



COMPREHENSIVE  
ANNUAL  
FINANCIAL  
REPORT  
2015

**GEORGE HOPKINS, EXECUTIVE DIRECTOR**  
A PENSION TRUST FUND OF THE STATE OF ARKANSAS



PREPARED BY THE STAFF OF  
**ARKANSAS TEACHER RETIREMENT SYSTEM**

1400 WEST THIRD STREET • LITTLE ROCK, AR 72201  
501.682.1517 • 1.800.666.2877 • ARTRS.GOV



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# Introduction





February 4, 2016

Board of Trustees  
Arkansas Teacher Retirement System  
1400 West Third Street  
Little Rock, AR 72201

The Arkansas Teacher Retirement System (the “System” or ATRS) is pleased to submit this Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2015. The ATRS CAFR provides comprehensive information on the retirement plan that ATRS administers. Responsibility for both the accuracy of the data and the completeness and fairness of presentation rests with the System. To the best of the System’s knowledge and belief, the enclosed data is accurate in all material respects and presents fairly the System’s financial status and changes in the financial condition.

The 2015 Financial Report is presented in five sections. Contents are summarized below (a detailed Table of Contents may be found on page 3).

**INTRODUCTORY SECTION:**

This section contains the transmittal letter, the Board of Trustees, and organizational chart.

**FINANCIAL SECTION:**

This section provides the System’s financial statements, required supplementary information, and supporting schedules with additional information about the System’s expenses.

**INVESTMENT SECTION:**

This section includes the investment consultant’s report, investment policies, asset allocation, and investment results.

**ACTUARIAL SECTION:**

This section provides the certification letter from the independent actuary, supporting schedules, and a summary of plan provisions.

**STATISTICAL SECTION:**

This section presents schedules and tables of comparative data related to the membership, active and retired, of the System.

On March 17, 1937, ATRS was established by Act 266 of 1937. ATRS is a combination contributory/noncontributory retirement system governed by Arkansas retirement law, Chapter 24 of the Arkansas Code. ATRS is one of five state-supported retirement systems in Arkansas and provides retirement, disability, and survivor benefits to employees of Arkansas public schools and educationally related public agencies. The System has 335 participating employers.

**INVESTMENTS**

Performance across capital markets was mixed during fiscal year 2015, with non-U.S. markets significantly underperforming those in the U.S. Throughout the year, markets faced several potential hurdles including concerns of an economic slowdown in China, drastic declines in oil prices, and the winding down process for the U.S. Federal Reserve’s large asset purchasing program (often known as quantitative easing). Within the U.S., economic indicators show signs of continuing improvement. While the global outlook is still uncertain and corrections should be anticipated, markets have shown momentum and resiliency.

ATRS has structured a diversified portfolio that has allocations to equity markets, bonds, private equity, real assets, and alternative investments. Investing in multiple asset classes not only allows the System to benefit from equity advances, but also offers protection during down markets. The approach is not static and changes in accordance with the changing investment environment. For example, the target allocation to equities has been converted from a 20% allocation to U.S. equity and a 30% allocation to global equity to a 50% target allocation to total equity, and investments in alternative asset classes such as real assets continue to be added. These target allocation alignments are designed to further stabilize the portfolio and match the ATRS assets to its liabilities.

Over the long-term, ATRS’s investment approach has proved beneficial. For example, over both the 10-year and 3-year periods ending



June 30, 2015, ATRS ranked in the top 1% in the universe of large public pension funds. ATRS maintains a roster of compelling investment managers, and new opportunities that will benefit the System are being considered. ATRS still uses indexing to level out risk. A focus on long-term growth potential, coupled with asset protection and cost containment, continues to be a focus for ATRS.

## **ADDITIONS/DEDUCTIONS TO PLAN NET ASSETS**

As a retirement system matures, employer and member contributions are supplemented from investment earnings to fully fund retirement benefits and operating costs. This process is intended to leave the investment nucleus untouched to continue providing the required investment income for future generations of plan participants.

Fiscal year 2015 contributions totaled about \$537 million dollars (\$408 million employer and \$129 million member) and remained stable from previous years. As ATRS becomes a more mature system, the total active members compared to retirees will continue to move more toward a one-to-one ratio, and is now just over a two-to-one ratio. This equalization trend will occur for some time as ATRS matures, as the Baby Boomer generation reaches retirement age, and as schools continue to consolidate and outsource nonteaching positions to private contractors in transportation, food service, custodial services, and substitute teachers.

## **FUNDING STATUS**

ATRS has recovered well since the financial crisis in 2008 and 2009. ATRS had a 4.3% actuarially determined return as compared to its 8% assumed rate of return. To reduce the impact of wild swings in the financial markets, annual results are spread over a four-year period (four year smoothing). This means the returns above or below 8% will be smoothed in through fiscal year 2017. ATRS remains a stable 80% funded and improved its funded level from last fiscal year. Amortization required to fund the unfunded accrued actuarial liability (UAAL) decreased from over 39 years to 33 years.

## **INTERNAL CONTROL**

Internal controls are at the heart of safeguarding the System's assets. ATRS has an active internal audit department that is continually reviewing and updating control policies. As the System grows and technology advances, we feel it prudent to continuously monitor internal systems and policies to detect and correct potential errors before they occur and to correct any errors that are discovered.

## **PROFESSIONAL SERVICES**

The ATRS Board of Trustees employs firms that are proven experts to draw on their knowledge and expertise on policy and administration. ATRS's independent general investment consultant and real asset consultant is AON Hewitt Investment Consultants (formerly known as Hewitt EnnisKnupp), headquartered in Chicago, IL; the private equity consultant is Franklin Park, Associates, LLC of Bala Cynwyd, PA; and the independent actuary is Gabriel Roeder Smith & Company, headquartered in Southfield, MI. The System also uses the services of local legal firms.

## **ACKNOWLEDGEMENTS**

This report is intended to provide complete and reliable information as a foundation for management decisions, determining compliance with legal provisions, and determining conscientious administration of the System's fund. Compilation of this report symbolizes the collective efforts of the staff, under the direction of the Board of Trustees.

This report is posted on the ATRS website ([artrs.gov](http://artrs.gov)), and hard copies are available upon request.

Respectfully submitted,

**George Hopkins**  
Executive Director



## MEMBER AND RETIRANT TRUSTEES

**POSITION #1**

MEMBER TRUSTEE  
1ST CONGRESSIONAL DISTRICT

Robin Nichols  
Jonesboro, AR  
Term Expires 6/30/2019

**POSITION #2**

MEMBER TRUSTEE  
2ND CONGRESSIONAL DISTRICT

Janet Watson  
Bryant, AR  
Term Expires 6/30/2016

**POSITION #3**

MEMBER TRUSTEE  
3RD CONGRESSIONAL DISTRICT

Deborah Thompson  
Springdale, AR  
Term Expires 6/30/2019

**POSITION #4**

MEMBER TRUSTEE  
4TH CONGRESSIONAL DISTRICT

Kathy Clayton  
Malvern, AR  
Term Expires 6/30/2017

**POSITION #5**

MEMBER TRUSTEE  
ADMINISTRATOR TRUSTEE

Dr. Richard Abernathy  
Bryant, AR  
Term Expires 6/30/2018

**POSITION #6**

MEMBER TRUSTEE  
ADMINISTRATOR TRUSTEE

Jeff Stubblefield (Chair)  
Charleston, AR  
Term Expires 6/30/2021

**POSITION #7**

MEMBER TRUSTEE  
NON-CERTIFIED TRUSTEE

Kelly Davis  
Fort Smith, AR  
Term Expires 6/30/2021

**POSITION #8**

MEMBER TRUSTEE  
MINORITY TRUSTEE

Anita Bell  
North Little Rock, AR  
Term Expires 6/30/2021

**POSITION #9**

RETIRANT TRUSTEE

Lloyd Black  
Little Rock, AR  
Term Expires 6/30/2016

**POSITION #10**

RETIRANT TRUSTEE

Bobby Lester  
Jacksonville, AR  
Term Expires 6/30/2019

**POSITION #11**

RETIRANT TRUSTEE

Danny Knight (Vice Chair)  
Sherwood, AR  
Term Expires 6/30/2018

## EX OFFICIO TRUSTEES

**JOHNNY KEY**

COMMISSIONER OF EDUCATION  
Little Rock, AR

**DENNIS MILLIGAN**

STATE TREASURER  
Little Rock, AR

**CANDACE A. FRANKS**

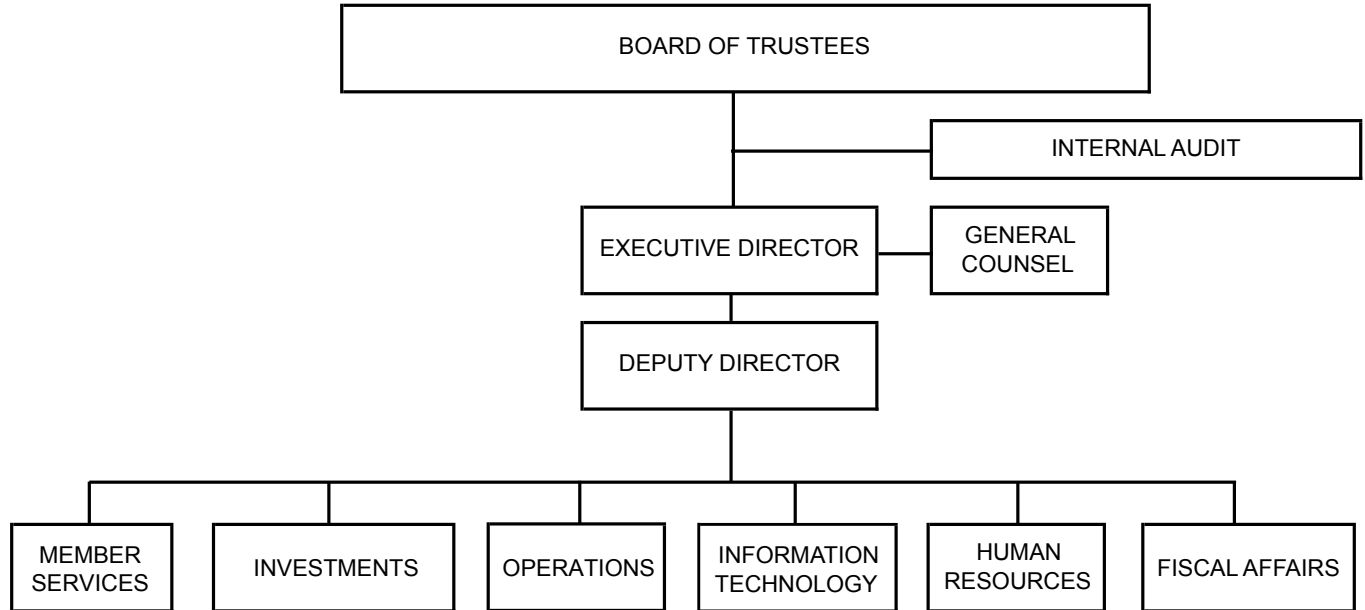
STATE BANK COMMISSIONER  
Little Rock, AR

**ANDREA LEA**

STATE AUDITOR  
Little Rock, AR



# ORGANIZATIONAL CHART



## ADMINISTRATIVE STAFF

**GEORGE HOPKINS**  
EXECUTIVE DIRECTOR

**GAIL BOLDEN**  
DEPUTY DIRECTOR

**LAURA GILSON**  
GENERAL COUNSEL

**MICHAEL RAY**  
MEMBER SERVICES ADMINISTRATOR

**CURTIS CARTER, CPA**  
ASSOCIATE DIRECTOR OF FISCAL AFFAIRS

**G. WAYNE GREATHOUSE**  
ASSOCIATE DIRECTOR OF INVESTMENTS

**CLINT RHODEN**  
ASSOCIATE DIRECTOR OF OPERATIONS

**VICKY FOWLER**  
HUMAN RESOURCES MANAGER

**MULLAHALLI MANJUNATH**  
ASSOCIATE DIRECTOR  
OF INFORMATION TECHNOLOGY

**BRENDA WEST, CPA**  
INTERNAL AUDITOR



## ACTUARY

**GABRIEL ROEDER SMITH & COMPANY**  
Southfield, MI

## LEGAL COUNSEL

**GILL, RAGON, OWEN & SHERMAN**  
Little Rock, AR

**ICE MILLER**  
Indianapolis, IN

**KUTAK ROCK, LLP**  
Scottsdale, AZ

**MITCHELL, WILLIAMS, SELIG, GATES & WOODYARD, PLLC**  
Little Rock, AR

**ROSE LAW FIRM, PA**  
Little Rock, AR

**WILLIAMS & ANDERSON**  
Little Rock, AR

## SECURITIES MONITORING COUNSEL

**BERNSTEIN, LITOWITZ, BERGER & GROSSMAN, LLP**  
New York, NY

**KAPLAN, FOX & KILSHEIMER**  
New York, NY

**KESSLER, TOPAZ, MELTZER & CHECK, LLC**  
Radnor, PA

**LABATON SUCHAROW, LLP**  
New York, NY

**NIX, PATTERSON & ROACH, LLP**  
Daingerfield, TX

## INVESTMENT CONSULTANT

**AON HEWITT INVESTMENT CONSULTING**  
Chicago, IL

## CUSTODIAN

(DOMESTIC AND INTERNATIONAL)

**STATE STREET FUND SERVICES TORONTO, INC.**  
Toronto, Ontario

**STATE STREET PUBLIC FUND SERVICES**  
Boston, MA

## PUBLIC MARKETS

**ALLIANZ GLOBAL INVESTORS CAPITAL**  
New York, NY

**BLACKROCK ACCOUNT MANAGEMENT GROUP**  
New York, NY

**DARUMA ASSET MANAGEMENT, INC.**  
New York, NY

**D.E. SHAW & COMPANY, LP**  
New York, NY

**GMO, INC.**  
Boston, MA

**HARRIS ASSOCIATES, LP**  
Chicago, IL

**JACOBS LEVY EQUITY MANAGEMENT, INC.**  
Florham Park, NJ

**KENNEDY CAPITAL MANAGEMENT**  
St. Louis, MO

**LAZARD ASSET MANAGEMENT, LLC**  
New York, NY

**LOOMIS SAYLES & COMPANY, LP**  
Boston, MA

**PERSHING SQUARE CAPITAL MANAGEMENT, LP**  
New York, NY

**PUTNAM INVESTMENTS MANAGEMENT**  
Boston, MA

**REAMS ASSET MANAGEMENT**  
Columbus, IN

**RELATIONAL INVESTORS, LLC**  
San Diego, CA

**RUSSELL IMPLEMENTATION SERVICES**  
Seattle, WA

**STATE STREET GLOBAL ADVISORS (SSGA)**  
Boston, MA

**STATE STREET GLOBAL MARKETS, LLC  
TRANSITION MANAGEMENT**  
Boston, MA

**STATE STREET - SECURITIES LENDING**  
Boston, MA

**STATE STREET SPECIALIZED TRUST SERVICES**  
Kansas City, MO

**STEPHENS INVESTMENT MANAGEMENT**  
Houston, TX

**T. ROWE PRICE ASSOCIATES, INC.**  
Baltimore, MD

## PROFESSIONAL CONSULTANTS



### **VOYA INVESTMENT MANAGEMENT (FKA ING)**

Chicago, IL

### **WELLINGTON MANAGEMENT CO., LLP**

Boston, MA

### **PRIVATE EQUITY**

#### **FRANKLIN PARK**

General Consultant – Private Equity  
Bala Cynwyd, PA

#### **21ST CENTURY GROUP**

Dallas, TX

#### **ADVENT INTERNATIONAL CORPORATION**

Boston, MA

#### **ALTUS CAPITAL PARTNERS**

Westport, CT

#### **ATLAS HOLDINGS, LLC**

Greenwich, CT

#### **AUDAX**

New York, NY

#### **BLACKSTONE MEZZANINE PARTNERS**

New York, NY

#### **BOSTON VENTURES (BV)**

Boston, MA

#### **CASTLELAKE**

Minneapolis, MN

#### **COURT SQUARE CAPITAL PARTNERS, LP**

New York, NY

#### **THE CYPRESS GROUP**

New York, NY

#### **DIAMOND STATE VENTURES**

Little Rock, AR

#### **DLJ INVESTMENT PARTNERS**

New York, NY

#### **DOUGHTY HANSON & COMPANY**

London, England

#### **DW HEALTHCARE**

Park City, UT

#### **ENCAP INVESTMENTS, LP**

Houston, TX

#### **GROSVENOR CAPITAL MANAGEMENT (FKA CREDIT SUISSE)**

#### **CUSTOMIZED FUND INVESTMENT GROUP**

New York, NY

#### **HICKS MUSE TATE & FURST**

Dallas, TX

#### **INSIGHT EQUITY INSIGHT MEZZANINE**

Southlake, TX

#### **J.F. LEHMAN & COMPANY**

New York, NY

#### **KPS CAPITAL PARTNERS**

New York, NY

#### **LEVINE LEICHTMAN III**

Beverly Hills, CA

#### **LIME ROCK RESOURCES III**

Westport, CT

#### **LLR EQUITY PARTNERS III**

Philadelphia, PA

#### **MASON WELLS**

Milwaukee, WI

#### **NATURAL GAS PARTNERS (NGP)**

Irving, TX

#### **OAK HILL CAPITAL PARTNERS**

New York, NY

#### **RIVERSIDE PARTNERS**

Boston, MA

#### **SIRIS CAPITAL GROUP**

New York, NY

#### **SYCAMORE PARTNERS**

New York, NY

#### **TA XI**

Boston, MA

#### **TENNENBAUM**

Santa Monica, CA

#### **THOMA BRAVO**

San Francisco, CA

#### **VISTA EQUITY PARTNERS**

San Francisco, CA

#### **WELLSPRING CAPITAL MANAGEMENT, LLC**

New York, NY

#### **THE WICKS GROUP OF COMPANIES, LLC**

New York, NY

### **REAL ASSETS REAL ESTATES**

#### **ALMANAC REALTY SECURITIES**

New York, NY

#### **BLACKSTONE REAL ESTATE PARTNERS**

New York, NY



**THE CARLYLE GROUP**

Washington, DC

**CB RICHARD ELLIS STRATEGIC PARTNERS, LP**

Los Angeles, CA

**CERBERUS**

New York, NY

**DLJ REAL ESTATE II, LP**

New York, NY

**DOUGHTY HANSON & CO. EUROPEAN REAL ESTATE FUND**

London, England

**HEITMAN CAPITAL MANAGEMENT, LLC**

Chicago, IL

**J.P. MORGAN STRATEGIC PROPERTY FUND  
J.P. MORGAN SPECIAL SITUATION FUND**

New York, NY

**LANDMARK PARTNERS**

Simsbury, CT

**LONG WHARF REAL ESTATE PARTNERS, LLC**

Boston, MA

**NEW BOSTON FUND**

Boston, MA

**O'CONNOR NORTH AMERICAN PROPERTY PARTNERS II**

New York, NY

**OLYMPUS REAL ESTATE CORPORATION**

Addison, TX

**PRUDENTIAL REAL ESTATE INVESTORS**

Madison, NJ

**ROCKWOOD CAPITAL REAL ESTATE PARTNERS**

New York, NY

**TORCHLIGHT DEBT OPPORTUNITY FUND (CAYMAN)**

New York, NY

**UBS REALTY INVESTORS**

Hartford, CT

**WESTBROOK PARTNERS, LLC**

New York, NY

**FARM MANAGERS**

**HALDERMAN FARM MANAGEMENT**

Wabash, IN

**UBS AGNVEST**

Dallas, TX

**TIMBERLAND**

**BTG PACTUAL TIMBERLAND INVESTMENT GROUP**

Atlanta, GA

**DIRECT REAL ESTATE PARTNERSHIPS**

**CRI - COOPER REAL ESTATE INVESTMENT**

Rogers, AR

**ALTERNATIVE INVESTMENTS**

**HEDGE FUNDS**

**ANCHORAGE CAPITAL GROUP, LLC**

New York, NY

**BREVEN HOWARD US, LLC**

New York, NY

**CAPULA INVESTMENT US, LP**

Greenwich, CT

**GRAHAM CAPITAL MANAGEMENT, LP**

Rowayton, CT

**YORK CAPITAL MANAGEMENT**

New York, NY



# Financial





## STATEMENT OF PLAN NET POSITION AS OF JUNE 30, 2015

### ASSETS

Cash and cash equivalents	\$	280,927,609
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### RECEIVABLES

Member contributions		9,767,220
Employer contributions		29,360,944
Investment trades pending		56,018,669
Accrued investment income		10,138,572
Due from other funds		2,669,431
Other receivables		210,966
Total Receivables		108,165,802

