View Water and Sewer Commission North Little Rock Convention and Visitors Bureau Pangburn Water Department **Piggott Light and Water System Rogers Water Utilities** Star City Water and Sewer Arkansas County Library Town of Arkansas City Town of Bigelow Town of Emerson Town of Fountain Hill Town of Fulton Town of Gum Springs Town of Highfill Town of Ravenden Town of Shirley Town of Viola Town of Western Grove Van Buren Municipal Utilities

### Municipal Agencies (continued)

Vilonia Waterworks Association Warren Water and Sewer Wynne Water Utilities

#### Schools

Arkadelphia School District Atkins School District Bald Knob School District Bauxite School District **Benton School District Bergman School District** Berryville School District **Blytheville School District Booneville School District Brinkley School District Brookland Public School Cabot School District** Cedarville School District **Clarendon School District** Clarksville School District **Conway School District Coassatot River School District Cotter School District Dardanelle School District** Deer-Mt. Judea School District **Des Arc School District Dollarway School District Dover School District Dumas School District** Earle School District El Dorado School District **Emerson-Taylor-Bradley District England School District** Fairview School District Fayetteville School District Fordyce School District Foreman School District Forrest City School District Ft. Smith Public Schools Gentry School District **Green Forest Schools** Greenwood School District Hamburg School District Hazen School District Helena-West Helena School District **Hope School District** Horatio School District Hot Springs School District Huntsville School District Jackson County Schools Jasper School District Jonesboro Public Schools Junction City School District Lafayette County Schools Lake Hamilton School District Lakeside School District Lavaca School District Lee County School District Leslie School District

Little Rock School District Magazine School District Magnolia School District Marion School District McCrory Public Schools **Mountain Home School District** Mountainburg School District **Newport School District** North Little Rock School District Osceola School District **Ozark School District Piggott School District Pine Bluff Schools Pocahontas School District** Pottsville School District Pulaski County Special School District **Rogers School District Russellville School District** South Mississippi County School District Searcy County School District Sheridan School District Shirley School District Siloam Springs School District South Conway County School District South Pike County School District Southside School District Stuttgart School District Two Rivers School District Valley Springs School District Van Buren School District Waldron School District Warren School District Watson Chapel School District West Memphis School District Wynne School District Yellville Summit School District

#### **District Judges**

Chicot County Dist Judge AChicot County Dist Judge ADJRS Pilot Ashdown Ashley County Austin County Biscoe **Bradley County** Brinkley Cabot Camden Charleston Cherokee Village Clarksville Crossett **Devalls Bluff** East Camden Elkins Franklin County Grant County Hamburg Hazen Helena/West Helena Hot Springs Lee County Little Rock Malvern Newport Newton County **Ouachita County** Ozark Phillips County Prairie Grove Randolph County Sharp County Sheridan Sherwood Ward Woodruff County

### **District Court Employers\***

Alpena District Court Berrvville District Court Blytheville District Court Booneville District Court Camden District Court **Cherokee Village District Court** City of De Queen District Court **Clarendon District Court** Dermott District Court **Devalls Bluff District Court Dumas District Court** East Camden District Court **Elkins District Court Eureka Springs District Court** Faulkner County District Court Fayetteville District Court Ft. Smith District Court Hoxie District Court Lake Village District Court Little Rock District Court Lonoke District Court Marion District Court Maumelle District Court McCrory District Court McGehee District Court Newport District Court North Little Rock District Court **Osceola District Court** Ozark District Court Pine Bluff District Court Sherwood District Court Siloam Springs District Court Springdale District Court Texarkana District Court Trumann District Court Tyronza District Court Walnut Ridge District Court West Memphis District Court Wrightsville District Court

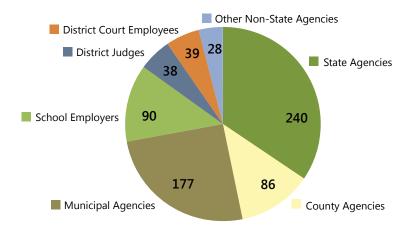
### Other Non-State Employers

Alpine Public Water Authority Benton County Solid Waste District Blytheville-Gosnell Regional Airport Authority **Boone County Airport** Boston Mountain Solid Waste District **Buffalo Island Regional Water District Clark County Country Water Facilities** Hot Spring County Solid Waste Authority James Fork Regional Water District **Kimzey Regional Water District** Marion County Regional Airport Milltown-Washburn Water Users Montgomery County Regional Water Authority NE AR Regional Solid Waste Management District Nevada County Solid Waste Management North Garland County Regional Water District Paragould Housing Authority Paron-Owensville Water Authority Pulaski Area Geographic Information System Pulaski County Regional Solid Waste Management District **Riversouth Rural Water District** Saline County Regional Solid Waste Management District Sardis Water Association SE White County Water Authority SW Boone County Water Association SW White County Regional Water Association Upper SW AR Sollid Waste Management District Washington Water Authority

### Number of Participating Employers

As of June 30, 2016	
State Agencies	240
County Agencies	86
Municipal Agencies	177
School Employers	90
District Judges	38
District Court Employers*	39
Other Non-State Agencies	28
Total	698

### **Reporting Entities 2016**



\*Employer doesn't participate in APERS with the exception of the District Court Judge and/or Court Clerk.