# ARKANSAS TEACHER RETIREMENT SYSTEM

## Annual Financial Report

**June 30, 2019**

LEGISLATIVE JOINT AUDITING COMMITTEE

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# INDEPENDENT AUDITOR'S REPORT

Arkansas Teacher Retirement System
Legislative Joint Auditing Committee

***Report on the Financial Statements***

We have audited the accompanying financial statements of the Fiduciary Pension Trust Fund of the Arkansas Teacher Retirement System, an office of Arkansas state government, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the Arkansas Teacher Retirement System's basic financial statements as listed in the table of contents.

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

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

***Auditor's Responsibility***

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

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

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

***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Fiduciary Pension Trust Fund of the Arkansas Teacher Retirement System as of June 30, 2019, and the changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

***Emphasis of Matter***

As indicated above, the financial statements of the Arkansas Teacher Retirement System are intended to present the financial position; the changes in financial position; and, where applicable, cash flows and budgetary comparisons of only that portion of the Fiduciary Pension Trust Fund of the State that is attributable to the transactions of the Arkansas Teacher Retirement System. They do not purport to, and do not, present fairly the financial position of the State as of June 30, 2019; the changes in its financial position for the year then ended; or, where applicable, its cash flows and budgetary comparisons for the year then ended, in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

500 WOODLANE STREET, SUITE 172 • LITTLE ROCK, ARKANSAS 72201-1099 • PHONE (501) 683-8600 • FAX: (501) 683-8605
www.arklegaudit.gov

***Other Matters***

*Required Supplementary Information*

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

The Governmental Accounting Standards Board requires that a Management's Discussion and Analysis be presented to supplement government-wide financial statements. However, as discussed in the "Emphasis of Matter" paragraph above, the financial statements of the Arkansas Teacher Retirement System are only for the specific transactions and activity of the Agency and not for the State as a whole. Therefore, the Management's Discussion and Analysis is not required to be presented for the Arkansas Teacher Retirement System individually. Our opinion on the basic financial statements is not affected by the omission of this information.

*Other Information*

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Arkansas Teacher Retirement System's basic financial statements. The Schedule of Selected Information is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The Schedule of Selected Information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on this information.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards,* we have also issued our report dated January 29, 2020, on our consideration of the Arkansas Teacher Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the effectiveness of the Arkansas Teacher Retirement System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Arkansas Teacher Retirement System's internal control over financial reporting and compliance.

ARKANSAS LEGISLATIVE AUDIT

Roger Norman

Roger A. Norman, JD, CPA, CFE, CFF
Legislative Auditor

Little Rock, Arkansas
January 29, 2020
SA1037519

Arkansas

Sen. Jason Rapert
Senate Chair
Sen. Eddie Cheatham
Senate Vice Chair

Rep. Richard Womack
House Chair
Rep. DeAnn Vaught
House Vice Chair

Roger A. Norman, JD, CPA, CFE, CFF
Legislative Auditor

LEGISLATIVE JOINT AUDITING COMMITTEE
ARKANSAS LEGISLATIVE AUDIT

## REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

## INDEPENDENT AUDITOR'S REPORT

Arkansas Teacher Retirement System
Legislative Joint Auditing Committee

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Fiduciary Pension Trust Fund of the Arkansas Teacher Retirement System (the "Agency"), an office of Arkansas state government, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the Arkansas Teacher Retirement System's basic financial statements, and have issued our report thereon dated January 29, 2020.

***Internal Control Over Financial Reporting***

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

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

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies; therefore, material weaknesses or significant deficiencies may exist that have not been identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify certain deficiencies in internal control, described in the accompanying Schedule of Findings and Responses, that we consider to be significant deficiencies. See Finding 2019-1.

***Compliance and Other Matters***

As part of obtaining reasonable assurance about whether the Agency's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards* which are described below in the Schedule of Findings and Responses. See Finding 2019-2.

## SCHEDULE OF FINDINGS AND RESPONSES

2019-1 Arkansas Teacher Retirement System (ATRS) discovered the benefits of two members had not been discontinued at the time of the death, resulting in overpayments of $306,686 and $17,186, respectively. One of the deaths was not reported to ATRS by the member's survivors, and the other was not correctly entered into the Agency's system. These members were identified with the implementation of new procedures by ATRS.

We recommend ATRS ensure member records are updated with all available information and continue to research new methods of identifying deceased members to prevent overpayments.

***Management personnel responded:*** *ATRS has relied on a number of methods in the past to identify when a member dies, including contracting with national data providers, daily in-house data searches, and data sharing with the Social Security Administration. ATRS agrees that it should utilize any available resource to ensure data accuracy. ATRS has already implemented at least one new method by requiring each member to affirmatively respond to a request for verification of status. This method is being rolled out incrementally, with requests going to about 7,000 members in each cycle. Special focus is placed upon members with out-of-state addresses since the two members above lived outside Arkansas. If the member fails to respond, ATRS will review the account and suspend benefits after multiple requests.*

*ATRS is also formalizing a process for recovery of overpayments when such an event occurs. Recovery efforts include identifying persons who likely have wrongly converted the overpayments, referring to law enforcement where warranted, demanding repayment, and pursuing legal action when our demands are not successful. Successful recovery has occurred at least in one case during recent years through ATRS's initiation of a probate proceeding.*

2019-2 The actuarial liability is calculated based on information about each member in the system (i.e., salary, age, years of service, contribution status, etc.). Errors in this information have a direct impact on the amount of the liability. Our review of the Agency's member records revealed the following deficiencies:

- A comparison of member records with the Arkansas Health Department death database identified 5,084 ATRS records that had not been updated with a date of death. Forty-one members identified as deceased were sent to the actuary to be included in the calculation of the liability.