### INVESTMENTS, AT FAIR VALUE

U.S. Government obligations		17,453,181
Domestic equities		2,837,466,664
International equities		846,243,295
Commingled funds		6,303,108,061
Corporate bonds		658,670,879
Asset and mortgage-backed securities		23,651,842
Alternative investments		3,948,277,549
Limited partnerships		36,101,155
Real estate		52,597,687
Investment derivative instruments		(319,986)
Total Investments		14,723,250,327

Securities lending collateral		633,738,363
Capital assets, net of accumulated depreciation		228,983
Other assets		137,723
		15,746,448,807

### TOTAL ASSETS

**15,746,448,807**

### LIABILITIES

Accrued expenses and other liabilities		10,102,231
Compensated absences payable		458,689
Post employment benefit liability		2,699,780
Investment trades pending payable		61,413,630
Securities lending obligations		634,242,838
Due to other funds		1,830,327
		710,747,495

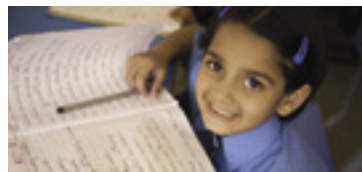
### TOTAL LIABILITIES

**710,747,495**

### NET POSITION RESTRICTED FOR PENSION BENEFITS

**\$15,035,701,312**

**THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS.**



## STATEMENT OF CHANGES IN PLAN NET POSITION

### FOR THE YEAR ENDED JUNE 30, 2015

#### ADDITIONS

Contributions		
Member	\$	128,555,684
Employer		408,230,472
Total Contributions		<u>536,786,156</u>
Investment income		
From investing activities:		
Net appreciation (depreciation) in fair value of assets		565,577,916
Interest and dividends		99,352,401
Real estate operating income		7,506,050
Total investment income (loss)		<u>672,436,367</u>
Less investment expense		<u>43,838,480</u>
Net investment income (loss)		<u>628,597,887</u>
From securities lending activities:		
Securities lending gross income		4,268,476
Less securities lending expense		<u>770,923</u>
Net securities lending income (loss)		<u>3,497,553</u>
Other income		<u>71,511</u>
<b>TOTAL ADDITIONS (LOSSES)</b>		<u><b>1,168,953,107</b></u>

#### DEDUCTIONS

Benefits	970,719,484
Refunds of contributions	10,774,122
Administrative expenses	<u>8,034,857</u>
<b>TOTAL DEDUCTIONS</b>	<u><b>989,528,463</b></u>

<b>CHANGE IN NET POSITION RESTRICTED FOR PENSION BENEFITS</b>	<b>179,424,644</b>
<b>NET POSTION - BEGINNING OF YEAR</b>	<u><b>14,856,276,668</b></u>
<b>NET POSITION - END OF YEAR</b>	<u><u><b>\$ 15,035,701,312</b></u></u>

**THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS.**



## NOTES TO FINANCIAL STATEMENTS

**JUNE 30, 2015**

### **NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

#### **A. REPORTING ENTITY/HISTORY**

Act 266 of 1937, as amended, established the Arkansas Teacher Retirement System (ATRS) as an office of Arkansas State government for the purpose of providing retirement benefits for employees of any school or other educational agency participating in ATRS. Act 427 of 1973, as amended, provided that the general administration of ATRS, responsibility for its proper operation, and responsibility for making effective the provisions of the Teacher Retirement law are vested in a 15-member Board of Trustees. The State Bank Commissioner, Treasurer of State, Auditor of State, and Commissioner of Education are ex-officio trustees. The remaining 11 trustees are elected and consist of seven active members of ATRS with at least five years of actual service, three retired members receiving an annuity from ATRS, and one active or retired member from a minority racial ethnic group. The seven active trustees consist of one member from each of the four congressional districts; two administrators, of which one must be a superintendent; and one member employed in a position that does not require state licensure. The trustees are elected in accordance with rules adopted by the Board. Board members serve as trustees without compensation but are reimbursed for any necessary expenses incurred to attend Board meetings or perform other duties authorized by the Board.

#### **B. PLAN DESCRIPTION**

ATRS is a cost-sharing, multiple-employer defined benefit pension plan that covers employees of schools and education-related agencies, including Arkansas School for the Blind, Arkansas School for the Deaf, Arkansas Activities Association, State Board of Education, regional education service cooperatives, ATRS, Arkansas Educational Television Commission, area vocational-technical schools, Arkansas Rehabilitation Services, enterprises privatized by a public school district, and educational nonprofit organizations.

On June 30, 2015, the number of participating employers was as follows:

Public schools	254
State colleges and universities	40
State agencies	11
Other/privatized	30
<b>TOTAL</b>	<b>335</b>

On June 30, 2015, ATRS's membership consisted of the following:

Retirees or beneficiaries currently receiving benefits	40,748
T-DROP participants	3,974
Inactive plan members (not receiving benefits)	12,379
Active members	
Fully vested	47,215
Non-vested	21,730
<b>TOTAL</b>	<b>126,046</b>

Members are eligible for full retirement benefits at age 60 with five or more years of credited service or at any age with 28 or more years of credited service. Members with 25 years of credited service who have not attained age 60 may receive an annuity reduced by 5/12 of 1% multiplied by the number of months by which the early retirement precedes the earlier of (1) completion of 28 years of credited service or (2) attainment of age 60. The normal retirement benefit, paid monthly, is determined based on (1) the member's final average salary (effective April 1, 1998, computed using highest three years salary) and (2) the number of years of service.

ATRS has contributory and noncontributory plans. The contributory plan has been in effect since the beginning of ATRS. The noncontributory plan became available July 1, 1986. Act 81 of 1999, effective July 1, 1999, requires all new members to be contributory and allowed active members as of July 1, 1999, until July 1, 2000, to make an irrevocable choice to be contributory or noncontributory. Act 93 of 2007 allows any noncontributory member to make an irrevocable election to become contributory on July 1 of each fiscal year.





## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

JUNE 30, 2015

### B. PLAN DESCRIPTION (CONTINUED)

Disability retirement benefits are payable to members who are vested and demonstrate total and permanent incapacity to perform the duties of their position while in active employment. The disability annuity is computed in the same manner as the age and service annuity.

Survivor benefits are payable to qualified survivors upon the death of an active, vested member. Eligible spouse survivors receive a survivor annuity that is based on the member's years of service credit prior to their death, and minor child survivors receive a percentage of the member's highest salary earned. ATRS also provides a lump sum death benefit for active and retired members with 10 years of actual service. The amount for contributory members will be up to \$10,000 and up to \$6,667 for noncontributory members. The amount will be prorated for members who have both contributory and noncontributory service. Members with 15 or more years of contributory service will receive the full \$10,000.

A cost of living adjustment (COLA) is payable on July 1 of each year to retirees, certain survivors, and annuity beneficiaries who received monthly benefits for the previous 12 months. The COLA is calculated by multiplying 100% of the member's base retirement annuity by 3%.

Act 1096 of 1995 created a teacher deferred retirement option plan (T-DROP) for members with 30 or more years of service credits. Act 1590 of 1999 allows for participation in the T-DROP after 28 years of credited service with a reduction of 6% for each year under 30 years. Effective September 1, 2003, Act 992 of 2003 requires employers to make contributions on behalf of all members participating in T-DROP at rates established by the Board of Trustees. Member election to enter T-DROP is irrevocable, and additional service credit cannot be accumulated. During participation in T-DROP, ATRS will credit the member account with plan deposits and interest. The plan deposits are the member's normal retirement benefit reduced by 1% for each year of service. For members who entered T-DROP prior to September 1, 2003, the reduction is 1/2 of 1% (.5%) for contributory service and 3/10 of 1% (.3%) for noncontributory service for each year above 30 years of service. The T-DROP account accrues interest at a variable rate that is set annually by the ATRS Board of Trustees. T-DROP deposits into member accounts cease at the completion of 10 years of participation in the program; however, a member may continue employment and will continue to receive interest on the account balance at the 10-year plus interest rate that is also set annually by the Board of Trustees. When T-DROP participation ceases, the member may receive the T-DROP distribution as a lump-sum cash payment or an annuity or may roll it over into another tax-deferred account. A member may also elect to defer all or part of the distribution into a T-DROP cash balance account held by ATRS.

### C. BASIS OF PRESENTATION – FUND ACCOUNTING

The accounting system is organized and operated on a fund basis. A *fund* is defined as a fiscal and accounting entity with a self balancing set of accounts recording cash and other financial resources, together with all related liabilities and residual equities or balances and changes therein, which are segregated for purposes of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions, or limitations. The following types of funds, if applicable to this Agency, are recognized in the accompanying financial statements.

#### FIDUCIARY FUNDS

**Trust and Agency Funds** – Trust and Agency Funds are used to report resources held by the Agency in a trustee capacity or as an agent for individuals, other governmental units, and other funds. These include Pension Trust Funds, Employee Health Trust Funds, Investment Trust Funds, Private-Purpose Trust Funds, and Agency Funds. The specific activity accounted for at this Agency includes the following:

Arkansas Teacher Retirement System Fiduciary Pension Trust Fund

### D. BASIS OF ACCOUNTING

Basis of accounting refers to when revenues and expenditures or expenses are recognized and reported in the financial statements. The economic resources measurement focus and accrual basis of accounting are used in Fiduciary Fund financial statements. Under the accrual basis, contributions and other revenues are recognized when earned, and benefits, refunds, and other expenses are recorded when incurred.



## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

### JUNE 30, 2015

#### E. FEDERAL INCOME TAX STATUS

During the year ended June 30, 2015, ATRS was a qualified plan under 26 USC § 401(a) and was exempt from federal income taxes under 26 USC § 501(a).

#### F. CASH AND CASH EQUIVALENTS

Cash and cash equivalents include demand accounts, imprest accounts, cash on hand, cash in State Treasury, all certificates of deposit with maturities at purchase of 90 days or less, all short-term instruments with maturities at purchase of 90 days or less, and short-term investment fund (STIF) accounts. The STIF accounts are created through daily sweeps of excess cash by the custodial bank into bank-sponsored commingled funds that are invested in U.S. Government and agency securities and other short-term instruments. The STIF accounts had an average weighted maturity of 90 days or less. All short-term investments are stated at fair value.

#### G. CAPITAL ASSETS

Capital assets purchased and in the custody of this Agency 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 or setup costs, and installation costs). Infrastructure or public domain fixed assets (such as roads, bridges, tunnels, curbs and gutters, streets and sidewalks, drainage systems, and lighting systems) are also capitalized. Gifts or contributions are generally recorded in the accounts at fair market value at the time received. Depreciation is reported for proprietary fund capital assets based on a straight-line method, with no salvage value. Estimated useful lives generally assigned are as follows:

<b>ASSETS:</b>	<b>YEARS</b>
Equipment	5-20
Buildings and building improvements	20-50
Infrastructure	10-30
Land improvements	10-40
Intangibles	4-99
Other capital assets	4-20

Capital asset activity for the year ended June 30, 2015, was as follows:

<b>FIDUCIARY ACTIVITIES:</b>	<b>BEGINNING BALANCE</b>	<b>ADDITIONS</b>	<b>RETIREMENTS</b>	<b>ENDING BALANCE</b>
Equipment	\$ 1,987,277			\$ 1,987,277
Less: Accumulated depreciation	<u>1,732,440</u>	<u>\$ 25,854</u>		<u>1,758,294</u>
Fiduciary activities, net	<u>\$ 254,837</u>	<u>\$ 25,854</u>	<u>\$ 0</u>	<u>\$ 228,983</u>



## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

### JUNE 30, 2015

#### H. DEPOSITS AND INVESTMENTS

##### DEPOSITS

Deposits are carried at cost and consist of cash in bank, cash in State Treasury, and short-term investment funds. At June 30, 2015, these totals were \$8,859,187, \$2,371,822, and \$269,696,526, respectively. State Treasury Management Law governs the management of funds held in the State Treasury, and the Treasurer of State is responsible for ensuring these funds are adequately insured and collateralized.

**Custodial Credit Risk** – Custodial credit risk for deposits is the risk that, in the event of the failure of a depository institution, the Agency will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. The Agency has adopted the State Board of Finance policy requiring the use of depository insurance and collateralization procedures to manage the risk that deposits may not be returned. As of June 30, 2015, \$948,954 of the Agency's bank balance of \$278,631,093 was held in foreign bank accounts and was exposed to custodial credit risk.

##### INVESTMENTS

Investments are reported at fair value. Fair value is determined using pricing services, when available; historical costs adjusted for market trends; independent third party appraisals; and independent brokers and industry experts. Publicly-traded alternative investments are valued based on quoted market prices. When not readily available, alternative investment securities are valued based on good faith determination of the General Partner. Given the inherent nature of investments, it is reasonably possible that changes in the value of those investments will occur in the near term and that such changes could materially affect the amounts reported in the Statement of Plan Net Position.

As of June 30, 2015, ATRS had the following investments and securities lending collateral:

<b>INVESTMENT TYPE</b>	<b>FAIR VALUE</b>
U. S. Government obligations	\$ 17,453,181
Domestic equities	2,837,466,664
International equities	846,243,295
Commingled funds	6,303,108,061
Corporate bonds	658,670,879
Asset- and mortgage-backed securities	23,651,842
Alternative investments	3,948,277,549
Limited partnerships	36,101,155
Real estate	52,597,687
Investment derivatives	(319,986)
<b>TOTAL INVESTMENTS</b>	<b><u>\$14,723,250,327</u></b>
<b><u>SECURITIES LENDING COLLATERAL</u></b>	
Quality D short term investment pool	\$ 633,738,363
<b>TOTAL</b>	<b><u>\$15,356,988,690</u></b>

\*Cash collateral received totaled \$634,242,838. The amount reported in the GASB 40 footnote above is the market value of the collateral received at June 30, 2015.

Ark. Code Ann. §§ 24-2-601 — 24-2-619 authorizes the ATRS Board of Trustees to have full power to invest and reinvest monies of ATRS and to hold, purchase, sell, assign, transfer, or dispose of any of the investments, or investment proceeds in accordance with the prudent investor rule. The Code also states ATRS shall seek to invest no less than 5% and no more than 10% of the ATRS portfolio in Arkansas-related investments, as long as the System's responsibility to invest in accordance with the prudent investor rule is not limited or impaired.



## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

### JUNE 30, 2015

#### H. DEPOSITS AND INVESTMENTS (CONTINUED)

##### INVESTMENTS (CONTINUED)

Each investment manager is required to invest within the specific guidelines and parameters set by the Board of Trustees. Asset allocation guidelines have been established as follows:

ASSET ALLOCATION	MINIMUM	TARGET	MAXIMUM
Total equity	45.0%	50.0%	55.0% **
Fixed income	15.0%	20.0%	25.0%
Alternatives	N/A*	5.0%	N/A*
Real assets***	N/A*	15.0%	N/A*
Private equity	N/A*	10.0%	N/A*
Cash equivalents	0.0%	0.0%	5.0%

\*Due to the illiquid nature of alternatives, real assets, and private equity, it is not prudent to set rebalancing ranges for these asset classes.

\*\*Additional allocations to total equity may be made beyond the maximum range to serve as a placeholder for unfunded and uncommitted alternatives, real assets, and private equity.

\*\*\*Real assets include real estate, timber, agriculture, and infrastructure.

**Rate of Return** – The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. For the year ended June 30, 2015, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 4.34%.

**Interest Rate Risk** – Interest Rate Risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Investments can be highly sensitive to changes in interest rates due to their terms or characteristics. The Agency does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

The summary below indicates that 99% of the Agency’s investment maturities are one year or longer.

#### INVESTMENT MATURITIES (IN YEARS)

INVESTMENT TYPE	FAIR VALUE	LESS THAN 1	1-5	6-10	MORE THAN 10
U.S. Government obligations	\$ 17,453,181	\$ 6,989,890	\$ 10,463,291		
Commingled funds	1,732,455,650		301,406,617	\$ 1,431,049,033	
Corporate bonds	658,670,879	26,491,517	284,570,182	223,209,576	\$ 124,399,604
Asset- and mortgage-backed securities	23,651,842		7,852,316	7,479,478	8,320,048
<b>TOTAL</b>	<b><u>\$2,432,231,552</u></b>	<b><u>\$ 33,481,407</u></b>	<b><u>\$604,292,406</u></b>	<b><u>\$1,661,738,087</u></b>	<b><u>\$132,719,652</u></b>

#### SECURITIES LENDING COLLATERAL

Quality D short term investment pool	<u>\$ 633,738,363</u>	<u>\$ 621,240,986</u>	<u>\$ 12,497,377</u>
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**Asset-Backed Securities** – As of June 30, 2015, ATRS held asset-backed securities with a fair value of \$20,646,677. These securities represent interests in various trusts consisting of pooled financial assets other than mortgage loans conveyed by the issuing parties. ATRS’s ability to recover the amount of principal invested in these securities depends on the performance and quality of the trust assets. At June 30, 2015, ATRS held no asset-backed securities that were considered highly sensitive to changes in interest rates.



## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

### JUNE 30, 2015

#### H. DEPOSITS AND INVESTMENTS (CONTINUED)

##### INVESTMENTS (CONTINUED)

**Mortgage-Backed Securities** – As of June 30, 2015, mortgage-backed securities had a fair value of \$3,005,165. The yields and maturities of mortgage-backed securities generally depend on when the underlying mortgage loan principal and interest are repaid. Although the full amount of principal will be received if prepaid, the interest income that would have been collected during the remaining period to maturity, net of any market adjustment, is lost. At June 30, 2015, no mortgage-backed securities were considered highly sensitive to changes in interest rates.

**Corporate Bonds** – As of June 30, 2015, ATRS held corporate bonds with a fair value of \$221,343,599. Corporate bonds are debt instruments that are issued by private corporations. They have a 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. At June 30, 2015, ATRS held no corporate bonds that were considered highly sensitive to changes in interest rates.

**Convertible Corporate Bonds** – As of June 30, 2015, ATRS held convertible bonds with a fair value of \$437,327,280. Convertible bonds convey an option to the bondholder to exchange each bond for a specified number of shares of common stock of the corporation. Convertible bonds offer lower coupon rates and promised yields to maturity than do nonconvertible bonds. A variable coupon varies directly with movements in interest rates. At June 30, 2015, ATRS held no convertible corporate bonds that were considered highly sensitive to changes in interest rates.

**Credit Risk** – Credit Risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Credit risk is measured by the credit quality of investments in debt securities as described by nationally recognized statistical rating organizations. The Agency does not have a formal investment policy for credit risk.

The Agency's exposure to credit risk as rated by Standard and Poor's (S&P) and Moody's Investors Service as of June 30, 2015, is as follows:

<b>STANDARD AND POOR'S</b>		<b>MOODY'S INVESTORS SERVICE</b>	
<b>RATING</b>	<b>FAIR VALUE</b>	<b>RATING</b>	<b>FAIR VALUE</b>
AAA	\$ 10,199,710	Aaa	\$ 25,729,298
AA	17,453,181	Aa	3,179,774
A	40,267,791	A	28,991,352
BBB	182,323,333	Baa	111,963,379
BB	121,529,335	Ba	90,638,829
B	69,802,979	B	37,474,168
CCC or below	8,821,675	Caa or below	2,646,075
Unrated	1,981,833,548	Unrated	2,131,608,677
<b>TOTAL</b>	<b><u>\$ 2,432,231,552</u></b>	<b>TOTAL</b>	<b><u>\$ 2,432,231,552</u></b>
<b>SECURITIES LENDING COLLATERAL</b>		<b>SECURITIES LENDING COLLATERAL</b>	
<b>UNRATED</b>	<b><u>\$ 633,738,363</u></b>	<b>UNRATED</b>	<b><u>\$ 633,738,363</u></b>

**Custodial Credit Risk** – Custodial Credit Risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the Agency 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 uninsured, are not registered in the Agency's name, and are held by either the counterparty or the counterparty's trust department or agent but not in the Agency's name. The Agency does not have a formal investment policy for custodial credit risk. At June 30, 2015, \$353,338 of the Agency's investments was exposed to custodial credit risk.



## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

### JUNE 30, 2015

#### H. DEPOSITS AND INVESTMENTS (CONTINUED)

##### INVESTMENTS (CONTINUED)

**Concentration of Credit Risk** – Concentration of Credit Risk is the risk of loss attributed to the magnitude of the Agency’s investment in a single issuer. The Agency does not have a formal investment policy for concentration of credit risk and places no limit on the amount it may invest in any one issuer. None of ATRS’s investments in any one issuer (other than those issued or guaranteed by the U.S. Government) represented more than 5% of total investments.

**Foreign Currency Risk** – Foreign Currency Risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. The Agency does not have a formal investment policy for foreign currency risk.

The Agency’s exposure to foreign currency risk for investments and deposits at June 30, 2015, was as follows:

		<b>INVESTMENTS</b>				
<b>CURRENCY</b>		<b>FAIR VALUE</b>	<b>FIXED INCOME</b>	<b>EQUITIES</b>	<b>FORWARD CONTRACTS</b>	<b>CASH DEPOSITS</b>
Australian Dollar	AUD	\$ 19,473,733	\$ 2,403,871	\$ 17,069,861		\$ 1
Brazilian Real	BRL	20,808,746	4,863,539	15,945,207	\$ (49,935)	49,935
British Pound Sterling	GBP	233,626,418		233,358,015	134,317	134,086
Canadian Dollar	CAD	9,754,005		9,753,981		24
Chilean Peso	CLP	1,393,428	1,393,428			
Columbian Peso	COP	1,072,470	1,072,470			
Danish Krone	DKK	19,002,806		16,670,374	2,332,432	
Euro	EUR	201,457,921	1,114,777	200,580,064	(270,142)	33,222
Hong Kong Dollar	HKD	82,972,495		82,926,929	(1,490)	47,056
Indian Rupee	INR	5,240,535	4,729,600			510,935
Israeli Shekel	ILS	6,228,690		6,228,690		
Japanese Yen	JPY	96,920,853		97,434,918	(687,617)	173,552
Malaysian Ringgit	MYR	2,113,803		2,113,803		
Mexican Peso	MXN	14,183,113	10,206,572	4,664,158	(687,617)	
New Taiwan Dollar	TWD	9,664,216		9,664,216		
Philippine Peso	PHP	5,036,061	5,036,061			
South African Rand	ZAR	10,754,261		10,701,218	53,043	
South Korean Won	KRW	21,886,062		21,886,061		1
Swedish Krona	SEK	26,381,023		26,381,023		
Swiss Franc	CHF	66,233,249		89,458,921	(23,225,815)	143
Turkish Lira	TRY	1,405,857		1,405,857		
<b>TOTALS</b>		<b><u>\$855,609,745</u></b>	<b><u>\$ 30,820,318</u></b>	<b><u>\$ 846,243,296</u></b>	<b><u>\$ (22,402,824)</u></b>	<b><u>\$ 948,955</u></b>

For Forward Currency Contracts in the schedule above, a positive number represents the market value of contracts to purchase that currency in excess of the market value of contracts to sell that currency. A negative number therefore represents the market value of contracts to sell foreign currency in excess of contracts to purchase that currency.



## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

### JUNE 30, 2015

#### H. DEPOSITS AND INVESTMENTS (CONTINUED)

##### INVESTMENTS (CONTINUED)

**Forward Currency Contracts** – ATRS enters into various currency contracts to manage exposure of foreign portfolio holdings to changes in foreign currency exchange rates. A forward exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. Risks associated with such contracts include movement in the value of the foreign currency relative to the U.S. dollar and the ability of the counterparty to perform. The contracts are valued at forward exchange rates, and the changes in value of open contracts are recognized as unrealized appreciation/depreciation in the statement of changes in plan net position. The realized gain or loss on closed forward currency contracts represents the difference between the value of the original contracts and the closing value of such contracts and is included in net appreciation (depreciation) in fair value of investments in the statement of changes in plan net position. At June 30, 2015, ATRS had outstanding forward exchange currency contracts to purchase foreign currencies with contract amounts of \$5,070,236 and market values of \$5,069,673, resulting in a net loss of \$563. Outstanding forward exchange currency contracts to sell foreign currencies with contract amounts of \$26,929,994 had market values of \$27,249,417, resulting in a net loss of \$319,423.

**Derivatives** – Derivative instruments are financial contracts or agreements whose values depend on the values of one or more underlying assets, reference rates, and/or financial indexes. Derivative instruments include futures contracts, forward contracts, swap contracts, options contracts, and forward foreign currency exchange. ATRS investment guidelines state that derivatives may be used to reduce the risk in a portfolio but should not be used to create a position of leverage or substantially increase the risk of the overall portfolio. Futures and options should be matched by cash or cash equivalent securities, and all short futures positions should be matched by equivalent long security positions. Each investment manager's derivative usage is specified in the investment management agreement or specific guidelines. As of June 30, 2015, ATRS held warrants with a fair value of \$1,849.

The fair value balances and notional amounts of derivative instruments outstanding at June 30, 2015, classified by type, and the changes in fair value of such derivative instruments for the year then ended, as reported in the 2015 financial statements, are as follows:

<b>CHANGES IN FAIR VALUE</b>		<b>FAIR VALUE AT JUNE 30, 2015</b>		<b>NOTIONAL</b>
<b>CLASSIFICATION</b>	<b>AMOUNT</b>	<b>CLASSIFICATION</b>	<b>AMOUNT</b>	
<b>Fiduciary funds</b>				
Investment derivative instruments:				
Foreign currency forwards				
Investment revenue	\$ 2,958			AUD
Investment revenue	(23)	Investments	\$ (23)	BRL \$ 155,117
Investment revenue	(273,835)	Investments	(284,222)	CHF 21,642,000
Investment revenue	(120,516)	Investments	(20,943)	EUR 1,638,406
Investment revenue	(5,946)	Investments	(17,898)	GBP 430,440
Investment revenue	(2)	Investments	(3)	HKD 364,800
Investment revenue	(110)	Investments	(3,759)	JPY 80,141,049
Investment revenue	14,544	Investments	7,425	MXN 7,300,000
Investment revenue	(26,575)	Investments	(563)	USD 5,070,235
	<b><u>\$ (409,505)</u></b>		<b><u>\$ (319,986)</u></b>	
<b>Rights</b>				
Investment revenue	\$ (4,850)			
<b>Warrants</b>				
Investment revenue	\$ (24,817)	Investments	\$ 1,849	\$ 123,300



## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

### JUNE 30, 2015

#### H. DEPOSITS AND INVESTMENTS (CONTINUED)

##### INVESTMENTS (CONTINUED)

**Securities Lending Transactions** – Arkansas Code Annotated and Board policy permit ATRS to participate in a securities lending program administrated by State Street Bank (the “Custodian”). The Custodian enters into agreements with broker-dealers or other entities to loan securities for collateral and have the same securities redelivered in the future. There were no restrictions on the dollar amount of securities loaned by ATRS. Securities on loan to participating brokers at year-end include U.S. Government securities, corporate securities, and international securities. Brokers who borrow the securities provide cash or other collateral, including securities issued or guaranteed by the U.S. Government. Collateral must be provided in the amount of at least 100% of the market value of the loaned securities. ATRS cannot pledge or sell collateral securities received unless the borrower defaults. The cash collateral received on each loan is invested in a collective investment fund comprised of a liquidity pool and a duration pool. As of June 30, 2015, the liquidity pool had an average duration of 27.64 days and an average weighted final maturity of 109.17 days for USD collateral. The duration pool had an average duration of 42.27 days and an average weighted final maturity of 2,105.68 days for USD collateral. Because the loans were terminable at will, their duration did not generally match the duration of the investments made with cash collateral. At year-end, ATRS had no credit risk exposure to borrowers due to the custodian’s indemnification. The Custodian indemnified ATRS by agreeing to purchase replacement securities, or return cash collateral in the event a borrower failed to return a loaned security or failed to pay the trust funds for income of the securities while on loan. No borrowers failed to return loaned securities or pay distributions during the year. Investments made with cash collateral appear as an asset on the Statement of Plan Net Position. Corresponding liabilities are recorded, as ATRS must return the cash collateral to the borrower upon expiration of the loan. ATRS is exposed to investment risk, including the possible loss of principal value in the cash collateral pool, due to fluctuation in the market value of the assets held by the cash collateral pool. As of June 30, 2015, the fair value of the cash collateral exceeded the net asset value (NAV) by \$504,475.

#### I. CONTRIBUTIONS

The Agency’s funding policy provides for periodic employer contributions at statutorily-established rates based on annual actuarial valuations. The employer contribution rate was 14% for the fiscal year ending June 30, 2015. Contributory members are required to contribute 6% of gross wages to ATRS. Employee contributions are refundable if ATRS-covered employment terminates before a monthly benefit is payable. Employee contributions remaining on deposit with ATRS for a period of one or more years earn interest credits, which are included in the refund.

#### J. RESERVES

In accordance with the provisions of Ark. Code Ann. § 24-7-405, ATRS must maintain reserve accounts showing net assets available for benefits. At June 30, 2015, the reserve accounts were funded at a level that complied with the code provisions.

The reserve balances at June 30, 2015, are as follows:

	<b>TOTAL</b>
Members’ deposit account reserve	\$ 9,025,717,759
Employers’ accumulation account reserve	(3,694,080,421)
Retirement reserve	9,060,282,337
Teacher deferred retirement option plan account reserve	543,490,685
Survivor benefit account reserve	90,353,488
Income – expense account reserve	9,937,464
<b>TOTAL</b>	<b>\$ 15,035,701,312</b>





## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

**JUNE 30, 2015**

### J. RESERVES (CONTINUED)

The Code provisions define each of the reserve accounts as follows:

**Members' Deposit Account Reserve** – The account in which members' contributions shall be accumulated with regular interest and from which shall be made transfers and refunds of contributions.

**Employers' Accumulation Account Reserve** – The account in which shall be accumulated the employer's contributions to ATRS and from which shall be made transfers as provided in the code.

**Retirement Reserve** – The account from which shall be paid all annuities and benefits in lieu of annuities payable as provided in this act to retirants who retired on account of superannuation or disability and to beneficiaries of such retirants.

**Teacher Deferred Retirement Option Plan Account Reserve** – The account in which shall be accumulated plan deposits made on behalf of the member with plan interest.

**Survivor Benefit Account Reserve** – The account from which shall be paid survivor benefits payable as provided in this act.

**Income-Expense Account Reserve** – The account to which shall be credited all investment income from invested assets of ATRS. It shall also be the account in which shall be accumulated the contributions made by employers for the administrative expenses of ATRS, from which shall be made annual transfers of interest credits and excess amounts to the other accounts of ATRS, and from which shall be paid all the expenses of the Board necessary for the administration and operation of ATRS.

### K. NET PENSION LIABILITY

The components of the net pension liability of the participating employers at June 30, 2015, were as follows:

Total pension liability	\$ 18,292,611,144
Plan net position	(15,035,701,312)
<b>NET PENSION LIABILITY</b>	<b><u>\$ 3,256,909,832</u></b>
<b>PLAN NET POSITION AS A PERCENTAGE OF THE TOTAL PENSION LIABILITY</b>	<b>82.20%</b>

**Actuarial Assumptions** – The total liability was determined by an actuarial valuation as of June 30, 2015, using the following actuarial assumptions, applied to all prior periods included in the measurement:

Wage inflation rate	3.25%
Salary increases	3.25-9.10%
Investment rate of return	8.00%

Mortality rates were based on the RP-2000 Mortality Table for Males and Females projected 25 years with Scale AA (95% for men and 87% for women).

The actuarial assumptions used in the June 30, 2015, valuation were based on the results of an actuarial experience study for the period July 1, 2005 through June 30, 2010.

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 (expected returns, net of pension plan investment expense, and inflation) are developed for each major 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 target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return were adopted by the plan's trustees after considering input from the plan's investment consultant and actuary.



## NOTES TO FINANCIAL STATEMENTS (CONTINUED)

**JUNE 30, 2015**

### **K. NET PENSION LIABILITY (CONTINUED)**

For each major asset class that is included in the pension plan's target asset allocation as of June 30, 2015, these best estimates are summarized in the following table:

<b>ASSET ALLOCATION</b>	<b>TARGET</b>	<b>LONG-TERM EXPECTED REAL RATE OF RETURN</b>
Global equity	50.0%	4.7%
Fixed income	20.0%	0.9%
Alternatives	5.0%	4.4%
Real assets	15.0%	4.3%
Private equity	10.0%	6.5%
Cash equivalents	0.0%	0.1%
<b>TOTAL</b>	<b>100.0%</b>	

**Single Discount Rate** – A single discount rate of 8.0% 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 8.0%. 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 14% of payroll. 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.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 8.0%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1% lower or 1% higher:

#### **SENSITIVITY OF THE NET PENSION LIABILITY TO THE SINGLE DISCOUNT RATE**

	1% Decrease	Current Rate	1% Increase
	7.00%	8.00%	9.00%
<b>NET PENSION LIABILITY</b>	<b>\$5,408,958,358</b>	<b>\$3,256,909,832</b>	<b>\$1,452,923,755</b>

### **NOTE 2: OTHER POST EMPLOYMENT BENEFITS (OPEB)**

GASB 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions (OPEB), requires that OPEB expense of fiduciary funds be recognized on the accrual basis in the fund financial statements. The 2015 liability of \$2,699,780 is a prorated amount from the Department of Finance and Administration based on a state-wide actuarial study. The amount allocated to ATRS is based on budgeted employees of ATRS 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, (4) minus actual contributions. The State of Arkansas 2015 CAFR will contain the complete OPEB footnote required by GASB 45.

### **NOTE 3: REQUIRED SUPPLEMENTARY SCHEDULES**

Detailed historical information about the pension liabilities for which the pension plan's assets are being held and managed and the significant assumptions used to measure these liabilities are required supplementary information. This required supplementary information, prepared in accordance with the parameters of GASB Statement no. 67, is included immediately following the notes to the financial statements.



## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

### FOR THE TEN-YEAR PERIOD ENDED JUNE 30, 2015

<b>TOTAL PENSION LIABILITY</b>	<b>2015</b>	<b>2014</b>	<b>2013*</b>	<b>2012*</b>	<b>2011*</b>	<b>2010*</b>	<b>2009*</b>	<b>2008*</b>	<b>2007*</b>	<b>2006*</b>
Service cost	\$ 298,134,477	\$ 326,999,276								
Interest	1,371,168,271	1,326,709,192								
Changes in benefit terms		(27,405,705)								
Difference between actual and expected experience	123,519,055	(103,017,525)								
Changes in assumptions										
Benefit payments	(970,719,484)	(914,250,015)								
Refunds	(10,774,122)	(10,485,103)								
<b>NET CHANGE IN TOTAL PENSION LIABILITY</b>	<b>811,328,197</b>	<b>598,550,120</b>								
<b>TOTAL PENSION LIABILITY – BEGINNING OF YEAR</b>	<b>17,481,282,947</b>	<b>16,882,732,827</b>								
<b>TOTAL PENSION LIABILITY – END OF YEAR (A)</b>	<b>\$ 18,292,611,144</b>	<b>\$17,481,282,947</b>								
<b>PLAN NET POSITION</b>										
Contributions – employer	\$ 408,230,472	\$ 404,920,440								
Contributions – member	128,555,684	125,225,906								
Net investment income	632,166,951	2,429,334,097								
Benefit payments	(970,719,484)	(914,250,015)								
Refunds	(10,774,122)	(10,485,103)								
Administrative expense	(8,034,857)	(8,034,236)								
<b>NET CHANGE IN PLAN NET POSITION</b>	<b>179,424,644</b>	<b>2,026,711,089</b>								
<b>PLAN NET POSITION – BEGINNING OF YEAR</b>	<b>14,856,276,668</b>	<b>12,829,565,579</b>								
<b>PLAN NET POSITION – END OF YEAR (B)</b>	<b>\$ 15,035,701,312</b>	<b>\$14,856,276,668</b>								
<b>NET PENSION LIABILITY – END OF YEAR (A)-(B)</b>	<b>\$ 3,256,909,832</b>	<b>\$ 2,625,006,279</b>								
Plan net position as a percentage of total pension liability	82.20%	84.98%								
Covered employee payroll	\$ 2,873,888,053	\$ 2,850,860,174								
Net pension liability as a percentage of covered employee payroll	113.33%	92.08%								

\*ATRS is only required to present those years for which information is available until the full 10-year trend is completed.



## SCHEDULE OF CONTRIBUTIONS FOR THE TEN-YEAR PERIOD ENDED JUNE 30, 2015

	<b>2015</b>	<b>2014</b>	<b>2013*</b>	<b>2012*</b>	<b>2011*</b>	<b>2010*</b>	<b>2009*</b>	<b>2008*</b>	<b>2007*</b>	<b>2006*</b>
Actuarially-determined contribution	\$ 474,773,530	\$ 485,904,529								
Actual contribution	408,230,472	404,920,440								
<b>CONTRIBUTION DEFICIENCY (EXCESS)</b>	<b>\$ 66,543,058</b>	<b>\$ 80,984,089</b>								
<b>COVERED EMPLOYEE PAYROLL</b>	<b>\$ 2,873,988,053</b>	<b>\$ 2,850,860,174</b>								
Actual contribution as a percentage of covered employee payroll	14.20%	14.20%								

\*ATRS is only required to present those years for which information is available until the full 10-year trend is completed.

## SCHEDULE OF INVESTMENT RETURNS FOR THE TEN-YEAR PERIOD ENDED JUNE 30, 2015

	<b>2015</b>	<b>2014</b>	<b>2013*</b>	<b>2012*</b>	<b>2011*</b>	<b>2010*</b>	<b>2009*</b>	<b>2008*</b>	<b>2007*</b>	<b>2006*</b>
Annual money-weighted rate of return	4.34%	19.27%								

\*ATRS is only required to present those years for which information is available until the full 10-year trend is completed.



## NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

### JUNE 30, 2015

#### **NOTE 1: SUMMARY OF SIGNIFICANT INFORMATION RELATED TO REQUIRED SUPPLEMENTARY SCHEDULES**

##### **A. CHANGES IN BENEFIT TERMS**

There were no significant benefit changes for the year ended June 30, 2015.

##### **B. CHANGES IN ASSUMPTIONS**

There were no significant changes in assumptions for the year ended June 30, 2015.

##### **C. METHOD AND ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALLY DETERMINED CONTRIBUTIONS**

Valuation date: June 30, 2015

The actuarially determined contribution rates are calculated as of June 30 of every year, which is one year prior to the beginning of the fiscal year in which contributions are reported.

The following actuarial methods and assumptions were used to determine contribution rates reported in the schedule of contributions:

Actuarial cost method	Entry age normal
Amortization method	Level percentage of payroll, closed
Amortization period	30 years
Asset valuation method	4-year smoothed market for funding purposes; 20% corridor
Wage inflation	3.25%
Salary increases	3.25% to 9.10%, including inflation
Investment rate of return	8.00%
Retirement age	Experience based table of rates that are specific to the type of eligibility condition. Last updated for the 2011 valuation pursuant to an experience study for the period July 1, 2005 - June 30, 2010
Mortality	RP-2000 Mortality Table for Males and Females projected 25 years with scale AA (95% for men and 87% for women)



**SCHEDULE OF SELECTED INFORMATION  
FOR THE FIVE-YEAR PERIOD ENDED JUNE 30, 2015 (UNAUDITED)**

For the Year ended June 30	2015	2014	2013	2012	2011
<b>Total Assets</b>	\$ 15,746,448,807	\$ 15,587,124,060	\$ 13,661,085,708	\$ 12,308,539,664	\$ 13,084,936,822
<b>Total Liabilities</b>	710,747,795	730,847,392	831,520,129	824,654,155	1,190,059,483
<b>Net Position Restricted for Pension Benefits</b>	15,035,701,312	14,856,276,668	12,829,565,579	11,483,885,509	11,894,877,339
<b>Total Additions (Losses)</b>	1,168,953,107	2,959,480,443	2,210,733,616	397,831,220	2,759,624,841
<b>Total Deductions</b>	989,528,463	932,769,354	865,053,546	808,823,050	748,321,500



# Investments





November 3, 2015



Board of Trustees  
Arkansas Teacher Retirement System  
1400 West Third Street  
Little Rock, AR 72201

## MARKET OVERVIEW

On the heels of two consecutive very strong fiscal year periods, the 2015 fiscal year experienced increased volatility and more muted returns. From the start, the year was characterized by diverging market trends from both a policy and economic perspective. Economic growth in the U.S. became more sure-footed throughout the year, while growth overseas was much more variable. Throughout the year, signs of economic weakness across certain markets unnerved investors, and in particular, concerns were focused on an economic slowdown in China. Central banks around the globe responded to these economic indicators with corresponding guidance and policies. Underscored by continued economic strength, the United States' third quantitative easing program (QE3) wound down at the beginning of the year and the Federal Reserve (Fed) provided a cautious stance on raising interest rates before gradually preparing markets for a rate hike that was loosely tied to late 2015. Elsewhere, central bank policies trended in the opposite direction and became much more accommodative. During the past year, more than 20 central banks implemented some type of monetary easing policy with the goal of boosting economic growth and restoring inflation. These diverging trends not only impacted investor sentiment and capital market returns, they also impacted currency markets. The U.S. dollar appreciated drastically relative to most currencies, rallying roughly 25% over the first nine months of the fiscal year period.