  ***Management personnel responded:*** *The 5,084 ATRS records from the Arkansas Health Department death database without updated dates of death were further analyzed by ATRS management. The primary concern is: Did ATRS make any regular monthly payments to these 5,084 members after their death? The answer is no. There were 5 members that were receiving a benefit, however ATRS learned of the deaths using existing procedures and removed them from payroll before the next payroll cycle. This audit did reveal 56 members that were inactive, non-vested but still had refundable contributions and deceased more than 5 years ago. These members are currently being processed to get these contributions paid to the members' estates.*

  *Out of the 5,084 records above, there were 41 members identified as deceased that were sent to the actuary to be included in the calculation of the liability. Out of the 130,000 member records sent to the actuary each year, there will always be a number of deceased members sent. An average of 3 ATRS members die each day and it takes time to get a member's record updated. Another challenge in updating members' date of death is when death database comparison results are "not a perfect match". Out of the 41 members identified as deceased, 7 of these were "not a perfect match" members who died between 2012 and 2017 and should have been processed by ATRS in a more timely manner.*

  *The vast majority of the 5,084 deceased records identified are defined by ATRS as "dormant zero-liability" members. A dormant zero-liability member is one that has no cost to the over-all liability of ATRS unless some future event is performed by the member. An example of a dormant zero-liability member is a substitute teacher that routinely only works a couple months of the year and does not have enough service credit to be vested. ATRS does not monitor these members against death databases since they have no liability to ATRS. Once this substitute teacher accrues enough service to be vested, they are monitored every couple of years along with the other deferred members. It can be difficult for ATRS staff members to easily identify when a member is classified as a dormant zero-liability member, therefore ATRS is working on modifying the database records to simplify the identification.*

*In general, ATRS has implemented several new procedures that should reduce the time it takes for ATRS to be notified of a deceased member. We are sending Annual Statements to all members in which ATRS owes benefits or refunds. Hopefully the family member of the deceased member will notify ATRS of the death upon receiving the Annual Statement.*

- The Agency used a default date of 1/1/1900 and 1/1/1901 when the member application was missing date of birth information. There were 9,335 member records with the default date of birth.

  ***Management personnel responded:*** *Over the years, ATRS has used both "1900-01-01" and "1901-01-01" as a default date for a missing date of birth on a member's record. There are currently 9,335 member records with these default birth dates. Most of these records are for dormant zero-liability members. However, there are still 199 of the 9,335 members that still have contributions on record with ATRS. Those contributions need to be refunded to those members upon request or to the member's estate once the member is deceased. The average amount of contributions on file for the 199 members is $17.53. ATRS is in the process of locating the missing birth dates for these 199 members since having an accurate birth date on file will assist in matching against death databases.*

- Our review of 29,260 member records from 43 employers revealed member date of birth information for 21 records did not agree to information obtained from employer records, resulting in a net difference of 614 months or 51 years.

  ***Management personnel responded:*** *ATRS routinely compares the names, gender and birth dates of its members to the names and birth dates on record with the Arkansas Department of Motor Vehicles in order have accurate birth dates for our members. ATRS is adding a similar comparison with the names and birth dates on record with Arkansas Public School Computer Network (APSCN) in an effort resolve incorrect birth dates like the 21 records identified in this audit.*

- The following school districts did not properly report their employees in ATRS covered positions as members of ATRS. For these employees, ATRS did not receive employer contributions, the employees did not receive any service credit, and the salary and contribution amounts were not included in the actuarial liability calculations.

| School Name | Date Range | No. of Unreported Employees | Total Unreported Salaries | Employer Contributions Due | Interest Due | Total Due |
|---|---|---|---|---|---|---|
| Fort Smith School District | 2015-2019 | 1 | $ 109,325 | $ 15,305 | $ 1,772 | $ 17,077 |
| Pulaski County Special School District | 2015-2019 | 3 | $ 131,123 | $ 18,357 | $ 1,497 | $ 19,854 |
| Fayetteville School District | 2015-2019 | 1 | $ 45,711 | $ 6,400 | $ 733 | $ 7,133 |
| North Little Rock School District | 2015-2019 | 1 | $ 71,876 | $ 10,063 | $ 1,284 | $ 11,347 |
| Bryant School District | 2015-2019 | 1 | $ 19,384 | $ 2,714 | $ 356 | $ 3,070 |
| Bismarck School District | 2015-2019 | 1 | $ 47,381 | $ 6,633 | $ 1,071 | $ 7,704 |
| Charleston School District | 2015-2019 | 1 | $ 9,648 | $ 1,351 | $ 169 | $ 1,520 |
| Melbourne School District | 2018-2019 | 1 | $ 750 | $ 105 | | $ 105 |
| Viola School District | 2015-2019 | 2 | $ 62,125 | $ 8,698 | $ 1,206 | $ 9,904 |
| Totals | | 12 | $ 497,323 | $ 69,626 | $ 8,088 | $ 77,714 |

  ***Management personnel responded:*** *ATRS relies on employers to report accurate information regarding member status, salary, etc. ATRS regularly finds and corrects reporting errors during routine reconciliations; however, if an employer does not assign the correct ATRS payroll deduction code no information regarding the member will be reported to the system. Legislative Audit was better able to discover these errors because of comparison to more comprehensive salary reports provided to them directly from APSCN. Previous efforts to access APSCN data have been unsuccessful, but ATRS is working with APSCN again to obtain an annual report that will include all employee salaries paid by districts for the fiscal year. This will allow ATRS to more effectively and easily find unreported members*

We recommend ATRS review the member information submitted by employers to determine the information is complete and has been properly reported. Member records should also be reviewed and updated timely with any missing information.

***Agency's Response to Findings***

The Agency's response to the findings identified in our audit is described above. The Agency's response was not subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we express no opinion on it.