Though economic indicators and central bank actions greatly influenced capital markets, they were certainly not the only events that spurred volatility and impacted returns. Late in 2014, oil prices plummeted nearly 40% as concerns surrounding demand grew due to additional sources of production and to OPEC's decision not to cut production. Additionally, the year was plagued with multiple geopolitical concerns that kept markets on edge, including the evolution of ISIS in the Middle East, uncertainty surrounding the Ukraine/Russia crisis, the sovereign bond default in Argentina, stock market gyrations in the Shanghai Composite Index due to Chinese policy makers attempt to liberalize their financial system, and Greece's ultimate default on its payment to the International Monetary Fund (IMF) to end the year.

Against this backdrop, the broad U.S. equity market, as measured by the DJ U.S. Total Stock Market Index, returned 7.2% on continued economic growth and general support from the Fed. Developed international and emerging equity markets provided a stark contrast, declining 4.2% and 5.1% as measured in U.S. dollar terms by the MSCI EAFE Index and the MSCI Emerging Markets Index, respectively. The strong appreciation of the U.S. dollar over the year was the main detractor of international market returns for U.S.-based investors. International markets did experience improved returns in the latter half of the year from accommodating central bank policies and positive economic indicators; though it was not enough to offset the numerous headwinds they faced throughout the year. Amongst the volatility, the U.S. bond market acted as somewhat of a safe-haven for investors. Despite a slight uptick in U.S. Treasury rates in the second half of the year, rates fell over the full one-year period, and the broad U.S. bond market, as measured by the Barclays Aggregate Bond Index, returned 1.9%.

## OVERVIEW OF ATRS FUND STRUCTURE

The ATRS portfolio continues to be well diversified across several asset classes, including global public equities, fixed income, alternative investments, real assets, and private equity. The asset allocation is a long-term policy determined through periodic asset-liability studies and assessments of risk and liquidity needs. The latest asset-liability study, completed in April 2012, supported a 20% allocation to fixed income and an 80% allocation across public equities, alternatives, real assets (including real estate, timber, agriculture, and infrastructure), and private equity. Within these asset classes, the investments are further diversified across investment types, styles, regions, and vintage years. A variety of investment firms are employed within each category to minimize manager- and firm-specific risks. We continue to believe the diversification and overall risk level of the portfolio is appropriate given the goals and objectives of ATRS.

The ATRS portfolio was very stable over the 2015 fiscal year, with only one notable, yet modest, adjustment to the Plan's asset allocation. At the end of the year, the Board approved the recommendation to combine the U.S. equity and global equity asset classes





to a single globally oriented Total Equity asset class, with the goal of globalizing the portfolio over time as efficient and appropriate opportunities are identified. The new Total Equity asset class will take effect beginning in fiscal year 2016. All other asset classes remained the same. Also during the year, the first infrastructure drawdown was called, ending the year with approximately \$22 million invested in infrastructure which is housed in the Real Assets asset class.

The underlying investment manager structure of the ATRS investment portfolio remained unchanged throughout the 2015 fiscal year period. During the year, the Board did approve an investment in an Arkansas-based firm to initiate the Opportunity Fund initiative, as well as a modification to a U.S. equity investment manager's guidelines to a global orientation, consistent with the goal of globalizing the Total Equity asset class. Both changes occurred subsequent to fiscal year-end. All other underlying managers remained unchanged. We continue to regularly review the portfolio allocation, structure, and manager line-up and evaluate additional types of strategies in order to best position the fund for continued growth and downside protection.

### ATRS PERFORMANCE OVERVIEW (ANNUALIZED RETURNS)

	1 Year Ending 6/30/15		3 Year Ending 6/30/15		5 Year Ending 6/30/15	
	Return	Rank	Return	Rank	Return	Rank
<b>Total Fund</b>	<b>5.2%</b>	<b>2</b>	<b>12.7%</b>	<b>1</b>	<b>11.7%</b>	<b>8</b>
Performance Benchmark	5.2%	2	12.2%	2	11.9%	4
<b>Total U.S. Equity</b>	<b>6.7%</b>	<b>55</b>	<b>18.1%</b>	<b>24</b>	<b>16.4%</b>	<b>75</b>
DJ U.S. Total Stock Market Index	7.2%	37	17.6%	35	17.5%	28
<b>Total Global Equity</b>	<b>1.8%</b>	<b>48</b>	<b>14.6%</b>	<b>42</b>	<b>12.1%</b>	<b>65</b>
MSCI ACW Index	0.7%	55	13.0%	64	11.9%	69
<b>Total Fixed Income</b>	<b>1.0%</b>	<b>64</b>	<b>3.6%</b>	<b>28</b>	<b>4.7%</b>	<b>50</b>
Performance Benchmark	1.6%	44	2.3%	62	3.8%	79
<b>Total Opportunistic/Alternatives</b>	<b>5.8%</b>	<b>-</b>	<b>9.6%</b>	<b>-</b>	<b>-</b>	<b>-</b>
Custom Alternatives Benchmark	1.7%	-	5.0%	-	-	-
<b>Total Real Assets*</b>	<b>11.7%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Total Real Assets Benchmark	11.7%	-	-	-	-	-
<b>Total Private Equity*</b>	<b>11.9%</b>	<b>-</b>	<b>14.9%</b>	<b>-</b>	<b>14.6%</b>	<b>-</b>
Private Equity Policy	-	-	18.7%	-	17.0%	-

\*ATRS private market investment and benchmark returns are reported on a one-quarter lagged basis.

The System's Total Fund ended the fiscal year with approximately \$15.0 billion in assets under management, representing a growth in assets of approximately \$386 million over the year. The growth was due to investment earnings over the year of \$779 million, which equates to a 5.2% net-of-fee total return. The Total Fund's 5.2% return was driven by the strong performing U.S. equity market, as well as from robust returns from the alternative asset classes, including opportunistic/alternative investments, real assets, and private equity. On a relative basis, the Total Fund performed in line with its Performance Benchmark during the fiscal year. Relative to a peer group of U.S. Public Pension Plans with assets over \$1 billion, the Plan performed extremely



well, ranking in the top second percentile over the fiscal year. Longer-term performance remains strong, as the Total Fund returned an annualized 12.7% over the three-year period and 11.7% over the five-year period and ranked in the first and eighth percentiles of the peer group, respectively.

The U.S. equity asset class posted a solid 6.7% return during the 2015 fiscal year, modestly trailing the broad U.S. market's return of 7.2%, as represented by the Dow Jones U.S. Total Stock Market Index. Despite mostly favorable results from active management, an overweight to U.S. small-cap equities was a headwind for the ATRS U.S. equity portfolio as small caps in general underperformed the broad U.S. equity market. The U.S. equity's long-term performance continues to be favorable, returning an annualized 18.1% and 16.4% over the trailing three- and five-year periods, respectively. Relative performance is favorable over the trailing three-year period, as the portfolio outperformed its benchmark and ranked in the top quartile of the BNY Mellon Performance & Risk Analytics' Public Fund with over \$1 billion U.S. equity asset class universe. While absolute performance over the five-year period remains strong, the U.S. equity portfolio modestly trailed the broad market and ranks in the 75th percentile of its peer group.

The global equity asset class produced a relatively weak fiscal year return of 1.8% over the fiscal year, primarily due to a weak foreign equity market. Despite the modest investment gains, the ATRS global equity portfolio outperformed its performance benchmark return of 0.7%, as represented by the MSCI All Country World Index. The outperformance is due to favorable active manager returns over the year. Over the longer-term periods, the global equity returns are favorable on an absolute and relative basis, having returned an annualized 14.6% and 12.1% over the trailing three- and five-year periods, respectively, and outperforming the benchmark over both time periods. Relative to a global equity universe, the ATRS global equity return ranked in the top half of the peer group over the trailing three-year period and in the 65th percentile over the trailing five-year period.

Total fixed income produced a modest return of 1.0% during the fiscal year and modestly trailed its performance benchmark return of 1.6%. The fixed income asset class includes several core-plus and opportunistic strategies that have performed well over the one-year period. The main headwind to relative performance at the asset class level was due to a negative benchmark effect, as the asset class benchmark provided a higher hurdle to outperform than some of the manager-specific benchmarks. Over the long term, total fixed income has outperformed its performance benchmark, returning an annualized 3.6% and 4.7% over the trailing three- and five-year periods, respectively. Additionally, total fixed income has ranked in the top half of the BNY Mellon Performance & Risk Analytics' Public Fund Fixed Income peer group over both the three- and five-year periods.

The opportunistic/alternatives asset class returned 5.8% during the fiscal year and meaningfully outperformed its performance benchmark by 4.1 percentage points. The hedge fund managers are well diversified and, with the exception of one, have each outperformed their respective performance benchmarks over the year. During the year, the Board approved an investment with Circumference Group, an emerging Arkansas-based investment firm, to manage a high-conviction equity portfolio that will be housed in the opportunistic/alternatives asset class. The allocation was funded subsequent to fiscal year-end. We continue to identify and evaluate additional alternative strategies for this asset class with the objective of improving the risk/return characteristics of the System's investments.

Total real assets returned 11.7% during the fiscal year, performing in line with its performance benchmark. The real assets category includes real estate, timber, agriculture, and infrastructure. Real estate, comprising 72% of the real assets category, drove the returns over the year. Real estate returned 13.4% during the fiscal year and outperformed the NCREIF ODCE Index return of 12.4%. Approximately 65% of ATRS's real estate portfolio is invested in core investments, characterized as high quality and typically more conservative properties, which has been a meaningful driver of relative performance. Over the three-year period, total real estate returned an annualized 11.1% and modestly trailed the NCREIF ODCE Index return of 11.9%. The timber portfolio returned 9.4% over the fiscal year compared to 10.5% for the Timberland Property Benchmark. However, over the five-year period, the timber portfolio returned 2.8% relative to the Index return of 4.2%. The housing downturn was the primary reason for the timber industry's poor five-year return. The agriculture portfolio is in the portfolio construction stage with only 68% of the outstanding commitment invested, resulting in performance figures that are not as meaningful. That being said, the total agriculture portfolio returned 2.5% compared to the NCREIF Agriculture Index of 8.0% for the fiscal year. During the fiscal year, the first infrastructure drawdowns were made, ending the year with approximately \$22 million invested. Given the early stages of this category, infrastructure performance metrics are not yet meaningful.

# INVESTMENTS



The System's private equity investments posted a strong absolute return during fiscal year 2015 of 11.9%. Due to the long-term nature of private equity, performance benchmark returns are not shown for periods less than three years. Long-term performance of the private equity portfolio has been strong, posting double-digit, positive returns of 14.9% and 14.6% over the trailing three- and five-year periods, respectively.

Overall, we continue to have confidence in the ATRS portfolio structure. It is a pleasure to be of service to the ATRS.

Sincerely,

A handwritten signature in black ink that reads "Patrick J. Kelly".

Patrick J. Kelly, CFA, CAIA  
Partner

A handwritten signature in black ink that reads "Katie Comstock".

Katie Comstock  
Senior Consultant



## INVESTMENT POLICIES AND PROCEDURES

**AMENDED OCTOBER 4, 2010**

**AMENDED FEBRUARY 7, 2011**

**AMENDED JUNE 3, 2013**

**AMENDED OCTOBER 7, 2013**

**AMENDED FEBRUARY 17, 2014**

**AMENDED JUNE 1, 2015**

### STATEMENT OF INVESTMENT POLICY

This Investment Policy has been prepared within the context of applicable Arkansas laws and is intended to allow for sufficient flexibility in the investment process to capture opportunities, yet ensure that both prudence and care are maintained in the execution of the investment program. While safety of principal is given primary consideration, the Arkansas Teacher Retirement System Board of Trustees, hereinafter “Board,” may take appropriate levels of risk to earn higher levels of investment return.

The Board has arrived at this policy through careful study of the rates of return and risks associated with various investment strategies in relation to the current and projected liabilities of the Arkansas Teacher Retirement System, hereinafter, “the System.” This policy has been chosen as the most appropriate for achieving the financial objectives of the System. The policy will be reviewed periodically as circumstances dictate.

The Board has adopted a long-term investment horizon so that the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets. The assets of the System will be invested in a manner that provides the safeguards and diversity to which a prudent investor would adhere. All transactions undertaken on behalf of the System will be in the sole interest of the members of the System.

To achieve the overall investment goal of the System, one or more investment consultants may be retained by the Board as investment advisors. The scope of duties, together with the terms and conditions of engagement, of any investment consultant will be set forth in a contract approved by the Board. Throughout this document, investment advisors are referred to as investment consultants.

The System shall manage those assets not specifically allocated to investment managers. No investment shall be made without an investment consultant’s recommendation.

#### **STANDARD OF CARE**

The standard of care for the Board and Executive Director of the assets of the System is: when investing and reinvesting trust assets and in acquiring, retaining, managing, and disposing of investments of the trust assets, there shall be exercised the reasonable care, skill, and caution that a prudent investor would use after considering the purposes, terms, distribution requirements, and other circumstances of the trust. Investment and management decisions respecting individual assets shall be evaluated not in isolation but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust. The investments of the trust shall be diversified unless the Board reasonably determines that, because of special circumstances, the purposes of the trust are better served without diversifying. The trust assets shall be invested and managed solely in the interest of the members and benefit recipients of the trust. The trust assets shall be invested in a manner to only incur costs that are appropriate and reasonable in relation to the assets and purposes of the investment. Compliance with the standard of care is determined in light of facts and circumstances at the time of action, not in hindsight.

Investment and management functions may be delegated to an investment agent that a prudent trustee of comparable skills could properly delegate under the circumstances. When making such delegation, the Board shall establish the scope and terms of the delegation, consistent with the purposes and terms of the trust, and shall monitor the investment agent performance and compliance with the terms of the delegation. In performing a delegated function, an investment agent owes a duty to the System and the trust to exercise reasonable care to comply with the terms of the delegation. In addition, the Executive Director may delegate certain duties to the System’s investment staff without relieving the Executive Director from the ultimate responsibility.

Each party serving in a fiduciary capacity for the trust shall apply the standard of care set forth herein.



## INVESTMENT POLICIES AND PROCEDURES (CONTINUED)

### ASSET ALLOCATION

The Board is responsible for the prudent investment of funds and to maintain a proper allocation of the System’s investment assets. The Board, in conjunction with its investment consultants, shall set and adjust the System’s asset allocation ranges as necessary to provide an optimal allocation to obtain its target returns. The general investment consultant shall notify the Executive Director and the Board when an asset liability modeling study should be undertaken. It shall be the goal of the System to maintain the following asset allocation targets and ranges:

Asset Category	Minimum*	Target	Maximum*
Total Equity	45.0	50.0	55.0**
Fixed Income	15.0	20.0	25.0
Opportunistic/Alternatives	N/A	5.0	N/A
Real Assets***	N/A	15.0	N/A
Private Equity	N/A	10.0	N/A
Cash Equivalents	0.0	0.0	5.0

\* Due to the illiquid nature of opportunistic/alternatives, real assets, and private equity, it is not prudent to set rebalancing ranges for these asset classes

\*\*Additional allocations to total equity may be made beyond the maximum range to serve as a placeholder for unfunded and uncommitted opportunistic/alternatives, real assets, and private equity

\*\*\*Real assets includes real estate, timber, agriculture, and infrastructure

### REBALANCING

The asset allocation ranges established by the Board represent the Board’s judgment of a portfolio mix that provides the greatest risk/return value. Allowing the portfolio to exceed the Board limits strays from the financial discipline, which the Board believes will – over time – provide the appropriate risk-adjusted return to the System.

The Executive Director is responsible for rebalancing the allowable asset classes and the individual portfolios if any of the asset classes fall outside of the designated range. The general investment consultant shall provide guidance and advice to the Executive Director to best achieve the rebalancing. The Executive Director and general investment consultant will monitor the asset values by classification for each asset manager on a monthly basis, based on month-end data provided by the custodial bank. The Executive Director and general investment consultant shall regularly inform the Board on the rebalancing pacing and strategy.

Whenever the minimum or maximum range of total equity or fixed income has been exceeded, a transfer of funds or other appropriate action will occur to bring the actual allocation within the prescribed range within a time frame determined to be prudent by the Executive Director in consultation with the general investment consultant.

Normal plan cash flows should be used to the extent possible to rebalance. Interest, dividends, and plan contributions should be used to the extent possible to fund asset classes that are below their target. Withdrawals should be made from asset classes that are above their target.

### INVESTMENT MANAGER SELECTION

In order to implement its investment strategy, the System will use individual investment managers. Arkansas Code § 24-3-401 et seq. requires ATRS to always operate under the prudent investor rule. The prudent investor rule requires all investment decisions to be made based on the experience of management, rates of return, appropriate risk, reasonable cost, and all other relevant factors that should be used by prudent investors.

It is the policy of the Board to include, whenever appropriate, qualified minority-owned and women-owned business enterprises in the System’s investment manager selection process and to objectively evaluate all qualified investment manager candidates regardless of race, gender, or disability.

The Board will evaluate all qualified investment manager candidates with emphasis on demonstrated professional performance, organizational depth, institutional investment management capability, and reasonableness of fee structure regardless of the amount of investment assets under management or the age of the investment management firm.



## INVESTMENT POLICIES AND PROCEDURES (CONTINUED)

### INVESTMENT MANAGER SELECTION (CONTINUED)

The Board will use professional consultants who do not use discriminatory practices in the creation and maintenance of their investment manager databases and will require the investment consultants to affirm their use of non-discriminatory practices when recommending investment manager candidates to the Board.

### GOALS

Recognizing the purpose of the System is to remain actuarially sound and pay member benefits, the overall investment goal is to achieve, over a period of years, the greatest rate of return for the System with due consideration given to preserving capital and its purchasing power, and to maintain an appropriate level of risk consistent with the obligations of a prudent investor. The return of the System should exceed, net of fees, a policy benchmark comprised of the respective asset class benchmarks weighted by the asset class policy targets over a full market cycle (approximately five years). During periods of transition to and from non-marketable and illiquid asset classes such as private equity and real assets, actual allocations may be used over extended periods to reflect these changes in the policy targets. Periodic performance reports will provide a detailed description of the policy benchmark composition over time.

The System's actuary sets an expected return based on the Board's policy decisions. Market cycles may result in the System earning a return materially above or below the actuarial rate of return for extended periods of time. Therefore, the actuarial rate of return will not be used for performance comparison purposes.

### TOTAL EQUITY

The total equity exposure of the portfolio shall be well diversified with broad exposures to small, mid, and large capitalization companies and growth and value style sectors across U.S. and non-U.S. markets. The goal for total equity shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the aggregate global equity market as measured by the Morgan Stanley Capital International (MSCI) All Country World Index (ACWI) Investable Market Index (IMI) over a full market cycle (approximately five years). Because the total equity portfolio was previously segregated into domestic and global equity components, the total equity portfolio has a bias to domestic equity relative to the MSCI ACWI IMI. Therefore, to ensure appropriate performance measurement, the benchmark for total equity will be weighted 30% to the Dow Jones U.S. Total Stock Market Index and 70% to the MSCI ACWI IMI Index until the domestic allocation is in line with the global opportunity set as defined by the MSCI ACWI IMI. The manager structure of the total equity portfolio should resemble the weighted average of their respective benchmarks and avoid any material biases due to a concentration of managers or management styles. To achieve this goal, the Board may employ various actively managed and passive mandates. The structure of the equity component will be analyzed annually to ensure proper diversification is achieved.

### FIXED INCOME

The manager structure of the aggregate fixed income portfolio's risk exposure should resemble the aggregate domestic fixed income market as measured by the Barclays U.S. Universal Bond Index. To help achieve this goal, the Board will employ investment managers who invest assets in a broad array of sectors (government, mortgage backed, credits, asset backed, and commercial mortgage backed bonds), maturities, and credit qualities so that the overall portfolio structure is not materially different from that of the domestic and global fixed income markets. To provide a broad base of low-cost diversification and readily available liquidity, the Board may allocate a portion of the fixed income assets to a passive investment portfolio that approximates the return of the broad fixed income market.

The goal for fixed income investments shall be to achieve a total rate of return that will exceed, net of all costs and fees, the return of the Barclays U.S. Universal Bond Index over a full market cycle (approximately five years).

### OPPORTUNISTIC/ALTERNATIVE INVESTMENTS

The Opportunistic/Alternatives asset class may include investments in direct hedge funds, hedge fund of funds, commodities, currency mandates, and other alternative strategies that are not closely correlated or related to the traditional asset classes (fixed income, equities, private equity, and real assets). Unique investments that do not fit within the other asset class categories may also be included in the Opportunistic/Alternative category at the Board's discretion.



## INVESTMENT POLICIES AND PROCEDURES (CONTINUED)

### OPPORTUNISTIC/ALTERNATIVE INVESTMENTS (CONTINUED)

Because this category may include illiquid investments made through closed end investment partnerships, it may take a period of time to reach the target allocation of 5%. Assets will be invested in the U.S. equity asset class until the total target is attained.