***Purpose of this Report***

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose. However, pursuant to Ark. Code Ann. § 10-4-417, all reports presented to the Legislative Joint Auditing Committee are matters of public record, and distribution is not limited.

ARKANSAS LEGISLATIVE AUDIT

Tom Bullington, CPA
Deputy Legislative Auditor

Little Rock, Arkansas
January 29, 2020

ARKANSAS TEACHER RETIREMENT SYSTEM
STATEMENT OF FIDUCIARY NET POSITION
JUNE 30, 2019

Exhibit A

| | Totals |
|---|---|
| ASSETS | |
| Cash and cash equivalents | $ 256,387,142 |
| | |
| Receivables: | |
| Member contributions | 9,227,839 |
| Employer contributions | 24,485,809 |
| Investment trades pending | 43,165,017 |
| Accrued investment income | 14,649,319 |
| Due from other funds | 3,207,041 |
| Other receivables | 3,189,511 |
| Total Receivables | 97,924,536 |
| | |
| Investments, at fair value: | |
| Domestic equities | 2,472,540,707 |
| International equities | 1,073,645,442 |
| U.S. Government obligations | 38,294,932 |
| Corporate obligations | 762,358,810 |
| Asset- and mortgage-backed securities | 39,156,489 |
| Promissory notes | 192,708,781 |
| Limited partnerships | 72,122,080 |
| Real estate | 52,354,702 |
| Pooled investments | 7,233,968,477 |
| Alternative investments | 5,328,103,330 |
| State recycling tax credits | 192,000,000 |
| Investment derivatives | (95,074) |
| Total Investments | 17,457,158,676 |
| | |
| Securities lending collateral | 469,822,525 |
| Capital assets, net of accumulated depreciation | 149,770 |
| Other assets | 74,153 |
| | |
| TOTAL ASSETS | 18,281,516,802 |
| | |
| LIABILITIES | |
| Accrued expenses and other liabilities | 790,553 |
| Compensated absences | 445,890 |
| Post-employment benefit liability | 5,098,111 |
| Investment trades pending payable | 48,848,311 |
| Accrued investment expenses | 12,462,488 |
| Securities lending liability | 469,786,940 |
| Due to other funds | 2,462,736 |
| | |
| TOTAL LIABILITIES | 539,895,029 |
| | |
| NET POSITION RESTRICTED FOR PENSION BENEFITS | $ 17,741,621,773 |

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

ARKANSAS TEACHER RETIREMENT SYSTEM
STATEMENT OF CHANGES IN PLAN NET POSITION
FOR THE YEAR ENDED JUNE 30, 2019

Exhibit B

| | | Totals |
|---|---|---|
| ADDITIONS | | |
| Contributions: | | |
| Member | $ | 141,885,632 |
| Employer | | 430,864,656 |
| Total contributions | | 572,750,288 |
| | | |
| Investment income | | |
| From investing activities: | | |
| Net appreciation (depreciation) in fair value of investments | | 801,901,294 |
| Interest and dividends | | 126,888,270 |
| Real estate operating income | | 7,671,704 |
| Total investment income (loss) | | 936,461,268 |
| Less investment expense | | 42,943,127 |
| Net investment income (loss) | | 893,518,141 |
| | | |
| From securities lending activities: | | |
| Securities lending gross income | | 14,218,966 |
| Less: securities lending expense | | 9,797,675 |
| Net securities lending income (loss) | | 4,421,291 |
| | | |
| Other income | | 445,434 |
| | | |
| TOTAL ADDITIONS (LOSSES) | | 1,471,135,154 |
| | | |
| DEDUCTIONS | | |
| Benefits | | 1,205,326,555 |
| Refunds of contributions | | 9,679,783 |
| Administrative expenses | | 7,134,783 |
| | | |
| TOTAL DEDUCTIONS | | 1,222,141,121 |
| | | |
| CHANGE IN NET POSITION RESTRICTED FOR PENSION BENEFITS | | 248,994,033 |
| | | |
| NET POSITION - BEGINNING OF YEAR | | 17,492,627,740 |
| | | |
| NET POSITION - END OF YEAR | $ | 17,741,621,773 |

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

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, 2019, the number of participating employers was as follows:

| | |
|---|---|
| Public schools | 262 |
| State colleges and universities | 39 |
| State agencies | 11 |
| Other/privatized | 29 |
| Total | 341 |

On June 30, 2019, ATRS's membership consisted of the following:

| | |
|---|---|
| Retirees or beneficiaries currently receiving benefits | 48,677 |
| T-DROP participants | 3,707 |
| Inactive plan members (not receiving benefits) | 13,033 |
| Active members | |
| Fully vested | 45,225 |
| Non-vested | 23,232 |
| Total | 133,874 |

Members are eligible for full retirement benefits at age 60 with five or more years of actual or reciprocal service or at any age with 28 or more years of credited service. Members with 25 years of actual or reciprocal service who have not attained age 60 may receive an annuity reduced by 10/12 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 July 1, 2018, computed using the average of the annual salaries paid during the period of 5 years of credited service producing the highest annual average) and (2) the number of years of service. For active members as of June 30, 2018, a benchmark 3-year FAS was established as a minimum FAS.

NOTE 1: Summary of Significant Accounting Policies (Continued)

B. Plan Description (Continued)

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. Acts 81 and 907 of 1999, effective July 1, 1999, require all new members under contract for 181 or more days to be contributory. Act 93 of 2007 allows any noncontributory member to make an irrevocable election to become contributory on July 1 of each fiscal year.

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 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 or more years of credited 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 non-contributory service; however, 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 plus 3%. Act 780 of 2017 allows the Board of Trustees to evaluate any future COLA adjustments on an annual basis to determine if a simple or compound COLA increase will be given based on the financial condition of the system.