The benchmark for the category will be a weighted average of the benchmarks of the underlying strategies.

The goal of the credit, global macro, and other liquid alternative investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the appropriate institutional quality hedge fund index over a full market cycle (approximately five years). Appropriate benchmarks will be determined as investments are added to the portfolio.

### REAL ASSETS

The Real Asset category may include real estate, timber, agriculture, and infrastructure. While no fixed targets are set, the following general parameters have been identified:

- 10% Real Estate
- 2% Timber
- 1% Agriculture
- 2% Infrastructure

The total target of the asset class will be 15%. Because this category may include illiquid investments made through closed end investment partnerships, it will take a period of time to reach these targets. Assets will be invested in the U.S. equity asset class until the total target is attained.

The System may initiate investments in real estate as governed by the Real Asset Statement of Investment Policy. The System's goal for real estate is to not materially exceed the System's approved target asset allocation for total real estate investments as determined by the Board at the beginning of each fiscal year. Should the real estate target asset allocation be exceeded, the Executive Director, working with the Real Estate Consultant, shall develop a pacing and strategy plan to address the over allocation.

ATRS's Real Estate portfolio is benchmarked on a net of fee basis against the NCREIF Fund Index Open-end Diversified Core Equity Index ("NFI-ODCE"). Once ATRS's Real Estate portfolio reaches its full target allocation for a five-year period, it is expected to meet or exceed the NFI-ODCE over rolling five-year periods.

The System may initiate direct ownership in timberland or indirect investments in fund of funds, partnerships, corporations, or real estate investment trusts ("REITs") investing in investment grade properties of like kind.

The goal of the timberland investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Timberland Property Index ("NTPI") over a five-year rolling period weighted according to ATRS's regional exposure based on Net Asset Value.

The goal of the agriculture investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the NCREIF Farmland Index ("NFI") over a five-year rolling period weighted according to ATRS's regional and crop type exposure based on Net Asset Value.

The goal of the infrastructure investments shall be to achieve a total rate of return that will exceed, net of all fees and costs, the return of the Consumer Price Index (CPI) plus 5 percentage points over a full market cycle (approximately 10 years). The Consumer Price Index plus 5 percentage points will be used as the benchmark to reflect the opportunity cost of investing in infrastructure. Similar infrastructure programs of institutional investors will also be used as a secondary benchmark to the extent such data is made available.

The ATRS Total Real Asset Benchmark is weighted by the allocations based on Net Asset Values across the various sub-categories, and thus defined as Real Estate benchmark, Timber benchmark, Agriculture benchmark, and Infrastructure benchmark. The net of fee return for ATRS's Total Real Asset Portfolio is expected to meet or exceed the Total Real Asset Benchmark over rolling five-year periods.



## INVESTMENT POLICIES AND PROCEDURES (CONTINUED)

### PRIVATE EQUITY

The System may initiate investments in private equity as governed by the Private Equity Statement of Investment Policy. Private equity investments may include domestic and foreign private equity partnerships, venture capital, and mezzanine financing partnerships that are intended to diversify the assets and reduce the likelihood of material losses in any individual investment classification. The investment consultant responsible for private equity shall advise the Executive Director and Board on the Private Equity Statement of Investment Policy and the structure of private equity investments best suited for the System.

The System's goal for private equity investments is to achieve a total rate of return that will exceed, net of all costs and fees, the return of the public equity markets, as measured by the Dow Jones U.S. Total Stock Market Index, plus a liquidity premium of 2 percentage points per year over a full market cycle for private equity (approximately 10 years).

### CASH EQUIVALENTS

The System may hold direct ownership in short-term investments or may permit or require managers to hold cash or cash equivalents to meet liquidity needs of the investment manager or of the System.

The System's cash management goal shall be to preserve capital and maintain liquidity.

### ARKANSAS-RELATED INVESTMENTS

The System may initiate Arkansas-related mortgage loans, promissory notes, direct real estate investments, or purchase insured certificates of deposit or short term securities of Arkansas financial institutions to meet the goals of the mandated requirements. Arkansas-related investments are categorized according to the appropriate asset class for each investment. In addition, Arkansas-related investments include, but are not limited to, investments managed by an Arkansas-related manager, Arkansas-related investments held by other fund managers, Arkansas timberland, partnerships based in Arkansas, and partnerships holding Arkansas properties.

### COMMINGLED OR MUTUAL FUNDS

If a commingled fund or mutual fund is utilized, the portfolio will be governed by the prospectus or similar document for the fund. In those cases, the System will utilize the prudent investor rule and advice of the investment consultant in selecting and evaluating funds initially and in monitoring them on an on-going basis.

### DERIVATIVES

Derivatives may be used to reduce the risk in a portfolio and provide desired market and security level positions as an alternative to purchasing cash securities. Excessive leverage shall not be created through the use of derivatives in a manner that substantially increases the System's portfolio risk. Each investment manager's derivative usage shall be specified in the investment management agreement or specific guidelines.

The use of futures and options shall be matched by cash or cash equivalent securities, and all short futures positions shall be matched by equivalent long security positions, unless otherwise stated in the investment manager guidelines or authorizing fund documents.

### LOANING OF SECURITIES

The lending agent will evaluate the credit-worthiness of potential borrowers of securities, and will loan securities only to financially sound borrowers. The lending agent will maintain a diversified list of such borrowers in order to mitigate the counterparty risk that is inherent in securities lending.

Collateral levels should be based on the nature of the loaned security and will generally be between 102% and 105% of the market value of the borrowed security. Marking to market will be performed every business day subject to de minimis rules of change in value, and borrowers will be required to deliver additional assets as necessary to maintain over-collateralization of securities loans.

### SECURITIES LENDING REINVESTMENT GUIDELINES

The cash collateral portfolio will be managed on an amortized cost basis (maintain a \$1 net asset value) and have investment guidelines that are 2a-7-like in nature (money market fund guidelines) to ensure that only a moderate amount of risk is taken on the reinvestment of the cash collateral. This will control the amount of credit and duration risk that can be taken by the short





## INVESTMENT POLICIES AND PROCEDURES (CONTINUED)

### SECURITIES LENDING REINVESTMENT GUIDELINES (CONTINUED)

duration fixed income manager, which will help to mitigate losses due to insufficient collateral relative to the amount on loan. In addition, guidelines for the cash collateral portfolio will be created in conjunction with the lending strategy and with input from the securities lending agent.

The collateral pool should also maintain a reasonable level of overnight liquidity in order to allow for the smooth recall of securities over time.

### INVESTMENT MANAGER REPORTING

The System will require all investment managers, managing partners, and general partners to provide on at least a quarterly and an annual basis reporting appropriate for the investment.

### ROLES

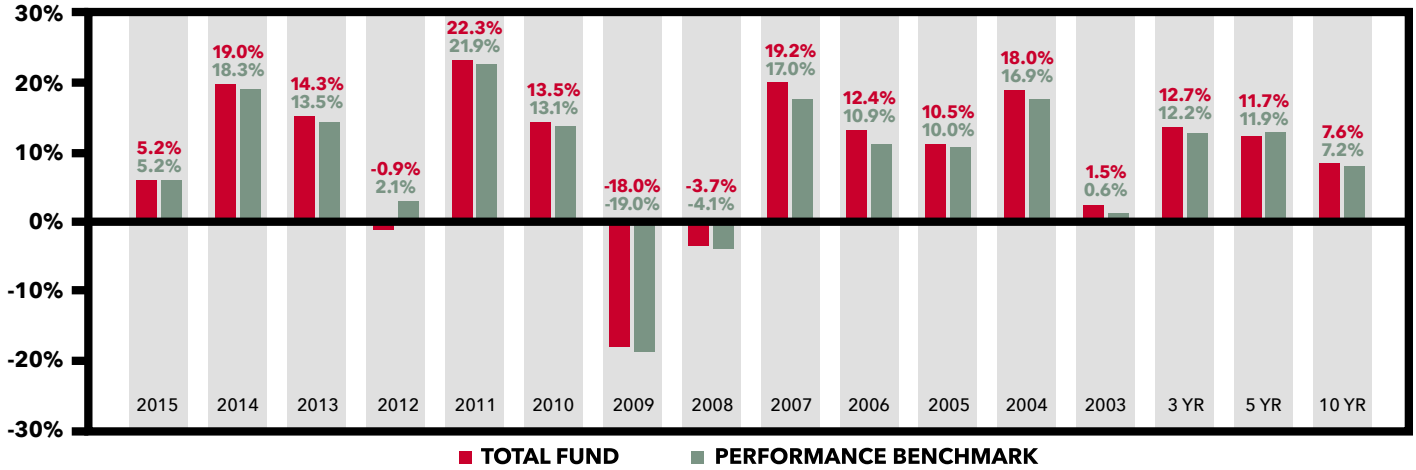
The Executive Director and investment consultant are jointly responsible for the initial selection of investment managers and any increase or decrease in an investment manager's funding. The Executive Director and investment consultant are jointly responsible for monitoring existing investment managers on performance, stability, and compliance. The Executive Director and investment consultant may also recommend termination of an investment manager when circumstances justify termination. Reasons for termination include, but are not limited to, relative performance, relative stability, costs, strategic allocation of assets, or other relevant factors that a prudent investor would use.

### PROXIES

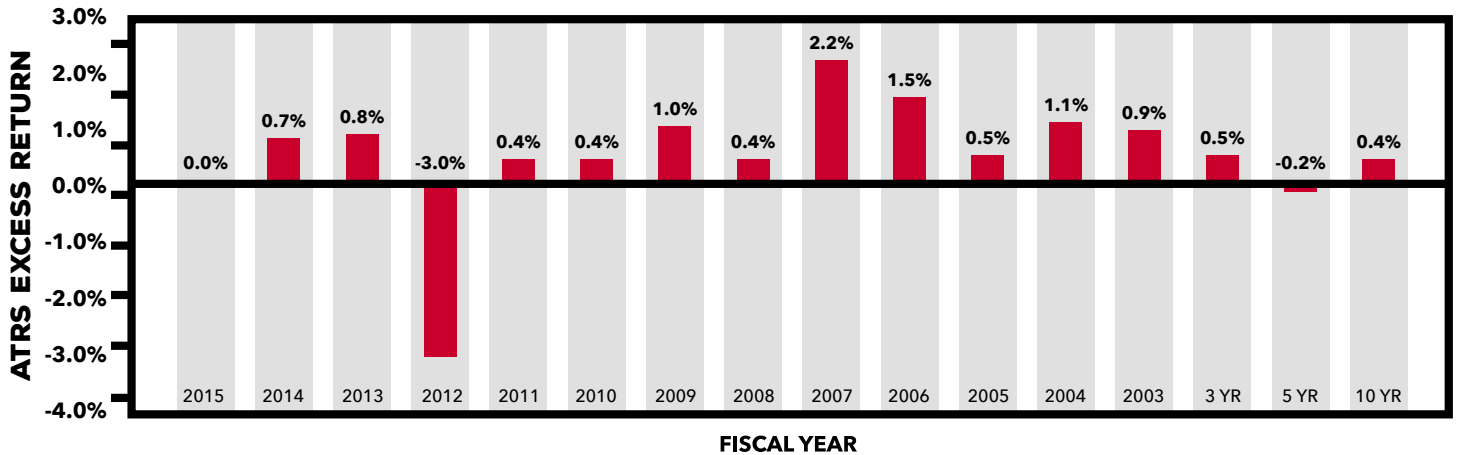
The System authorizes the investment manager to vote all proxies related to stocks in which it invests the System's assets. The System expects the investment manager to cast votes solely in the best interest of plan beneficiaries.



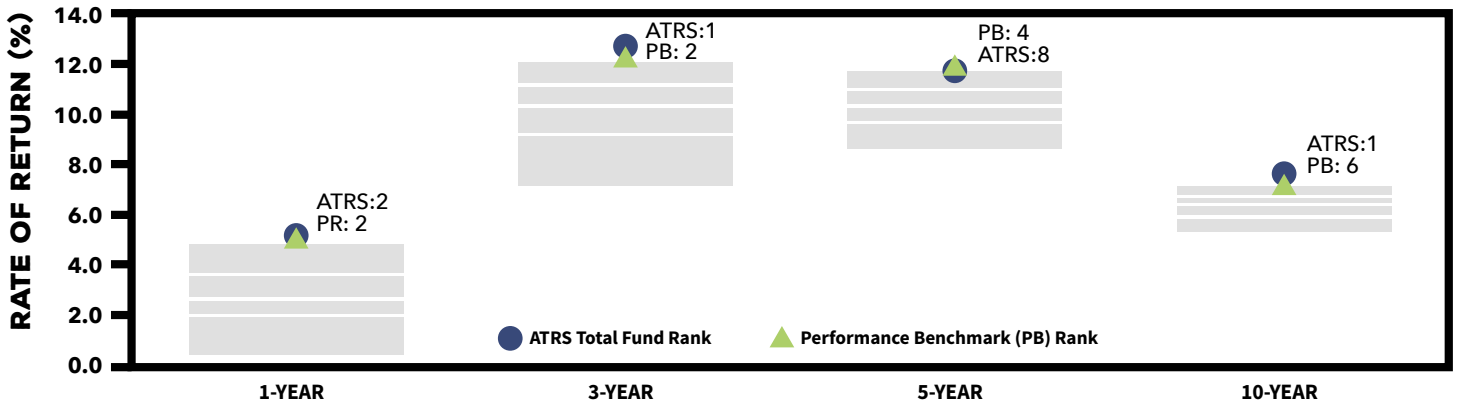
**ATRS TOTAL FUND FISCAL YEAR RETURNS VS. PERFORMANCE BENCHMARK: PERIODS ENDING JUNE 30, 2015**



**ATRS TOTAL FUND RETURNS RELATIVE TO PERFORMANCE BENCHMARK: PERIODS ENDING JUNE 30, 2015**



**ATRS TOTAL FUND RANKS: PERIODS ENDING JUNE 30, 2015  
UNIVERSE OF U.S. PUBLIC DEFINED BENEFIT PLAN WITH OVER \$1 BILLION IN AUM**





## SCHEDULE OF INVESTMENT RESULTS TRADITIONAL ASSETS

### RETURNS FOR PERIOD ENDING JUNE 30, 2015

The table below details the rates of return for the System's investment managers over various time periods ending June 30, 2015. The Appendix on page 49 provides a description of the benchmarks used for each manager as of the end of the fiscal year.

	1-Year	3-Years	5-Years
<b>Public Equity</b>			
BlackRock U.S. Equity Index Fund	7.3	17.7	-
Pershing Square International	12.9	19.6	17.0
Pershing Square Holdings	15.2	-	-
<i>Dow Jones U.S. Total Stock Market Index</i>	7.2	17.6	17.5
Allianz Structured Alpha 250	10.7	20.6	21.0
Allianz Structured Alpha 500	13.0	-	-
Voya Absolute Return	7.8	17.9	17.8
Relational Investors*	-3.9	19.9	18.3
<i>S &amp; P 500 Index</i>	7.4	17.3	17.3
Jacobs Levy	10.7	19.3	18.9
Jacobs Levy 130/30	14.2	20.2	20.3
<i>Russell 3000 Index</i>	7.3	17.7	17.5
Daruma Asset Management	-2.4	16.4	14.8
<i>Russell 2000 Index</i>	6.5	17.8	17.1
Kennedy Capital Management	2.7	21.3	18.0
<i>Russell 2000 Value Index</i>	0.8	15.5	14.8
Stephens	5.1	13.9	17.4
Voya Investment Management	11.3	18.8	19.6
<i>Russell 2000 Growth Index</i>	12.3	20.1	19.3
Allianz	4.4	15.3	14.2
<i>Performance Benchmark</i>	3.5	15.2	12.6
SSgA Global Index	1.2	13.8	12.6
BlackRock MSCI ASWI IMI Fund	1.2	13.9	-
<i>MSCI AC World IMI (Net)</i>	0.8	13.3	12.2
GMO Global All Country Equity	-4.5	-	-
T. Rowe Price Global Equity	7.5	18.8	14.7
Lazard	7.3	15.3	12.0
<i>MSCI AC World Index (Net)</i>	0.7	13.0	11.9

\*In liquidation



## SCHEDULE OF INVESTMENT RESULTS (CONTINUED) TRADITIONAL ASSETS

The table that follows details the rates of return for the System's investment managers over various time periods ending June 30, 2015.

	1-Year	3-Years	5-Years
<b>Public Equity (continued)</b>			
Harris Global Equity	0.7	-	-
D.E. Shaw	3.9	15.9	14.9
<i>MSCI World Index (Net)</i>	1.4	14.3	13.1
Wellington Global Perspectives	-1.4	19.7	17.9
<i>Performance Benchmark</i>	1.5	15.5	13.5
<b>Fixed Income</b>			
BlackRock	2.4	2.6	4.4
<i>Performance Benchmark</i>	1.6	2.3	3.8
Reams Core Plus Bond Fund	1.5	-	-
SSGA Aggregate Bond Index	1.9	1.9	3.4
<i>Barclays Aggregate Index</i>	1.9	1.8	3.3
Loomis Sayles	1.1	7.8	8.6
<i>Performance Benchmark</i>	1.0	3.5	5.3
Putnam	-0.7	2.8	2.2
<i>LIBOR</i>	0.2	0.3	0.3
Wellington Global Total Return	0.5	-	-
<i>BofA Merrill Lynch 3-Month U.S. T-Bill</i>	0.0	-	-

## ALTERNATIVES

The table that follows details the rates of return for the System's investment managers over various time periods ending June 30, 2015.

	1-Year	3-Years	5-Years
<b>Opportunistic/Alternatives</b>			
Anchorage	3.8	13.8	-
York	-7.2	10.7	-
<i>Credit Suisse Event Driven</i>	-2.0	8.6	-
Capula	8.9	6.9	-
Graham	23.9	10.5	-
Brevan Howard	6.8	-	-
<i>HFRI Macro (Total) Index</i>	4.2	1.8	-



## SCHEDULE OF INVESTMENT RESULTS (CONTINUED) REAL ASSETS

The table that follows details the rates of return for the System's investment managers for the period ending June 30, 2015.

Real Estate Manager	Since-Inception IRR*	Inception Date*
<b>Core &amp; Open End Funds</b>		
Arkansas Investments	7.9%	12/31/2007
JP Morgan Strategic Property Fund	6.6%	2/5/2007
JP Morgan Special Situation Property Fund	2.6%	2/5/2007
Prudential PRISA	5.8%	6/30/2005
UBS Trumbull Property Fund	6.0%	3/31/2006
<b>Closed End Funds</b>		
Almanac Realty Securities Fund V, L.P.	12.1%	5/12/2008
Almanac Realty Securities Fund VI, L.P.	14.2%	11/20/2012
Fidelity Real Estate Growth Fund III	7.6%	1/16/2008
LaSalle Income & Growth Fund VI	19.9%	7/16/2013
Long Wharf Real Estate Partners V	N/A	N/A
New Boston Real Estate Investment Fund VII	-5.2%	10/9/2008
Rockwood Capital Real Estate Partners Fund IX, L.P.	18.3%	12/27/2012
Westbrook Real Estate Fund X, L.P.	N/A	N/A
Blackstone Real Estate Partners VII, L.P.	24.8%	2/6/2012
Carlyle Realty Partners VII, L.P.	48.7%	7/15/2014
CB Richard Ellis Strategic Partners U.S. Opportunity Fund V, L.P.	2.7%	8/13/2008
Cerberus Institutional Real Estate Partners III, L.P.	16.4%	10/3/2013
DLJ Real Estate Capital Partners II, L.P.	19.1%	9/24/1999
Doughty Hanson & Co. European Real Estate Limited Partnership Number One	28.5%	7/29/1999
Heitman European Property Partners IV	0.6%	12/15/2008
Landmark Real Estate Partners VI, L.P.	24.8%	5/19/2010
LaSalle Asia Opportunity Fund IV	246.0%	7/22/2014
Lone Star Real Estate Fund IV, L.P.	N/A	N/A
O'Connor North American Property Partners II	-2.6%	4/10/2008
Olympus Real Estate Fund III, L.P.	-3.6%	8/15/2000
Torchlight Debt Opportunity Fund II	-2.9%	11/2/2007
Torchlight Debt Opportunity Fund III	13.9%	12/12/2008
Torchlight Debt Opportunity Fund IV	10.7%	7/19/2013
Torchlight Debt Opportunity Fund V	N/A	6/29/2015
Westbrook Real Estate Fund II, L.P.	13.4%	5/28/1997
Westbrook Real Estate Fund III, L.P.	8.8%	9/1/1998

\*N/A: Not applicable - no capital drawdowns through June 30, 2015.