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 contributions and accumulation of service credit will cease once a member enters T-DROP. 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.

NOTE 1: Summary of Significant Accounting Policies (Continued)

C. Basis of Presentation – Fund Accounting (Continued)

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.

E. Federal Income Tax Status

During the year ended June 30, 2019, 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 short-term investments with maturities at purchase of 90 days or less, and all deposits in the Short-Term Investment Fund (STIF). The STIF is 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 investments.

G. Deposits and Investments

Deposits

Deposits are carried at cost and consist of cash in bank, cash in State Treasury, cash on deposit with investment managers, and cash in Short-Term Investment Funds. At June 30, 2019, these totals were $888,648, $1,188,318, $47,935,130, and $206,374,971, 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, 2019, none of the bank balance of $1,226,965 was exposed to custodial credit risk as it was fully insured by the FDIC. As of June 30, 2019, none of the cash in the Short-Term Investment Fund was exposed to custodial credit risk as it was collateralized with securities held by the custodial agent in the name of ATRS. As of June 30, 2019, $2,225,416 of $48,406,484 in cash held by investment managers was exposed to custodial credit risk as it was uninsured and uncollateralized.

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and Investments (Continued)

Investments

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.

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 | 48.0% | 53.0% | 58.0% |
| Fixed income | 13.0% | 15.0% | 17.0% |
| Alternatives | N/A* | 5.0% | N/A* |
| Real assets*** | N/A* | 15.0% | N/A* |
| Private equity | N/A* | 12.0% | 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.

The fair value measurement of investments is categorized within the hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. In instances where inputs used to measure fair value fall into different levels, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation.

The hierarchy of inputs is defined as follows:

Level 1 – Unadjusted quoted prices for identical instruments in active markets.

Level 2 – Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3 – Valuations derived from valuation techniques in which significant inputs are unobservable.

For investments that do not have a readily determinable fair value and fall outside of the fair value hierarchy, the system establishes the value by utilizing the Net Asset Value (NAV) or its equivalent as a practical expedient.

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and Investments (Continued)

The fair value measurement of plan investments and securities lending collateral as of June 30, 2019, was as follows:

| Investments measured at fair value | Total | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| Equity investments: | | | | |
| Domestic equities | $ 2,472,540,707 | $ 2,472,540,707 | | |
| International equities | 1,073,645,442 | 1,073,645,442 | | |
| Fixed income investments: | | | | |
| U.S. Government obligations | 38,294,932 | | $ 38,294,932 | |
| Corporate obligations | 762,358,810 | | 762,358,810 | |
| Asset- and mortgage-backed securities | 39,156,489 | | 39,156,489 | |
| Promissory notes | 192,708,781 | | | $ 192,708,781 |
| Real estate investments: | | | | |
| Limited partnerships | 72,122,080 | | | 72,122,080 |
| Real estate | 52,354,702 | | | 52,354,702 |
| State recycling tax credits: | 192,000,000 | | 192,000,000 | |
| Derivative investments: | | | | |
| Forward contracts | (95,074) | | (95,074) | |
| Total plan investments at fair value | 4,895,086,869 | $ 3,546,186,149 | $ 1,031,715,157 | $ 317,185,563 |
| | | | | |
| Investments measured at net asset value (NAV) | | | | |
| Pooled investments: | | | | |
| Commingled domestic equities | 795,843,692 | | | |
| Commingled international equities | 4,284,376,577 | | | |
| Commingled domestic fixed income | 1,054,347,766 | | | |
| Commingled international fixed income | 1,099,400,441 | | | |
| Alternative investments: | | | | |
| Private equity funds | 2,161,343,656 | | | |
| Real estate funds | 1,249,713,318 | | | |
| Timberland funds | 265,506,538 | | | |
| Farmland funds | 198,635,940 | | | |
| Infrastructure funds | 301,724,121 | | | |
| Re-insurance funds | 325,182,593 | | | |
| Hedge funds | 653,976,421 | | | |
| Opportunistic funds | 28,361,411 | | | |
| Partnership funds | 143,659,332 | | | |
| Total plan investments at net asset value | 12,562,071,806 | | | |
| | | | | |
| Total plan investments | $ 17,457,158,675 | | | |
| | | | | |
| Securities Lending Collateral: | | | | |
| Quality D short term investment pool* | $ 469,822,525 | | | |

*Cash collateral received totaled $469,786,940. The amount reported in the GASB 40 footnote above is the market value of the collateral received at June 30, 2019.

Cash equivalents invested in the Short-Term Investment Fund are valued at amortized cost, which approximates fair value. The fund may issue and redeem shares at any time.

Equity investments are classified as Level 1 are exchange-traded securities whose values are based on published market prices and quotations from either national security exchanges or active markets for those securities.

Fixed income investments are classified as Level 2 and include publicly traded securities in inactive markets. Investments in this category are sourced from reputable pricing vendors using price matrix models and techniques. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Fair value is defined as the quoted market value on the last trading day of the period.

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and Investments (Continued)

Real estate and partnerships are classified as Level 3 and are comprised mostly of owned properties leased to commercial enterprises. These investments are valued using professional property valuations or appraisals, net of debt borrowed against the related assets. Appraisals and valuations are updated every 3 years.

Derivative investments include forward contracts and rights and are classified as Level 2 and valued using observable exchange, dealer or broker market pricing.

Pooled and alternative investments generally do not have readily obtainable market values and are valued using the net asset value (NAV) per share (or its equivalent). These values are based on the capital account balance of the general partner reports at the end of each reporting period, adjusted by subsequent contributions, distributions, management fees, and changes in values of foreign currency. There are inherent uncertainties in estimating fair values for these types of investments, and it is possible that the estimates will change in the near-term or the subsequent sale of assets will be different from the reported net asset value. Generally, the investments cannot be redeemed or have certain redemption restrictions, and distributions are from the liquidation of the underlying assets. The expected holding period is dependent on the discretion of the fund manager.

The unfunded commitments and redemption terms for investments measured at the net asset value (NAV) per share (or its equivalent) are presented in the following table:

| Investments measured at net asset value (NAV) | Total | Unfunded Commitments | Redemption Frequency | Redemption Notice Period |
|---|---|---|---|---|
| Pooled investments: | | | | |
| Commingled domestic equities | $ 795,843,692 | | Monthly | 5 days |
| Commingled international equities | 4,284,376,577 | | Daily - Quarterly | 1-65 days |
| Commingled domestic fixed income | 1,054,347,766 | | Daily | 2-15 days |
| Commingled international fixed income | 1,099,400,441 | | Daily - Monthly | 1-10 days |
| Alternative investments: | | | | |
| Private equity funds | 2,161,343,656 | $ 1,022,923,508 | N/A | N/A |
| Real estate funds | 1,249,713,318 | 493,287,238 | Quarterly | 45-90 days |
| Timberland funds | 265,506,538 | 24,891,933 | N/A | N/A |
| Farmland funds | 198,635,940 | 18,172,892 | Daily - Quarterly | 30-60 days |
| Infrastructure funds | 301,724,121 | 65,176,922 | Quarterly | 90 days |
| Re-insurance funds | 325,182,593 | | Semiannually - Annually | 60-90 days |
| Hedge funds | 653,976,421 | | Weekly - Annually | 3-90 days |
| Opportunistic funds | 28,361,411 | | Quarterly | 60 days |
| Partnership funds | 143,659,332 | 25,670,368 | Quarterly - Annually | 65-90 days |
| Total plan investments at net asset value | $ 12,562,071,806 | $ 1,650,122,861 | | |

Pooled Investments – Pooled investments are commingled funds that consist of assets from several accounts that are blended together to lower trading costs per dollar of investment. The System has funds invested in domestic and international equities, as well as domestic and international fixed income securities. The value of the investments in this asset class have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These investments can be redeemed with proper notification to the fund manager. Distributions are received through liquidation of the underlying assets. The expected holding period is dependent on the discretion of the fund manager.

Private Equity Funds – Private equity includes 47 buyout funds, 3 distressed debt funds, 2 growth equity funds, 13 hard asset funds, 4 mezzanine funds, 5 multi-strategy funds, 6 turnaround funds, 12 venture capital funds and 3 structured capital funds that invest mostly in private companies across a variety of industries. The value of the investments in this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These investments cannot be easily redeemed. The nature of private equity investments is that distributions are received through the liquidation of the underlying assets of the fund. The expected holding period of a private equity portfolio company is 2 to 10 years.

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and Investments (Continued)

Real Estate Funds – Real estate funds include 6 core funds, 17 value added funds, and 23 opportunistic funds that invest primarily in the United States, Europe, and Asia. Fund investments can be made in the debt, equity, or a combination of both in real estate property ventures. The value of the investments in this asset class have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These investments can be redeemed with proper notification to the fund manager. Distributions from each fund may be received as cash flows from operations or return of capital from sales of assets. The expected holding period of underlying assets in the real estate funds is 2 to 10 years.

Timberland Funds – The System has one timberland fund that invests in acquisition, growth, and disposition of timber and associated properties. The value of the investments in this asset class have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These investments cannot be easily redeemed. Distributions from the fund may be received as cash flows from operations or return of capital from sales of assets. The holding period for these assets is at the discretion of the fund manager based on the fund's purchase or sale of the underlying assets.

Farmland Funds – The System has 2 farmland funds. One fund is an open-ended fund comprised of units that represent the System's ownership of underlying agricultural related assets. This fund may be redeemed quarterly with proper notification to the fund manager. The other fund holds the System's direct investments in farmland and related assets. These investments cannot be easily redeemed. The value of the investments in this asset class has been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Distributions from the fund may be received in cash flows from operations or return of capital from sales of assets. The holding period is at the discretion of the fund manager based on the fund's purchase or sale of the underlying assets in the portfolio.

Infrastructure Funds – Infrastructure funds include 7 funds that primarily invest in physical, operational systems and in monopolistic opportunities such as governmental functions (transmission lines and toll roads). The value of the investments in this asset class have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These investments cannot be easily redeemed. Distributions from each fund may be received as cash flows from operations or return of capital from sales of assets. The expected holding period of underlying assets in the real estate funds is 2 to 10 years.

Re-insurance Funds – Re-insurance funds invest in insurance products designed to collect premiums from an insurance company for taking a specific type and level of risk associated with natural disasters. The value of the investments in this asset class have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These investments can be redeemed annually. Distributions from each fund may be received as cash flows from operations or return of capital from sales of assets. The expected holding period of underlying assets is 6 months to 1 year.

Hedge Funds – Hedge funds consist of 3 risk premia funds that target absolute returns through long-short positions across various factors and classes, 2 global macro funds that profit from broad market swings caused by political or economic events, and 2 credit funds that invest primarily in debt instruments of other companies. The value of the investments in this asset class have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Redemption ranges from monthly to annually depending on the manager (with the exception of one fund that currently has a 1 year hold). Distributions are received through liquidation of the underlying assets. The expected holding period is dependent on the discretion of the fund manager.

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and Investments (Continued)

Opportunistic Funds – Opportunistic funds utilize operational experience of the fund managers in the fields of information technology, telecommunications, and business services industries to seek quality returns. The value of the investments in this asset class has been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These investments can be redeemed quarterly with proper notification to the fund manager. Distributions are received through liquidation of the underlying assets. The expected holding period is dependent on the discretion of the fund manager.