## SCHEDULE OF INVESTMENT RESULTS (CONTINUED) REAL ASSETS

Real Estate Manager	Since-Inception IRR*	Inception Date*
<b>Closed End Funds (continued)</b>		
Westbrook Real Estate Fund IV, L.P.	20.7%	12/31/2000
Westbrook Real Estate Fund IX, L.P.	13.2%	6/11/2013
Westbrook SHP, LLC (Sunstone Hotel Investors, LLC)	2.5%	11/15/1999
<b>Total Real Estate</b>	<b>7.1%</b>	<b>5/28/1997</b>

\*N/A: Not applicable – no capital drawdowns through June 30, 2015.

Timber & Agriculture	Since-Inception IRR	Inception Date
BTG Timber Separate Account	5.5%	2/18/1998
HFMS Farmland Separate Account	8.1%	4/22/2011
UBS Agrivest Core Farmland Fund	1.3%	4/1/2015

Infrastructure	Since-Inception IRR	Inception Date
Antin Infrastructure Partners II, L.P.	-6.8%	7/3/2014
First Reserve Energy Infrastructure Fund II, L.P.	-49.9%	12/23/2014
KKR Global Infrastructure Investors II, L.P.	0.4%	12/18/2014
Macquarie Infrastructure Partners III, L.P.	-6.4%	2/13/2015



## SCHEDULE OF INVESTMENT RESULTS (CONTINUED) PRIVATE EQUITY

The table that follows details the rates of return for the System's investment managers for the period ending June 30, 2015.

	Inception Date	Annualized Internal Rate of Return*
<b>Individual Partnerships</b>		
Audax Mezzanine III	5/10/2010	8.1%
Blackstone Mezzanine I	12/22/1999	10.2%
DLJ Investment Partners II	11/10/1999	10.4%
Insight Mezzanine I	7/13/2009	9.2%
<b>Private Equity</b>		
21st Century Group I	4/6/2000	-3.8%
Advent GPE VI-A	3/12/2008	18.1%
Altus Capital II	6/3/2011	1.4%
Altas Capital II	12/13/2013	NMF
ATRS/FP Private Equity Fund	4/1/2012	14.2%
Big River – Equity	6/27/2014	NMF
Big River – Mezzanine	6/27/2014	NMF
Big River – Senior Secured Debt	6/27/2014	NMF
Blue Oak Arkansas	3/26/2014	NMF
Boston Ventures VII	12/14/2007	9.7%
BV VIII	8/15/2014	301.2%
Castlelake II	5/4/2012	17.7%
Castlelake III	2/28/2014	NMF
Court Square III	7/17/2012	0.4%
CSFB-ATRS 2005-1 Series	5/1/2005	8.1%
CSFB-ATRS 2006-1 Series	8/1/2006	9.1%
Cypress MBP II	6/18/1999	-0.3%
DH Tech I	1/12/2000	-18.7%
Diamond State	4/15/2000	5.2%
Diamond State II	1/4/2007	11.8%
DLJ MBP III	7/19/2000	19.4%
Doughty Hanson III	10/20/1997	13.0%
DW Healthcare III	12/21/2011	13.2%
EnCap IX	12/19/2012	-11.1%
EnCap VIII	1/31/2011	4.9%
EnCap X	4/7/2015	NMF
FP Intl 2011	2/16/2011	0.4%
FP Intl 2012	1/31/2012	-6.5%
FP Intl 2013	2/7/2013	-7.4%

\*2013 through 2015 vintage year funds' performance is deemed not meaningful (NMF).



## SCHEDULE OF INVESTMENT RESULTS (CONTINUED) PRIVATE EQUITY

	Inception Date	Annualized Internal Rate of Return*
<b>Private Equity (continued)</b>		
FP Intrnl 2014	1/23/2014	NMF
FP Intrnl 2015	1/23/2015	NMF
FP Venture 2008	1/18/2008	21.5%
FP Venture 2009	1/16/2009	26.7%
FP Venture 2010	1/29/2010	19.7%
FP Venture 2011	2/16/2011	49.9%
FP Venture 2012	1/31/2012	34.3%
FP Venture 2013	2/7/2013	18.3%
FP Venture 2014	1/23/2014	NMF
FP Venture 2015	1/23/2015	NMF
HMTF III	3/4/1997	1.8%
HMTF IV	6/18/1998	-6.2%
HMTF V	11/28/2000	17.6%
Insight Equity II	7/13/2009	16.5%
JF Lehman III	8/8/2011	14.2%
KPS III Supplemental	8/14/2009	22.6%
KPS IV	4/12/2013	NMF
Levine Leichtman V	4/30/2013	11.3%
Lime Rock III	7/16/2013	NMF
LLR III	5/9/2008	14.5%
Mason Wells III	5/13/2010	6.8%
NGP IX	2/27/2008	13.4%
NGP X	4/20/2012	6.9%
NGP XI	9/30/2014	NMF
Oak Hill I	4/1/1999	10.6%
Riverside IV	12/4/2009	12.5%
Riverside V	5/11/2012	-14.9%
Second Cinven	4/30/1998	9.3%
Siris III	12/11/2014	NMF
Sycamore Partners II	4/7/2014	NMF
TA XI	4/30/2009	17.5%
Tennenbaum VI	2/15/2011	8.7%
Thoma Bravo XI	5/1/2014	NMF
Vista Equity III	7/11/2008	31.0%
Vista Foundation II	10/31/2013	-12.7%
Wellspring V	7/28/2010	10.0%
Wicks IV	4/29/2011	18.0%

\*2013 through 2015 vintage year funds' performance is deemed not meaningful (NMF).





## DESCRIPTION OF BENCHMARKS

**Total Fund** – The Performance Benchmark for the Total Fund reflects a weighted average of the underlying asset class benchmarks, weighted as follows: Opportunistic/Alternatives, Real Assets and Private Equity at the weight of the previous month’s ending market values, Global Equity and Fixed Income at their long-term Policy Targets of 30% and 20%, respectively, and Domestic Equity at its long-term Policy Target of 20% plus the balance of the unfunded or uncommitted assets of the Opportunistic/ Alternatives, Real Assets, and Private Equity categories. From October 2007 to July 2013, the Performance Benchmark was the performance of the asset class benchmarks as a weighted average of the previous month’s ending market values. The historical components of the benchmark are shown in the table below. Returns prior to September 30, 1996, consist of the actual allocations to the seven different asset classes included in the ATRS portfolio over time. The historical benchmarks used for each asset class are noted below.

Date	DJ U.S. Total Stock Market Index	Russell 3000 Index	MSCI ACW ex-U.S. Index	MSCI ACWI	Barclays U.S. Universal Bond Index	Barclays Aggregate Bond Index	Alternative Policy <sup>1</sup>
3/31/2004 to 9/30/2007	40.0%	–	17.5%	–	25.0%	–	17.5%
7/31/2003 to 2/29/2004	40.0%	–	17.5%	–	–	25.0%	17.5%
10/31/2001 to 6/30/2003	–	40.0%	17.5%	–	–	25.0%	17.5%
8/31/1998 to 9/30/2001	–	40.0%	17.0%	–	–	28.0%	15.0%
10/31/1996 to 7/31/1998	–	40.0%	20.0%	–	–	28.0%	12.0%

<sup>1</sup>Currently, the benchmarks for Private Equity, Real Assets, and Opportunistic/Alternatives are included in the Total Fund Performance Benchmark at their actual beginning quarter weights. Prior to October 1, 2007, private equity, real estate, and other alternatives (timber) were grouped together in one “Alternatives Asset Class.” The Alternative Policy for this asset class was comprised of the weighted average of the Real Estate, Private Equity, and Other Alternatives policy benchmarks. Prior to July 31, 2003, the alternative benchmark consisted of 57.0% of the Russell 3000 + a 2% Premium per year, 8.5% of the NCREIF South Timberland Index, 28.5% of the Real Estate Index, 6% of the EnnisKnupp STIF Index. After this date, real estate and private equity benchmarks started to report on a one-quarter lag to align with the returns of their asset classes.

**TOTAL U.S. EQUITY** – The Dow Jones U.S. Total Stock Market Index.

**TOTAL GLOBAL EQUITY** – The MSCI All Country World Index.

**TOTAL FIXED INCOME** – The Barclays U.S. Universal Bond Index as of March 1, 2004.

**TOTAL OPPORTUNISTIC/ALTERNATIVES** – A custom benchmark consisting of 60% HFRI Macro Index and 40% DJ/CS Event-Driven Index. Prior to July 2013, it was a composite of 25% DJ/CS Event-Driven Index, 25% HFR Macro Index, and 50% South Timberland NCREIF Index.

**TOTAL REAL ASSETS** – A custom benchmark consisting of a weighted average of the net asset values at previous month’s end of the subcategories’ benchmarks, defined as Real Estate Benchmark, Timber Benchmark, Agriculture Benchmark, and Infrastructure Benchmark.

**REAL ESTATE** – NFI-ODCE - NCREIF Fund Index Open-end Diversified Core Equity Index.



## DESCRIPTION OF BENCHMARKS (CONTINUED)

**TIMBER BENCHMARK** – NCREIF Timberland Property Index (NTPI) weighted according to ATRS's regional exposure based on net asset value.

**AGRICULTURE BENCHMARK** – NCREIF Farmland Index (NFI) weighted according to ATRS's regional and crop type exposure based on net asset value.

**INFRASTRUCTURE BENCHMARK** – Consumer Price Index (CPI) plus 500 basis points annually.

**TOTAL PRIVATE EQUITY** – The Dow Jones U.S. Total Stock Market Index + a 2% premium per year.

**CASH EQUIVALENTS** – The Citigroup 90 day T-bill.

**ALLIANZ PERFORMANCE BENCHMARK** – On January 1, 2005, the benchmark for the portfolio was changed to the Merrill Lynch Convertible Bond (All Quality) Index. Prior to January 1, 2005, the performance benchmark for the Allianz (previously Nicholas Applegate) portfolio was the CSFB Convertible Securities Index. Prior to May 1, 2004, the performance benchmark consisted of 90% CSFB Convertible Securities Index and 10% Salomon High Yield Index.

**BLACKROCK PERFORMANCE BENCHMARK** – The Barclays U.S. Universal Bond Index as of March 1, 2004. Previously it was the Barclays Aggregate Bond Index.

**JACOBS LEVY PERFORMANCE BENCHMARK** – On January 1, 2008, the benchmark for the portfolio was changed to the Russell 3000 Index. Prior to January 1, 2008, the portfolio benchmark was the Russell 1000 Growth Index.

**LOOMIS SAYLES PERFORMANCE BENCHMARK** – An Index that splices 65% of the Barclays Capital Government/Credit Index and 35% Barclays Capital High Yield Index.

**PIMCO PERFORMANCE BENCHMARK** – The Barclays U.S. Universal Bond Index as of March 1, 2004. Previously it was the Barclays Capital Aggregate Bond Index.

**WELLINGTON GLOBAL PERFORMANCE BENCHMARK** – As of July 1, 2012, the benchmark was changed to MSCI All Country World Small Cap Index. Prior to July 1, 2012, the benchmark was MSCI All Country World Small/Mid Cap Index.

**BARCLAYS AGGREGATE BOND INDEX** – A market-value weighted index consisting of the Barclays Corporate, Government, and Mortgage-Backed Securities Indices. The Index also includes credit card-, auto- and home equity loan-backed securities, and is the broadest available measure of the aggregate U.S. fixed income market.

**BARCLAYS GOVERNMENT/CREDIT INDEX** – The Barclays Government/Credit Index measures the investment return of all medium and larger public issues of U.S. Treasury, agency, investment-grade corporate, and investment-grade international dollar-denominated bonds.

**BARCLAYS HIGH YIELD INDEX** – The Barclays High Yield Index covers the universe of fixed rate, non-investment grade debt. Pay-in-kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

**BARCLAYS U.S. UNIVERSAL BOND INDEX** – A market-value weighted index consisting of the components of the Barclays Aggregate Bond Index, plus EuroDollar bonds, emerging markets bonds, 144A fixed income securities, and U.S. corporate high-yield securities.



## DESCRIPTION OF BENCHMARKS (CONTINUED)

**CITIGROUP 90 DAY T-BILL INDEX** – Treasury bill rates of return, as reported by Citigroup (Salomon Smith Barney), for bills with a maximum time remaining to maturity of 90 days.

**DJ/CS EVENT-DRIVEN INDEX** – Event-driven funds typically invest in various asset classes and seek to profit from potential mispricing of securities related to a specific corporate or market event. Such events can include: mergers, bankruptcies, financial or operational stress, restructurings, asset sales, recapitalizations, spin-offs, litigation, regulatory and legislative changes, as well as other types of corporate events. Event-driven funds can invest in equities, fixed income instruments (investment grade, high yield, bank debt, convertible debt and distressed), options, and various other derivatives. Many event-driven fund managers use a combination of strategies and adjust exposures based on the opportunity sets in each subsector.

**DOW JONES U.S. TOTAL STOCK MARKET INDEX** – A capitalization-weighted stock index representing all U.S. common stocks traded regularly on the organized exchanges. The Index is the broadest measure of the aggregate U.S. stock market.

**FTSE EUROPE** – A tradable index, designed to represent the performance of the 100 most highly capitalized blue chip companies in Europe.

**HFR MACRO INDEX** – An index representing investment managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency, and commodity markets.

**HFR DISTRESSED/RESTRUCTURING INDEX** – An index representing distressed restructuring strategies which employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings.

**LIBOR INDEX** – London Interbank Offered Rate. A filtered average of the world's most creditworthy banks' interbank deposit rates with maturities between overnight and one full year.

**MERRILL LYNCH CONVERTIBLE BOND (ALL QUALITY) INDEX** – The Merrill Lynch All Convertibles All Qualities Index is a widely used index that measures convertible securities' performance. It measures the performance of U.S. dollar-denominated convertible securities not currently in bankruptcy with a total market value greater than \$50 million at issuance.

**MSCI ALL COUNTRY WORLD EX-U.S. INDEX** – A capitalization-weighted index of stocks representing 48 developed and emerging country markets, excluding the U.S. market.

**MSCI ALL COUNTRY WORLD INDEX** – A capitalization-weighted index of stocks representing 48 developed and emerging country markets.

**MSCI EUROPE, AUSTRALASIA, FAR EAST (EAFE) NON-U.S. STOCK INDEX** – A capitalization-weighted index of stocks representing 21 developed and emerging country markets in Europe, Australia, Asia, and the Far East.

**MSCI WORLD INDEX** – A capitalization-weighted index of stocks representing 22 developed stock markets in Europe, Asia, and Canada.

**NFI-ODCE INDEX** – NCREIF Fund Index Open-end Diversified Core Equity Index is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy; underlying funds are leveraged with gross and net returns available.



## DESCRIPTION OF BENCHMARKS (CONTINUED)

**RUSSELL 3000 INDEX** – An index that measures the performance of the 3,000 stocks that make up the Russell 1000 and Russell 2000 Indices.

**RUSSELL 1000 INDEX** – An index that measures the performance of the largest 1,000 stocks contained in the Russell 3000 Index.

**RUSSELL 1000 VALUE INDEX** – An index that measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower I/B/E/S growth forecasts.

**RUSSELL 2000 INDEX** – An index that measures the performance of the smallest 2,000 companies contained in the Russell 3000 Index.

**RUSSELL 2000 GROWTH INDEX** – An index that measures the performance of those Russell 2000 companies with greater price-to-book ratios and greater I/B/E/S growth forecasts.

**RUSSELL 2000 VALUE INDEX** – An index that measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower I/B/E/S growth forecasts.

**RUSSELL MID CAP VALUE INDEX** – An index that measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

**S&P 500 STOCK INDEX** – A capitalization-weighted stock index consisting of the 500 largest publicly traded U.S. stocks.

**SOUTH TIMBERLAND INDEX** – The largest regional subindex of the NCREIF Timberland Index, consisting of timberland properties held in the U.S. South. This includes close to 300 properties with more than 10 million cumulative acres of timberland in the following states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. Calculations are based on quarterly returns at the individual property level. Performance is reported on an all-cash, unlevered basis, gross of investment management fees.

### DESCRIPTION OF UNIVERSES

**TOTAL FUND** – The Total Fund and its benchmark are ranked in our Public Fund Universe. The universe is calculated based on data provided by BNY Mellon Performance & Risk Analytics, LLC, and includes roughly 60 public pension plans each with assets greater than \$1 billion.

**TOTAL DOMESTIC EQUITY** – The total domestic equity component and its benchmark are ranked in our domestic equity component universe. The universe is calculated based on data provided by BNY Mellon Performance & Risk Analytics, LLC, and includes the domestic equity asset class returns of approximately 50 public pension plans each with assets greater than \$1 billion.

**TOTAL GLOBAL EQUITY** – The total global equity component and its benchmark are ranked in our global equity component universe. The universe is calculated based on data provided by BNY Mellon Performance & Risk Analytics, LLC, and includes 200 global equity portfolios.

**TOTAL FIXED INCOME** – The total fixed income component and its benchmark are ranked in our fixed income component universe. The universe is calculated based on data provided by BNY Mellon Performance & Risk Analytics, LLC, and includes the fixed income asset class returns of approximately 45 public pension plans each with assets greater than \$1 billion.



## TOP LARGEST HOLDINGS

(BY MARKET VALUE)

**AS OF JUNE 30, 2015**

### FIXED INCOME

SECURITY NAME	DUE DATE	MARKET VALUE
LAM RESEARCH 1.25%	5/15/2018	\$9,685,828
ILLUMINA INC 0%	6/15/2019	\$9,540,634
FIAT CHRYSLER AUTO 7.875%	12/15/2016	\$9,155,237
GILEAD SCIENCES INC 1.625%	5/1/2016	\$8,739,844
SALESFORCE.COM INC .25%	4/1/2018	\$8,564,113
MYLAN INC 3.75%	9/15/2015	\$8,435,921
YAHOO INC 0%	12/1/2018	\$7,471,971
SUNEDISTON INC .25%	1/15/2020	\$7,332,525
RADIAN GROUP INC 2.25%	3/1/2019	\$7,212,855
UST NOTES 3.375%	5/31/2016	\$6,989,889

## TOP LARGEST HOLDINGS

(BY MARKET VALUE)

**AS OF JUNE 30, 2015**

### DOMESTIC/GLOBAL EQUITIES

SECURITY NAME	MARKET VALUE
JP MORGAN CHASE & CO	\$24,786,608
DANONE	\$21,454,394
MASTERCARD INC CLASS A	\$19,509,276
AMAZON.COM INC	\$18,301,234
WELLS FARGO & CO	\$18,092,408
INTEL CORP	\$17,929,642
APPLE INC	\$17,906,927
CADENCE DESIGN SYSTEMS INC	\$17,664,294
PRICELINE GROUP INC	\$17,155,413
ALLERGAN PLC PFD	\$16,873,115



## TOP LARGEST HOLDINGS

(BY MARKET VALUE)

**AS OF JUNE 30, 2015**

### ARKANSAS RELATED

<b>SECURITY NAME</b>	<b>MARKET VALUE</b>
TIMBERLAND I	\$382,854,734
BIG RIVER STEEL	\$125,834,030
AMERICAN CENTER 1 & 2 (PARTNERSHIP)	\$36,101,155
THE VICTORY BUILDING	\$30,388,215
BLUE OAK RECYCLING	\$14,840,000
ARKANSAS INSURANCE DEPARTMENT BUILDING	\$5,910,000
ROSE LAW FIRM	\$4,080,000
RETIREMENT VILLAGE PROPERTY	\$4,000,000
ARKANSAS TEACHER RETIREMENT BUILDING	\$3,453,466
WEST MEMPHIS DHS BUILDING	\$2,310,150



# Actuarial





## ACTUARY'S CERTIFICATION 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

February 18, 2016

Board of Trustees  
Arkansas Teacher Retirement System  
1400 West Third Street  
Little Rock, Arkansas 72201

Dear Board Members:

The basic funding objective of the Arkansas Teacher Retirement System (ATRS) is to establish and receive contributions which:

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

The progress being made toward the realization of the financing objectives of the System through June 30, 2015 is illustrated in Exhibits 1 and 2. The valuation process develops contribution rates that are sufficient to fund the plan's current 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. The actuarial valuations are performed each year, and the most recent valuations were completed based upon census data, asset data, and plan provisions as of June 30, 2015.

The System's administrative staff provides the actuary with data for the actuarial valuations. The actuary relies on the census data after reviewing it for internal and year-to-year consistency. Member data was not otherwise audited by the actuary. The actuary summarizes and tabulates population data in order to analyze longer term trends. Asset information was accepted without further audit. We are not responsible for the accuracy or completeness of the data provided by ATRS.