Partnership Funds – The System has two Partnership funds that acquire enough shares of a company to gain a controlling interest in order to make corrections to potentially increase a stock's value. The value of the investments in this asset class have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These investments can be redeemed every year subject to redemption lockup restrictions and proper notification to the fund manager. Distributions are received through liquidation of the underlying assets. The expected holding period is dependent on the discretion of the fund manager.

Securities Lending Collateral - Cash collateral received from borrowers in the securities lending program are invested in a Quality D short-term investment fund that consists of a liquidating account with a liquidity pool and a duration pool. The value of this fund has been determined by the fund administrator using the NAV per share (or its equivalent).

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, 2019, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 5.25%.

Interest Rate Risk – Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. 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 shown below indicates that 97% 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 | $ 38,294,932 | | $ 17,802,270 | $ 7,634,647 | $ 12,858,015 |
| Corporate obligations | 762,358,810 | $ 15,313,119 | 389,792,698 | 257,711,192 | 99,541,801 |
| Asset- and mortgage-backed securities | 39,156,489 | 91,201 | 22,053,837 | 3,553,189 | 13,458,262 |
| Promissory notes | 192,708,781 | 58,295,562 | 134,413,219 | | |
| Pooled investments | 2,153,748,207 | | 1,099,400,441 | 1,054,347,766 | |
| State recycling tax credits | 192,000,000 | 16,000,000 | 64,000,000 | 80,000,000 | 32,000,000 |
| Total | $ 3,378,267,219 | $ 89,699,882 | $ 1,727,462,465 | $ 1,403,246,794 | $ 157,858,078 |
| | | | | | |
| Securities Lending Collateral | | | | | |
| Quality D short term investment pool | $ 469,822,525 | $ 468,789,188 | | $ 1,033,337 | |

Asset-Backed Securities – As of June 30, 2019, ATRS held asset-backed securities with a fair value of $34,542,279. 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, 2019, ATRS held no asset-backed securities that were considered highly sensitive to changes in interest rates.

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and Investments (Continued)

Mortgage-Backed Securities – As of June 30, 2019, mortgage-backed securities had a fair value of $2,875,926. 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, 2019, no mortgage-backed securities were considered highly sensitive to changes in interest rates.

Corporate Bonds – As of June 30, 2019, ATRS held corporate bonds with a fair value of $273,149,739. Corporate bonds are debt instruments that are issued by private corporations. These bonds 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, 2019, ATRS held no corporate obligations that were considered highly sensitive to changes in interest rates.

Convertible Corporate Bonds – As of June 30, 2019, ATRS held convertible bonds with a fair value of $489,209,071. 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 generally offer lower coupon rates and promised yields to maturity in exchange for the value of the option to trade the bond into stock. At June 30, 2019, ATRS held no convertible corporate bonds that were considered highly sensitive to changes in interest rates.

Promissory Notes – ATRS also held seven promissory notes with a fair value of $384,708,781 at June 30, 2019. Promissory notes are a form of debt that companies use to raise money in exchange for payment of a fixed amount of periodic income at a specified date or on demand. Five unsecured promissory notes were issued to Big River Steel Holdings, LLC, and two secured notes were issued to Highland Pellets, LLC. ATRS held no promissory notes that were considered highly sensitive to changes in interest rates at June 30, 2019.

Credit Risk – Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Agency has adopted the State Board of Finance Policy that limits investment choices to certificates of deposit, repurchase agreements, treasury bills, treasury notes, and securities issued by the State of Arkansas and its political subdivisions.

The Agency's exposure to credit risk as of June 30, 2019, is as follows:

| Standard and Poor's | | Moody's Investors Service | |
|---|---|---|---|
| Rating | Fair Value | Rating | Fair Value |
| AAA | $ 21,905,755 | Aaa | $ 57,759,867 |
| AA | 54,904,221 | Aa | 12,266,677 |
| A | 43,829,169 | A | 43,688,426 |
| BBB | 184,423,218 | Baa | 131,969,748 |
| BB | 75,605,347 | Ba | 77,309,748 |
| B | 50,837,486 | B | 21,416,823 |
| CCC or below | 14,139,386 | Caa or below | 3,171,946 |
| Unrated | 2,932,622,637 | Unrated | 3,030,683,984 |
| Total | $ 3,378,267,219 | Total | $ 3,378,267,219 |
| Securities Lending Collateral | | | |
| Unrated | $ 469,822,525 | Unrated | $ 469,822,525 |

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and Investments (Continued)

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. The Agency has adopted the State Board of Finance Policy requiring the use of depository insurance and collateralization procedures to manage the risk that investments may not be returned for any other investments other than loaned securities. As of June 30, 2019, $157,982 of the Agency's investments were exposed to custodial credit risk.

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 places no limit on the amount it may invest in any one issuer. As of June 30, 2019, none of the Agency's investments represent 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 an investment policy that limits investment in foreign currency.