The figures disclosed in the Supplementary Schedules to the Financial Section were provided by Gabriel, Roeder, Smith & Company, as were the Notes to Trend Data. In addition, Gabriel, Roeder, Smith & Company was responsible for the following schedules found in the Actuarial Section:

Computed Actuarial Liabilities	Assumed Duration in T-DROP for Members
Employer Contribution Rate Computed as of June 30, 2015	Teachers Separations and Individual Pay Increases
Active Members in Valuation Data	Support Employees Separations and Individual Pay Increases
Retirees and Beneficiaries Added to and Removed from Rolls	Actuarial Gain (Loss) by Risk Area
Short Condition Test	Comments
Summary of Actuarial Assumptions and Methods	Schedule of Retired Members by Benefit Type
Single Life Retirement Values	Schedule of Average Benefit Payments
Probabilities of Retirement for Members	

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.

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. The Board adopts these assumptions





after considering the advice of the actuary and other professionals. 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, 2015 valuations were based upon assumptions that were recommended in connection with a study of experience covering the 2005-2010 period.

The Arkansas Teacher Retirement System remains stable with a 79.6% funded position as of June 30, 2015. The amortization period as of June 30, 2015 is 33 years. Unless there is an investment loss in Fiscal Year 2016, the amortization period is likely to fall below 30 years in the next valuation. Based on the June 30, 2015 valuation, an employer contribution rate of 14.3% would be needed to return the amortization period to 30 years. This document contains material excerpted from the Retirement System's actuarial report, but is not the full report. In order to obtain a full understanding of the actuarial condition of the Retirement System, it is necessary to read and understand the entire actuarial valuation report and other relevant materials.

### **GENERAL IMPLICATIONS OF FUNDING POLICY ON FUTURE EXPECTED PLAN CONTRIBUTIONS AND FUNDED STATUS**

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 8.00% on the actuarial value of assets), it is expected that:

- (1) The unfunded liability will increase in dollar amount for several years before it begins to decrease.
- (2) The unfunded actuarial accrued liabilities will be fully amortized after 33 years.
- (3) The funded status of the plan will increase gradually toward a 100% funded ratio.

### **LIMITATIONS OF FUNDED STATUS MEASUREMENT**

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market type transaction.
- (2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
- (3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

### **LIMITATION OF PROJECT SCOPE**

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

**Based upon the results of the June 30, 2015 valuations, we are pleased to report to the Board of Trustees that the Arkansas Teacher Retirement System is meeting its basic financial objective of level percent of payroll financing. The contribution rate is currently not sufficient to amortize the unfunded liability over a 30-year period. However, unless there is an investment loss in Fiscal Year 2016, the amortization period is likely to fall below 30 years in the next valuation.**



GRS

Gabriel Roeder Smith & Company  
Consultants & Actuaries

One Towne Square  
Suite 800  
Southfield, MI 48076-3723

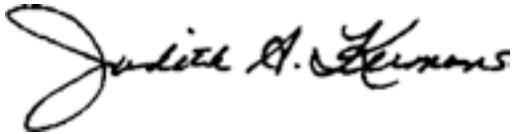
248.799.9000 phone  
248.799.9020 fax  
www.gabrielroeder.com

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. This report does not contain an analysis of the potential range of such future measurements.

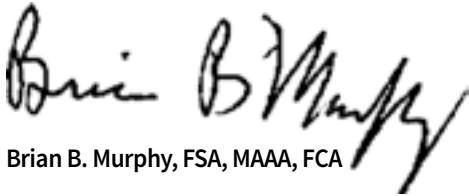
To the best of our knowledge, this report is complete and accurate and was made in accordance with standards of practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries. The actuarial assumptions used for the valuation produce results which, individually and in the aggregate, are reasonable.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. Judith A. Kermans and Brian B. Murphy 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,



Judith A. Kermans, EA, MAAA, FCA



Brian B. Murphy, FSA, MAAA, FCA

JAK/BBM:ah



**EXHIBIT 1**  
**COMPUTED ACTUARIAL LIABILITIES**  
**AS OF JUNE 30, 2015**

Actuarial Present Value of	(1) Total Present Value	Entry Age Actuarial Cost Method	
		(2) Portion Covered by Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1)-(2)
Age and service retirement allowances based on total service likely to be rendered by present active members.	\$ 7,474,423,350	\$2,010,541,610	\$ 5,463,881,740
Age and service retirement allowances based on total service likely to be rendered by present T-DROP members.	2,063,815,574	38,047,896	2,025,767,678
Vested deferred benefits likely to be paid present active and inactive members.	1,193,107,433	400,818,613	792,288,820
Survivor benefits expected to be paid on behalf of present active members.	117,037,810	41,477,485	75,560,325
Disability benefits expected to be paid on behalf of present active members.	198,036,787	101,933,803	96,102,984
Refunds of member contributions expected to be paid on behalf of present active members.	15,907,999	111,927,855	(96,019,856)
Benefits payable to present retirees and beneficiaries.	9,778,462,281	0	9,778,462,281
<b>Total</b>	<b>\$20,840,791,234</b>	<b>\$2,704,747,262</b>	<b>\$18,136,043,972</b>
Applicable Assets	14,433,823,989	0	14,433,823,989
Liabilities to be covered by future contributions	\$ 6,406,967,245	\$2,704,747,262	\$ 3,702,219,983



**EXHIBIT 2**  
**EMPLOYER CONTRIBUTION RATE**  
**COMPUTED AS OF JUNE 30, 2015**  
**FOR THE FISCAL YEAR ENDING JUNE 30, 2017**

Computed Contributions for	Percents of Active Member Payroll			
	Teachers	Support	Combined	Prior Year
<b>Normal Cost</b>				
Age & Service Annuities	9.60%	7.19%	<b>8.88%</b>	8.85%
Deferred Annuities	1.61%	2.13%	<b>1.77%</b>	1.77%
Survivor Benefits	0.19%	0.16%	<b>0.18%</b>	0.18%
Disability Benefits	0.47%	0.42%	<b>0.46%</b>	0.45%
Refunds of Member Contributions	0.38%	0.81%	<b>0.51%</b>	0.51%
<b>Total</b>	12.25%	10.71%	<b>11.80%</b>	11.76%
Average Member Contributions	5.36%	4.11%	<b>4.99%</b>	4.92%
Net Employer Normal Cost	6.89%	6.60%	<b>6.81%</b>	6.84%
Unfunded Actuarial Accrued Liabilities			<b>7.19%</b>	7.16%
<b>Employer Contribution Rate</b>			<b>14.00%</b>	14.00%
<b>Amortization Years</b>			<b>32.5</b>	39.1

The amortization period is the number of years it will take to pay off the unfunded liability of \$3.7 billion assuming that the employer contribution rate remains at the 14% of payroll level. Since 2000, the period has varied from a low of 19 years to a high of more than 100 years. Unless there is an investment loss in Fiscal Year 2016, the amortization period is likely to fall below 30 years in the next valuation.



## SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date June 30	Active Members in Valuation <sup>#</sup>		Average Annual Pay	
	Number	Annual Payroll (Millions)	Amount	% Change
2015	72,919	\$2,777	\$38,088	2.7%
2014	74,352	\$2,758	\$37,092	1.9%
2013	74,925	\$2,727	\$36,400	0.0%
2012	75,627	\$2,714	\$35,891	1.0%
2011	76,780	\$2,728	\$35,534	7.7%
2010	72,208	\$2,381	\$32,980	0.5%
2009	70,655	\$2,318	\$32,804	1.5%
2008	70,172	\$2,268	\$32,319	2.1%
2007	69,226	\$2,191	\$31,645	3.0%
2006	67,710	\$2,080	\$30,714	3.0%

<sup>#</sup> Beginning with the June 30, 2011 valuation, active member information includes T-DROP participation.

## SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

Year	Estimated Number		Total Retirees	Annual Allowances (Millions)	% Increase in Annual Allowances	Average Annual Allowances
	Added	Removed				
2015	3,326	1,056	40,748	\$916.62	11.5% <sup>@</sup>	\$22,495
2014	3,156	932	38,478	\$822.19	7.7%	\$21,368
2013	3,039	945	36,254	\$763.76	7.7%	\$21,067
2012	2,932	871	34,160	\$709.17	7.9%	\$20,760
2011	2,394	882	32,099	\$657.08	7.2%	\$20,470
2010	2,588	819	30,587	\$612.77	8.5%	\$20,034
2009	2,721	704	28,818	\$564.59	9.5%	\$19,591
2008	1,703	513	26,801	\$515.56	6.4%	\$19,237
2007	2,017	559	25,611	\$484.55	7.7%	\$18,920
2006	1,958	485	24,153	\$449.77	8.4%	\$18,622

T-DROP participants are classified as active members for purposes of the valuation and are not included in this schedule.

<sup>@</sup> Increased percent due to T-DROP annuities included in 2015.



## SHORT CONDITION TEST

ATRS's 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 test.

A *short condition test* is one means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with: 1) Member contributions on deposit; 2) The liabilities for future benefits to present retired lives; 3) The liabilities for service already rendered by members. In a system that has been following the discipline of level percent-of-payroll financing, the liabilities for 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 rare circumstances). In addition, the liabilities for service already rendered by 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 unusual.

The schedule below illustrates the history of liability 3 of the System and is indicative of the ATRS objective of following the discipline of level percent-of-payroll financing.

Val. Date June 30	(1) Member Contrib.	(2) Retirees and Benef.	(3) Active and Inactive Members (Employer Financed Portion)	Present Valuation Assets	Portion of Present Values Covered by Present Assets			
					(1)	(2)	(3)	Total
\$ Millions								
2015	\$1,128	\$9,778	\$7,230	\$14,434	100%	100%	49%	80%
2014	1,077	8,777	7,456	13,375	100%	100%	47%	77%
2013 <sup>#</sup>	1,027	8,181	7,514	12,247	100%	100%	40%	73%
2012	981	7,649	7,509	11,484	100%	100%	38%	71%
2011 <sup>*#</sup>	929	7,132	7,460	11,146	100%	100%	41%	72%
2010 <sup>#</sup>	848	6,516	7,333	10,845	100%	100%	47%	74%
2009	790	6,041	7,188	10,617	100%	100%	53%	76%
2008 <sup>#</sup>	732	5,544	7,058	11,319	100%	100%	71%	85%
2007 <sup>#</sup>	679	4,960	6,690	10,519	100%	100%	73%	85%
2006	630	4,617	6,376	9,332	100%	100%	64%	80%

\* Revised actuarial assumptions or methods.

# Legislated benefit or contribution rate change.



## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

An actuarial valuation is based upon an actuarial cost method, an asset valuation method, and actuarial assumptions. These methods and assumptions are chosen by the Board of Trustees after consultation with the Actuary and other advisors.

The actuarial cost method is called the Entry Age Actuarial Cost Method. This method is consistent with the Board's level percent-of-payroll funding objective. With this method, the level percent-of-payroll is determined that will fund a member's retirement benefit over the member's entire working lifetime, from date of hire (Entry Age) to date of exit from the active member population. Differences in the past between assumed and actual experience become part of unfunded actuarial accrued liabilities and are amortized with level percent-of-payroll contributions. This cost method was first used in the **June 30, 1986** valuation.

The asset valuation method is a four-year smoothed market value method in which assumed investment return is recognized immediately each year, and differences between actual and assumed investment return are phased-in over a closed four-year period. This asset valuation method is intended to give recognition to the long-term accuracy of market values while filtering out and dampening short-term market swings. This method was first used in the **June 30, 1995** valuation. It was modified in conjunction with the 2002 valuation to include a corridor. Assets were set to market value in 2012 to reduce future volatility.

The actuarial assumptions used in producing the valuation fall into two broad classes: economic assumptions and demographic assumptions. Economic assumptions refer to long-term rates of investment return, wage growth, covered population growth, and inflation. Demographic assumptions refer to retirement rates, turnover rates, disability rates, and mortality rates. The current assumptions are based upon a 2005-2010 study of experience of the Arkansas Teacher Retirement System. The assumptions are reviewed from time to time to keep them reasonably current with expected experience.

### ECONOMIC ASSUMPTIONS

**The investment return rate** used in making the valuation was 8.0% per year, compounded annually (net after administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return over wage inflation is defined to be the portion of investment return which is more than the wage inflation rate. Considering wage inflation recognition of 3.25%, the 8.0% rate translates to an assumed real rate of return over wage inflation of 4.75%. This rate was first used for the **June 30, 2011** valuation. The assumed real rate of return over price inflation would be higher – on the order of 5% to 5.25%.

**Pay increase assumptions** for individual active members are shown on Tables IV and V. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.25% recognizes wage inflation. These rates were first used for the **June 30, 2011** valuation. No specific **Price Inflation** is needed for this valuation. However, the wage inflation and interest rate assumptions would be compatible with a price inflation assumption of 2.75%. It is assumed that the 3% COLA will always be paid.

The Active Member Group size is assumed to remain at its present level.

**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 rate was first used for the **June 30, 2011** valuation.

### NON-ECONOMIC ASSUMPTIONS

**The mortality table** used was the RP-2000 Mortality Table for Males and Females projected 25 years with scale AA (95% for men and 87% for women). Mortality rates were adjusted to include a small margin for future mortality improvement as described in the table named above. This table was first used for the **June 30, 2011** valuation. For disabled lives, the mortality table used was the 1983 Group Annuity Mortality Table, the mortality table set forward five years. The set forward of five years was first used for the **June 30, 2002** valuation.

**The probabilities of retirement** for members eligible to retire are shown on Tables II and III. The rates for full retirement were first used in the **June 30, 2011** valuation. The rates for reduced retirement were first used in the **June 30, 2002** valuation.

**The probabilities of withdrawal** from service, **death in service**, and **disability** are shown for sample ages on Tables IV and V. These rates were first used in the **June 30, 2011** valuation.

**The data about persons now covered and about present assets** was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary. Members whose dates of birth were not supplied were assumed to be 40 years old on the valuation date.



## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS (CONTINUED)

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: plan experience differing from that anticipated by the economic and demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the Actuary's assignment, the Actuary did not perform an analysis of the potential range of such future measurements.

### TABLE I SINGLE LIFE RETIREMENT VALUES

Sample Attained Ages	Present Value of \$1.00 Monthly for Life		Present Value of \$1.00 Monthly for Life Increasing 3.0% Annually		Future Life Expectancy (Years)		Percent Dying within Next Year	
	Men	Women	Men	Women	Men	Women	Men	Women
40	\$147.45	\$148.74	\$192.83	\$195.36	43.26	45.92	0.08%	0.04%
45	144.24	145.78	186.54	189.56	38.45	41.03	0.10%	0.07%
50	139.69	141.63	178.19	181.91	33.65	36.18	0.13%	0.10%
55	133.32	135.93	167.28	172.06	28.89	31.39	0.21%	0.19%
60	124.93	128.62	153.79	160.06	24.28	26.77	0.43%	0.39%
65	114.53	119.62	137.94	146.03	19.92	22.41	0.85%	0.74%
70	102.19	109.01	120.09	130.24	15.89	18.36	1.45%	1.28%
75	87.25	96.62	99.84	112.72	12.15	14.64	2.53%	2.00%
80	70.65	82.27	78.66	93.60	8.86	11.25	4.76%	3.35%
85	54.64	66.59	59.29	73.90	6.25	8.29	8.83%	5.80%
Ref:	472x0.95	473x0.87	472x0.95	473x0.87				

Sample Attained Ages	Benefits Increasing 3.0% Yearly	Portion of Age 60 Lives Still Alive	
		Men	Women
60	\$100.00	100%	100%
65	115.00	97%	97%
70	130.00	92%	93%
75	145.00	84%	86%
80	160.00	71%	76%
Ref		472x0.95	473x0.87





**TABLE II**  
**PROBABILITIES OF RETIREMENT FOR MEMBERS**

Retirement Ages	% of Active Participants Retiring with Unreduced Benefits			
	Education		Support	
	Male	Female	Male	Female
48	59%	55%	25%	25%
49	67%	25%	54%	22%
50	11%	7%	3%	9%
51	7%	6%	5%	7%
52	7%	6%	8%	7%
53	7%	8%	9%	8%
54	8%	8%	9%	8%
55	9%	9%	6%	10%
56	11%	10%	10%	9%
57	11%	12%	10%	10%
58	11%	12%	16%	14%
59	14%	16%	16%	27%
60	16%	16%	11%	13%
61	15%	15%	10%	14%
62	30%	26%	29%	22%
63	24%	22%	21%	18%
64	22%	20%	25%	20%
65	37%	43%	46%	40%
66	43%	41%	38%	36%
67	35%	34%	37%	35%
68	31%	33%	39%	28%
69	25%	33%	26%	34%
70	37%	40%	33%	34%
71	41%	30%	34%	33%
72	32%	34%	41%	31%
73	44%	36%	32%	34%
74	30%	30%	29%	34%
75	100%	100%	100%	100%
Ref	2013	2014	2015	2016



### TABLE III PROBABILITIES OF REDUCED RETIREMENT FOR MEMBERS

Retirement Ages	% of Active Participants Retiring with Reduced Benefits			
	Education		Support	
	Male	Female	Male	Female
50	2%	2%	2%	2%
51	2%	2%	2%	2%
52	3%	3%	3%	3%
53	4%	4%	4%	4%
54	4%	4%	4%	4%
55	6%	6%	6%	6%
56	9%	5%	9%	5%
57	9%	5%	9%	5%
58	9%	5%	9%	5%
59	9%	5%	9%	5%
Ref	826	825	826	825

### DURATION OF T-DROP FOR MEMBERS

Present T-DROP members are assumed to remain in T-DROP according to the following table:

Entry Age	Assumed Duration Years
50-56	6
57	5
58	4
59+	3



**TABLE IV  
TEACHERS**

**SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE AND SERVICE  
RETIREMENT & INDIVIDUAL PAY INCREASES**

Sample Ages	Percent of Active Members Separating within the Next Year						
	Service	Death		Disability		Other	
		Men	Women	Men	Women	Men	Women
	0					25.30%	18.00%
	1					13.80%	11.30%
	2					10.60%	9.10%
	3					8.40%	8.40%
	4					5.00%	6.60%
25	5 & Up	0.01%	0.01%	0.05%	0.05%	3.50%	4.00%
30		0.02%	0.01%	0.05%	0.04%	3.60%	4.30%
35		0.03%	0.02%	0.04%	0.05%	2.80%	2.90%
40		0.04%	0.02%	0.08%	0.09%	2.30%	2.10%
45		0.05%	0.03%	0.18%	0.16%	1.90%	1.80%
50		0.07%	0.05%	0.40%	0.39%	2.90%	2.20%
55		0.11%	0.10%	0.73%	0.69%	3.60%	2.60%
60		0.22%	0.20%	0.96%	0.86%	3.10%	2.30%
65	0.43%	0.38%	1.00%	0.90%	2.50%	1.80%	
Ref						718	719
		472x0.48	473x0.44	737x1	738x1	1192	1193



**TABLE IV (CONTINUED)  
TEACHERS**

**SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE AND SERVICE  
RETIREMENT & INDIVIDUAL PAY INCREASES**

Age	Pay Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
20	5.10%	3.25%	8.35%
25	4.10%	3.25%	7.35%
30	3.10%	3.25%	6.35%
35	2.10%	3.25%	5.35%
40	1.40%	3.25%	4.65%
45	0.90%	3.25%	4.15%
50	0.46%	3.25%	3.71%
55	0.12%	3.25%	3.37%
60	0.00%	3.25%	3.25%
65	0.00%	3.25%	3.25%
Ref:	388		



**TABLE V**  
**SUPPORT EMPLOYEES**

**SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE AND SERVICE  
RETIREMENT & INDIVIDUAL PAY INCREASES**

Sample Ages	Percent of Active Members Separating within the Next Year						
	Service	Death		Disability		Other	
		Men	Women	Men	Women	Men	Women
	0					47.50%	46.80%
	1					27.30%	24.90%
	2					18.90%	17.00%
	3					15.30%	13.20%
	4					10.80%	10.40%
25	5 & Up	0.01%	0.01%	0.05%	0.04%	11.10%	9.50%
30		0.02%	0.01%	0.10%	0.05%	9.00%	7.20%
35		0.03%	0.02%	0.10%	0.05%	6.90%	5.40%
40		0.04%	0.02%	0.12%	0.07%	5.40%	4.90%
45		0.05%	0.03%	0.20%	0.16%	4.30%	4.40%
50		0.07%	0.05%	0.55%	0.34%	3.90%	3.60%
55		0.11%	0.10%	0.88%	0.59%	3.50%	3.00%
60		0.22%	0.20%	0.98%	0.76%	2.80%	2.50%
65	0.43%	0.38%	1.00%	0.80%	2.30%	2.00%	
Ref						720	721
		472x0.48	473x0.44	739x1	740x1	1194	1195



**TABLE V (CONTINUED)  
SUPPORT EMPLOYEES**

**SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE AND SERVICE  
RETIREMENT & INDIVIDUAL PAY INCREASES**

Age	Pay Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
20	5.85%	3.25%	9.10%
25	4.97%	3.25%	8.22%
30	3.93%	3.25%	7.18%
35	3.33%	3.25%	6.58%
40	2.65%	3.25%	5.90%
45	1.29%	3.25%	4.54%
50	0.35%	3.25%	3.60%
55	0.00%	3.25%	3.25%
60	0.00%	3.25%	3.25%
65	0.00%	3.25%	3.25%
Ref:	389		



**ACTUARIAL GAIN (LOSS) BY RISK AREA  
DURING THE PERIOD JULY 1, 2014 TO JUNE 30, 2015**

Type of Risk Area	Gain (Loss) in Period	
	\$ Millions	Percent of Liabilities
<b>ECONOMIC RISK AREAS</b> Pay increases. <i>If there are smaller pay increases</i> than assumed, there is a gain. If greater increases, a loss.	\$ 110.6	0.64 %
Gross Investment Return. <i>If there is greater investment</i> return recognition than assumed, there is a gain. If less return recognition, a loss.	451.6	2.61 %
<b>NON-ECONOMIC RISK AREAS</b> Retirements. <i>If members retire at older</i> ages, there is a gain. If younger ages, a loss.	0.1	0.00 %
Disability Retirements. <i>If there are fewer disabilities</i> than assumed, there is a gain. If more, a loss.	(0.1)	0.00 %
Death-in-Service Benefits. <i>If there are fewer</i> than assumed, there is a gain. If more, a loss.	(0.2)	0.00 %
Withdrawal. <i>If more liabilities are released by other</i> separations than assumed, there is a gain. If smaller releases, a loss.	1.8	0.01 %
Death After Retirement. <i>If there are more deaths</i> than assumed, there is a gain. If fewer, a loss.	10.9	0.06 %
<b>ACTUARIAL GAIN (LOSS) DURING PERIOD</b>	574.7	3.32 %
<b>BEGINNING OF YEAR ACCRUED LIABILITIES</b>	\$17,310.3	100.0 %



## COMMENTS

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**General Financial Objective.** Section 24-7-401(a) of the Arkansas Code provides as follows (emphasis added):

“6.01. (1) The general financial objective of each Arkansas public employee retirement plan shall be to **establish and receive contributions which, expressed as percents of active member payroll, will remain approximately level from generation to generation of Arkansas citizens.** More specifically, contributions received each year shall be sufficient both to (i) fully cover the costs of benefit commitments being made to members for their service being rendered in such year, and (ii) make a level payment which if paid annually over a reasonable period of future years will fully cover the unfunded costs of benefit commitments for service previously rendered...”