The Agency's exposure to foreign currency risk in U.S. dollars for investments and deposits at June 30, 2019, was as follows:

| | | | Investments | | | |
|---|---|---|---|---|---|---|
| Currency | | Fair Value | Fixed Income | Equities | Forward Contracts | Cash Deposits |
| Argentine Peso | ARS | $ 2,703,425 | $ 2,563,497 | | | $ 139,928 |
| Australian Dollar | AUD | 16,730,543 | | $ 16,730,543 | | |
| Brazilian Real | BRL | 7,504,624 | | 7,504,624 | | |
| British Pound Sterling | GBP | 295,879,193 | | 294,381,170 | $ 961,066 | 536,957 |
| Canadian Dollar | CAD | 18,029,666 | | 18,029,605 | | 61 |
| Danish Krone | DKK | 16,811,884 | | 16,209,460 | 602,424 | |
| Euro | EUR | 224,538,538 | | 224,480,774 | 66,051 | (8,287) |
| Hong Kong Dollar | HKD | 74,161,019 | | 74,158,878 | | 2,141 |
| Hungarian Forint | HUF | 1,979,686 | 1,979,686 | | | |
| Indian Rupee | INR | 471,354 | | | | 471,354 |
| Indonesian Rupiah | IDR | 9,594,758 | | 9,594,758 | | |
| Japanese Yen | JPY | 112,339,548 | | 111,708,399 | 161,252 | 469,897 |
| Malaysian Ringgit | MYR | 7,284,782 | 2,970,681 | 4,236,354 | 77,747 | |
| Mexican Peso | MXN | 7,056,950 | 84,512 | 6,972,438 | | |
| New Taiwan Dollar | TWD | 25,151,833 | | 24,538,740 | | 613,093 |
| New Zealand Dollar | NZD | 7,084,011 | | 7,084,011 | | |
| Norwegian Krone | NOK | 6,846,549 | 2,893,984 | 4,591,184 | (638,619) | |
| Polish Zloty | PLN | 1,990,446 | 1,990,446 | | | |
| South African Rand | ZAR | 56,646,319 | | 56,646,319 | | |
| South Korean Won | KRW | 39,631,108 | | 39,631,108 | | |
| Swedish Krona | SEK | 66,534,164 | | 67,624,063 | (1,089,925) | 26 |
| Swiss Franc | CHF | 79,863,234 | | 87,156,628 | (7,293,640) | 246 |
| Turkish Lira | TRY | 2,366,386 | | 2,366,386 | | |
| Totals | | $ 1,081,200,020 | $ 12,482,806 | $ 1,073,645,442 | $ (7,153,644) | $ 2,225,416 |

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.

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and Investments (Continued)

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, forward foreign currency exchange, and rights. 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.

The fair value balances and notional amounts of derivative instruments outstanding at June 30, 2019, classified by type, and the changes in fair value of such derivative instruments for the year then ended, as reported in the 2019 financial statements, are as follows:

| | Changes in Fair Value | | Fair Value at June 30, 2019 | | | |
|---|---|---|---|---|---|---|
| | Classification | Amount | Classification | Amount | Notional | |
| **Fiduciary funds** | | | | | | |
| Derivative investments: | | | | | | |
| Foreign currency forwards | Investment revenue | $ (786,001) | Investments | $ (129,476) | CHF | $ 7,007,745 |
| | Investment revenue | 3,901 | Investments | (724) | GBP | 166,279 |
| | Investment revenue | 41 | Investments | | HKD | |
| | Investment revenue | (2,033) | Investments | | JPY | |
| | Investment revenue | 618 | Investments | (281) | NOK | 5,444,898 |
| | Investment revenue | 106 | | 106 | SEK | 10,112,537 |
| | Investment revenue | 209,805 | Investments | 164,799 | USD | 5,755,503 |
| | Investment revenue | (495,599) | Investments | (129,498) | ZAR | 54,385,000 |
| | | $ (1,069,162) | | $ (95,074) | | |

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, 2019, ATRS had outstanding forward exchange currency contracts to purchase foreign currencies with contract amounts of $5,755,503 and market values of $5,920,302, resulting in a net gain of $164,799. Outstanding forward exchange currency contracts to sell foreign currencies with contract amounts of $12,814,073 had market values of $13,073,946, resulting in a net loss of $259,873.

NOTE 1: Summary of Significant Accounting Policies (Continued)

G. Deposits and 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, 2019, the liquidity pool had an average duration of 22.56 days and an average weighted final maturity of 105.37 days for USD collateral. The duration pool had an average duration of 19.89 days and an average weighted final maturity of 1,696.66 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, 2019, the fair value of the securities lending assets exceeded the securities lending liabilities by $35,585.

Guarantees – GIP CAPS Pine, L.P. ("GIP Pines"), extended a $145,000,000 loan to Highland Pellets, Ltd. ("Highland Pellets"), pursuant to a Credit Agreement dated February 22, 2016. Pinnacle Mountain Holding Company V, LLC. ("Pinnacle"), an affiliate of ATRS, acquired 100% of the issued and outstanding Class B units of Highland, LLC. ("Highland"), the sole member of Highland Pellets, pursuant to a Subscription Agreement on July 28, 2016. Pinnacle also extended a $26,000,000 loan to Highland pursuant to a Secured Term Promissory Note on September 12, 2017. On July 20, 2018, in order to provide GIP Pines with comfort that the Credit Agreement would be paid in full at maturity, ATRS entered into an agreement with the parties above to execute a Guaranty with the following considerations.

- Highland and Highland Pellets paid ATRS a $15,000,000 nonrefundable contingent liability fee related to its future obligations to guarantee the GIP Pines Credit Agreement.
- Highland and Highland Pellets paid GIP Pines $20,000,000 to reduce the principal outstanding under the GIP Pines Credit Agreement.
- Highland and Highland Pellets paid Pinnacle $15,000,000 to reduce principal outstanding under the Pinnacle Promissory Note. Highland had the right to request additional advances up to $5,000,000, if needed, in order to fund scheduled debt service due from Highland to GIP Pines.
- Highland and Highland Pellets paid all reasonable costs and expenses incurred by Pinnacle legal counsel and third-party consultants.

On November 9, 2018, the Credit Agreement was assigned from GIP Pines to JP Morgan Chase Bank, N.A. ("JP Morgan"). ATRS reaffirmed the existing Guaranty with JP Morgan. The Credit Agreement was amended on December 7, 2018, with an outstanding principal balance of $149,756,131 and a maturity date of October 8, 2021. No principal or interest was due or had been paid as of June 30, 2019.