**Arkansas Teacher Retirement System Status:** Based upon the results of June 30, 2015 actuarial valuations, *ATRS is satisfying the financial objective of level-contribution-percent financing.*

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The amortization period this year is 33 years, a decrease from last year’s period of 39 years. The decrease occurred primarily due to investment gains, with the annual market rate of return being 4.26%# compared to an assumed rate of 8.0%. Investment gains and losses that occur each year are smoothed in over a four-year period. As of June 30, 2015, the market value of assets exceeded the actuarial value of assets by approximately \$602 million.

The Arkansas Teacher Retirement System remains stable with a 79.6% funded position as of June 30, 2015. Unless there is an investment loss in Fiscal Year 2016, the amortization period is likely to fall below 30 years in the next valuation. Based on the June 30, 2015 valuation, an employer contribution rate of 14.3% would be needed to return the amortization period to 30 years.

# This return figure was calculated by the Actuary and may not exactly match your investment consultant’s figure.





## SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT

Monthly Benefit	No. of Retirees	Type of Retirement*					Option Selected#			
		1	2	3	4	5	Life	Opt. A	Opt. B	Opt. C
\$1-250	4,433	3,950	116	111	237	19	3,667	598	44	124
\$251-500	4,905	4,133	97	148	488	39	4,038	654	86	127
\$501-750	3,281	2,756	61	84	348	32	2,650	434	106	91
\$751-1,000	2,341	1,929	72	56	250	34	1,817	344	118	62
\$1,001-1,250	1,970	1,568	72	43	256	31	1,483	310	128	49
\$1,251-1,500	1,756	1,434	69	25	199	29	1,303	297	125	31
\$1,501-1,750	1,812	1,509	65	29	190	19	1,334	296	143	39
\$1,751-2,000	1,889	1,597	49	39	177	27	1,353	348	151	37
Over \$2,000	18,097	17,071	336	143	491	56	13,376	2,657	1,756	308
<b>Total</b>	<b>40,484</b>	<b>35,947</b>	<b>937</b>	<b>678</b>	<b>2,636</b>	<b>286</b>	<b>31,021</b>	<b>5,938</b>	<b>2,657</b>	<b>868</b>

\*Type of Retirement

1. Normal retirement for age and service
2. Survivor payment – normal or early retirement
3. Survivor payment – death-in-service
4. Disability retirement
5. Survivor payment – disability retirement

# Option Selected at Retirement

- Life – Straight life annuity
- Opt. A – 100% survivor annuity
- Opt. B – 50% survivor annuity
- Opt. C – Annuity for 10 years certain and life thereafter

Excludes Act 793 and Act 808 retirees.



## SCHEDULE OF AVERAGE BENEFIT PAYMENTS

Retirement Effective Dates		Service at Retirement						
July 1, 2005 to June 30, 2015		0-4 <sup>#</sup>	5-9	10-14	15-19	20-24	25-29	30+
7/1/05 - 6/30/06	Average Monthly Benefit	\$178	\$249	\$486	\$796	\$1,472	\$2,146	\$2,860
	Average Final Salary	\$23,915	\$17,531	\$24,252	\$29,291	\$39,726	\$43,432	\$42,735
	Number of Active Retirees	44	371	263	207	150	633	290
7/1/06 - 6/30/07	Average Monthly Benefit	\$193	\$269	\$489	\$810	\$1,470	\$2,168	\$2,791
	Average Final Salary	\$30,693	\$19,693	\$24,448	\$29,479	\$40,437	\$44,736	\$43,192
	Number of Active Retirees	31	447	251	215	157	665	251
7/1/07 - 6/30/08	Average Monthly Benefit	\$299	\$290	\$526	\$954	\$1,440	\$2,303	\$2,778
	Average Final Salary	\$25,406	\$20,153	\$25,808	\$36,169	\$41,295	\$45,077	\$42,414
	Number of Active Retirees	12	402	187	187	180	518	217
7/1/08 - 6/30/09	Average Monthly Benefit	\$162	\$248	\$532	\$902	\$1,378	\$2,399	\$2,949
	Average Final Salary	\$24,871	\$22,873	\$26,844	\$33,190	\$40,876	\$47,821	\$46,900
	Number of Active Retirees	47	360	265	235	235	654	245
7/1/09 - 6/30/10	Average Monthly Benefit	\$169	\$234	\$545	\$939	\$1,519	\$2,473	\$3,115
	Average Final Salary	\$31,970	\$21,380	\$26,941	\$34,607	\$44,270	\$47,853	\$49,724
	Number of Active Retirees	54	415	335	252	249	827	192
7/1/10 - 6/30/11	Average Monthly Benefit	\$157	\$274	\$568	\$1,019	\$1,584	\$2,543	\$3,031
	Average Final Salary	\$29,025	\$25,410	\$28,010	\$37,744	\$45,054	\$49,358	\$50,203
	Number of Active Retirees	47	471	295	246	248	764	135
7/1/11 - 6/30/12	Average Monthly Benefit	\$160	\$262	\$588	\$994	\$1,537	\$2,529	\$3,122
	Average Final Salary	\$31,339	\$24,705	\$29,042	\$37,456	\$44,664	\$50,784	\$51,737
	Number of Active Retirees	47	558	423	295	350	879	150
7/1/12 - 6/30/13	Average Monthly Benefit	\$168	\$272	\$634	\$980	\$1,482	\$2,453	\$3,053
	Average Final Salary	\$40,573	\$24,799	\$30,499	\$36,168	\$42,688	\$49,266	\$51,813
	Number of Active Retirees	50	551	429	301	377	1,038	120
7/1/13 - 6/30/14*	Average Monthly Benefit	\$144	\$294	\$626	\$1,034	\$1,481	\$2,553	\$3,195
	Average Final Salary	\$41,396	\$26,223	\$30,235	\$37,996	\$42,612	\$50,577	\$54,193
	Number of Active Retirees	42	497	472	336	358	1,060	122
7/1/14 - 6/30/15*	Average Monthly Benefit	\$144	\$306	\$684	\$1,069	\$1,518	\$2,540	\$3,270
	Average Final Salary	\$40,803	\$27,540	\$32,878	\$38,857	\$44,433	\$52,059	\$56,908
	Number of Active Retirees	64	564	529	375	375	1,106	138

# May include cases where the service was not reported.

\* May not match page 61. Page 61 also includes new retirees with retirement dates prior to July 1, 2014.

The figures in this chart are figures that are relevant to one specific year of retirement. They have not been updated for certain changes in COLAs that occurred after retirement.



# Statistical





## SCHEDULE OF REVENUE BY SOURCE

### EMPLOYER CONTRIBUTIONS

YEAR ENDING JUNE 30,	EMPLOYER CONTRIBUTIONS	% OF ANNUAL COVERED PAYROLL	MEMBER CONTRIBUTIONS	INVESTMENT AND MISCELLANEOUS INCOME	TOTAL
2006	\$311,713,735	15.0%	\$ 92,005,600	\$ 1,173,286,760	\$ 1,577,006,095
2007	331,891,210	14.1%	100,093,372	1,892,393,365	2,324,377,947
2008	350,319,504	15.4%	108,872,293	(477,579,443)	(18,387,646)
2009	359,061,671	15.5%	111,654,256	(1,996,871,185)	(1,526,155,258)
2010	389,296,432	16.4%	115,931,733	1,291,307,143	1,796,535,308
2011	400,330,902	14.7%	139,460,601	2,219,833,337	2,759,624,840
2012	398,822,946	16.3%	117,662,465	(118,654,190)	397,831,221
2013	400,933,872	14.3%	113,900,872	1,695,899,517	2,210,733,616
2014	404,920,441	14.2%	125,225,906	2,429,334,098	2,959,480,445
2015	408,230,472	14.2%	128,555,684	632,166,951	1,168,953,107



## SCHEDULE OF EXPENSE BY TYPE

<b>YEAR ENDING JUNE 30,</b>	<b>BENEFIT PAYMENTS</b>	<b>REFUNDS</b>	<b>ADMINISTRATIVE AND OTHER EXPENSES</b>	<b>TOTAL</b>
2006	\$507,641,961	\$ 6,207,622	\$5,991,755	\$519,841,338
2007	545,220,337	5,179,850	5,854,557	556,254,744
2008	587,319,942	6,462,122	6,676,667	600,458,731
2009	635,878,958	6,409,016	6,913,865	649,201,839
2010	701,562,784	7,165,354	7,229,398	715,948,536
2011	731,866,100	8,906,441	7,548,959	748,321,500
2012	791,844,923	9,225,151	7,752,975	808,023,049
2013	846,210,946	11,087,596	7,755,004	865,053,546
2014	914,250,015	10,485,103	8,034,235	932,769,353
2015	970,719,484	10,774,122	8,034,857	989,528,463



## SCHEDULE OF BENEFIT EXPENSES BY TYPE

**FOR THE YEAR ENDING JUNE 30,**

<b>TYPE OF BENEFIT</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
Age and Service	\$795,518,171	\$739,571,020	\$683,699,899	\$631,087,685	\$584,859,307
Disability	36,188,748	34,639,050	33,164,746	31,316,331	30,034,768
Option	23,056,130	21,341,913	19,925,200	18,501,555	16,873,271
Survivor	9,626,726	9,025,326	8,699,159	8,486,669	7,793,789
Reciprocity	41,958,663	38,031,351	34,346,675	31,166,875	27,854,621
Active Members Death Benefits	404,248	493,957	326,748	380,913	410,871
T-DROP	50,656,897	54,408,232	59,031,639	67,060,580	59,949,242
Act 808		3,249,162	3,516,979	3,844,317	4,090,231
Cash and Savings Help Program	8,923,390	7,271,797			
Cash Balance Disbursements	1,246,632	6,218,208	3,499,902		
<b>TOTAL</b>	<b>\$970,719,485</b>	<b>\$914,250,015</b>	<b>\$846,210,947</b>	<b>\$791,844,923</b>	<b>\$731,866,100</b>



## SCHEDULE OF PARTICIPATING EMPLOYERS

### AS OF JUNE 30, 2015

Academics Plus Charter School	Bentonville School District	Crowley's Ridge Coop	Gentry School District
Alma School District	Bergman School District	Crowley's Ridge Tech Inst	Glen Rose School District
Alpena School District	Berryville School District	Cutter Morning Star	Gosnell School District
AR Association Edu Admin	Bismarck School District	Danville School District	Gravette School District
AR Dept Of Career Education (Rehab Services)	Black River Technical College	Dardanelle School District	Great Rivers Ed Coop
AR Dept Of Career Education (Workforce Education)	Blevins School District	Dawson Educational Service Coop	Green Forest School District
AR Dept Of Economic Dev	Blytheville School District	Decatur School District	Greenbrier School District
AR Dept Of Education	Booneville School District	Deer/Mt. Judea School District	Greene Co Tech School
AR Dept Of Higher Ed	Boston Mts Ed Coop	De Queen School District	Greenland School District
AR Educational TV	Bradford School District	De Queen-Mena Ed Coop	Greenwood School District
AR Northeastern College	Brinkley School District	Dermott School District	Gurdon School District
AR River Ed Srvs Coop	Brookland School District	Des Arc School District	Guy-Perkins School District
AR School Boards Ins Trust	Bryant School District	DeWitt School District	Haas Hall Academy Charter
AR School For The Blind	Buffalo Island Central	DHS-Divison Of Youth Services	Hackett School District
AR School For The Deaf	Cabot School District	Dierks School District	Hamburg School District
AR State University	Caddo Hills School District	Dollarway School District	Hampton School District
AR State University, Beebe	Calico Rock School District	Dover School District	Harmony Grove School - Benton
AR State University, Mtn. Home	Camden-Fairview School District	Drew Central School District	Harmony Grove School - Camden
AR State University, Newport	Carlisle School District	Dumas School District	Harrisburg School District
AR Teacher Ret Sys	Cave City School District	Earle School District	Harrison School District
AR Tech University	Cedar Ridge School District	East AR Comm College	Hartford School District
Arch Ford Coop	Cedarville School District	East End School District	Hazen School District
Ark Correctional School	Centerpoint School District	East Poinsett School District	Heber Springs School District
Ark Easter Seals	Charleston School District	El Dorado School District	Hector School District
Ark Virtual Academy Charter	Clarendon School District	Elkins School District	Helena-West Helena School District
Arkadelphia School District	Clarksville School District	Emerson-Taylor-Bradley School District	Henderson State University
Arkansas Activities Association	Cleveland Co School District	England School District	Hermitage School District
Armored School District	Clinton School District	eStem Public Charter School	Highland School District
Ashdown School District	College Of The Ouachitas	Eureka Springs School District	Hillcrest School District
Atkins School District	Concord School District	Exalt Academy Charter	Hope School District
Augusta School District	Conway School District	Farmington School District	Horatio School District
Bald Knob School District	Conway Voc Ctr	Fayetteville Public Schools	Hot Springs School District
Barton-Lexa School District	Corning School District	First Student	Hoxie School District
Batesville School District	Cossatot River School District	Flippin School District	Hughes School District
Bauxite School District	Cotter School District	Fordyce School District	Huntsville School District
Bay School District	County Line School District	Foreman School District	Imboden Area Charter School
Bearden School District	Covenant Keepers College Prep Charter	Forrest City School District	Izard Co Cons School
Beebe School District	Craighead Co School District Exe Council	Fort Smith School District	Jackson County School District
Benton Co School Of Arts Charter	Cross Co School District	Fouke School District	Jacksonville Lighthouse Charter
Benton School District	Crossett School District	Fountain Lake School District	Jasper School District
		Genoa Central School District	Jessieville School District
			Johnson Co Westside School District



## SCHEDULE OF PARTICIPATING EMPLOYERS (CONTINUED)

**AS OF JUNE 30, 2015**

Jonesboro School District	Mountain Home School District	Pottsville School District	Springdale School District
Jonesboro Voc Ctr	Mountain Pine School District	Poyen School District	Star City School District
Junction City School District	Mountain View School District	Prairie Grove School District	Strong School District
Kipp Delta College Prep Charter	Mountainburg School District	Premier High School of Little Rock	Stuttgart School District
Kirby School District	Mt. Vernon-Enola School District	Prescott School District	Texarkana School District
Lafayette Co School District	Mulberry School District	Pulaski Co School District	Texarkana Voc Ctr
Lake Hamilton School District	Nashville School District	Pulaski Technical College	Trumann School District
Lakeside School District – Hot Springs	Natl Park Comm College	Quest Middle School – Pine Bluff	Two Rivers School District
Lakeside School District – Lake Village	Nemo Vista School District	Quest Middle School – WLR	U Of AR – Fayetteville
Lamar School District	Nettleton School District	Quitman School District	U Of AR – Fort Smith
Lavaca School District	Nevada School District	Rector School District	U Of AR – Little Rock
Lawrence Co School District	Newport School District	Rich Mtn. Comm College	U Of AR – Monticello
Lead Hill School District	Norfolk School District	River Valley Tech (Voc) Center	U Of AR – Pine Bluff
Lee County School District	North Arkansas College	Riverside School District	U Of AR Com College – Batesville
Lincoln School District	North Central Career Center	Riverside Vo-Tech School	U Of AR Com College – Hope
Lisa Academy Charter	North Central Educational Coop	Riverview School District	U Of AR Com College – Morrilton
Little Rock Prep Academy Charter	North Little Rock School District	Rogers School District	U Of AR Cooperative Extension
Little Rock School District	Northeast AR Educational Coop	Rose Bud School District	U Of AR Cossatot Com College
Lonoke School District	Northwest AR Comm College	Russellville School District	U Of AR Medical Sciences
Magazine School District	Northwest AR Ed Svc Coop	Salem School District	U Of AR School Math, Science
Magnet Cove School District	Northwest Tech Inst	Scranton School District	University Of Central AR
Magnolia School District	NW AR Classical Academy	Searcy County School District	Valley Springs School District
Malvern School District	Omaha School District	Searcy School District	Valley View School District
Mammoth Spring School District	Osceola School District	Sheridan School District	Van Buren School District
Manila School District	Ouachita River School District	Shirley School District	Vilonia School District
Mansfield School District	Ouachita School District	SIATech Little Rock	Viola School District
Marion School District	Ozark Mountain School District	Siloam Springs School District	Waldron School District
Marked Tree School District	Ozark School District	Sloan-Hendrix School District	Warren School District
Marmaduke School District	Ozark Unlimited Res Coop	Smackover-Norphlet School District	Warren Voc Ctr
Marvell School District	Ozarka College	So AR Developmental Ctr	Watson Chapel School District
Mayflower School District	Palestine-Wheatley School District	South AR Comm College	West Fork School District
Maynard School District	Pangburn School District	South AR University – East Camden	West Memphis School District
McCrary School District	Paragould School District	South AR University – Magnolia	West Side School District – Greers Ferry
McGehee School District	Paris School District	South Central Svc Coop	Western AR Educational Coop
Melbourne School District	Parkers Chapel School District	South Conway Co School District	Western Yell Co School District
Mena School District	Pea Ridge School District	South Mississippi Co School District	Westside Consolidated School District
Metropolitan Voc Ctr	Perryville School District	South Pike County School District	White Co Central School District
Midland School District	Phillips Com College – Dewitt	Southeast Ark Ed Coop	White Hall School District
Mid-So Comm College	Phillips Comm College – UA	Southeast Ark Tech College	Wilbur D Mills Ed Svs
Mineral Springs School District	Piggott School District	Southside School District – Batesville	Wonderview School District
Monticello School District	Pine Bluff Lighthouse Charter	Southside Bee Branch School District	Woodlawn School District
Monticello Voc Ctr	Pine Bluff School District	Southwest Ark Ed Coop	Wynne School District
Mount Ida School District	Pocahontas School District	Spring Hill School District	Yellville-Summit School District



PREPARED BY THE STAFF OF  
**ARKANSAS TEACHER RETIREMENT SYSTEM**

1400 WEST THIRD STREET • LITTLE ROCK, AR 72201  
501.682.1517 • 1.800.666.2877 • ARTRS.GOV





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