NOTE 1: Summary of Significant Accounting Policies (Continued)

H. 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). Gifts or contributions are generally recorded in the accounts at acquisition value at the time received. Acquisition value is the market value if the Agency would have purchased the item. Depreciation is reported based on a straight-line method, with no salvage value. Estimated useful lives generally assigned are as follows:

| Assets: | Years |
|---|---|
| Equipment | 5-20 |

Capital assets activity for the year ended June 30, 2019, was as follows:

| | Beginning Balance | Additions | Retirements | Ending Balance |
|---|---|---|---|---|
| Fiduciary activities: | | | | |
| Equipment | $ 1,125,490 | | $ 61,231 | $ 1,064,259 |
| Less: Accumulated depreciation | 947,574 | $ 27,231 | 60,316 | 914,489 |
| Fiduciary activities, net | $ 177,916 | $ (27,231) | $ 915 | $ 149,770 |

I. Compensated Absences – Employee Leave

Annual leave is earned by all full-time employees. Upon termination, employees are entitled to receive compensation for their unused accrued annual leave up to 30 days. Liabilities for compensated absences are determined at the end of the year based on current salary rates.

Sick leave is earned by all full-time employees and may be accrued up to 120 days. Compensation up to a maximum of $7,500 for unused sick leave is payable to employees upon retirement.

Compensated absences are reported in the State's "Government-Wide" financial statements but are not reported as liabilities or expenditures in the governmental funds. However, the compensated absences payable attributable to this Agency's employee annual and sick leave as of June 30, 2019 and 2018, amounted to $445,890 and $533,706, respectively. The net changes to compensated absences payable during the year ended June 30, 2019, amounted to $87,816.

J. Post-Employment Benefits Other Than Pensions

Arkansas State Employee Health Insurance Plan (Plan)

Plan Description – The Department of Finance and Administration – Employee Benefits Division (DFA-EBD) provides medical and prescription drug benefits for eligible state employees and retirees. Policies for DFA-EBD related to medical and prescription drug plans are established by the State and Public School Life and Health Insurance Board (Board) and may include ad hoc benefit changes or annual cost redeterminations. For the current year, no ad hoc or cost redetermination changes occurred. The Constitution of Arkansas, Article 5, vests the General Assembly with legislative power to enact and amend duties of and benefit provisions of the Board and DFA-EBD, respectively, as published in Subchapter 4, Chapter 5 of Title 21 of the Arkansas Code Annotated. DFA-EBD is included in the State of Arkansas's Comprehensive Annual Financial Report (CAFR), which includes all applicable financial information, notes, and required supplementary information. That report may be obtained by writing to Department of Finance and Administration, 1509 West Seventh Street, Suite 403, Little Rock, Arkansas 72201 or by calling 501-682-1675.

NOTE 1: Summary of Significant Accounting Policies (Continued)

J. Post-Employment Benefits Other Than Pensions (Continued)

Arkansas State Employee Health Insurance Plan (Plan) (Continued)

The Agency contributes to the Plan, a single employer defined benefit OPEB plan administered by the DFA-EBD, on a monthly basis. The Board establishes medical and prescription drug benefits for three classes of individuals covered as follows: active employees, terminated employees with accumulated benefits, and retires and beneficiaries. The Plan is established on the basis of a pay-as-you-go financing requirement, and no assets are accumulated in a trust as defined by Governmental Accounting Standards Board (GASB) Statement No. 75. The State's annual OPEB cost for the Plan is based on an actuarially determine calculated amount made in accordance with GASB Statement No. 75.

Funding Policy – Employer contributions to the Plan are established by Ark. Code Ann. § 21-5-414 not to exceed $450 per budgeted position. Employees, retirees, and beneficiaries contribute varying amounts based on the type of coverage and inclusion of family members. Retirees that are Medicare eligible will have their benefits coordinated with Medicare Part A and B with the Plan being the secondary payer. The portion of the State's annual OPEB liability attributable to ATRS as of June 30, 2019, was $5,098,111.

K. 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, 2019. 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.

L. 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, 2019, the reserve accounts were funded at a level that complied with the code provisions.

| | Total |
|---|---|
| Members' deposit account reserve | $ 11,151,764,896 |
| Employers' accumulation account reserve | (5,848,500,611) |
| Retirement reserve | 11,856,275,769 |
| Teacher deferred retirement option plan account reserve | 466,986,731 |
| Survivor benefit account reserve | 105,863,197 |
| Income - expense account reserve | 9,231,791 |
| Total | $ 17,741,621,773 |

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.

NOTE 1: Summary of Significant Accounting Policies (Continued)

L. Reserves (Continued)

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.

M. Subsequent Events

On June 30, 2014, Pinnacle Mountain Holding Company III, LLC (“PMHC”), an affiliate of ATRS, entered an agreement with Big River Steel Holdings, LLC ("BRS Holdings"), to acquire 200 Common Units or a 20% equity interest, for capital contributions of $81,000,000 and credit support of $12,000,000. On October 31, 2019, U.S. Steel Holdco, LLC, purchased a 49.9% equity interest in BRS Holdings for $648,000,000. As a result of the purchase, PMHC's 200 Common Units were converted to 362 Class B Common Units with a value of $260,000,000.

NOTE 2: Net Pension Liability

The components of the net pension liability of the participating employers at June 30, 2019, were as follows:

| | | |
|---|---|---|
| Total pension liability | $ | 21,912,986,823 |
| Plan net position | | (17,741,621,773) |
| Net pension liability | $ | 4,171,365,050 |
| Plan net position as a percentage of the total pension liability | | 80.96% |

Actuarial Assumptions – The total liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all prior periods included in the measurement:

| | |
|---|---|
| Wage inflation rate | 2.75% |
| Salary increases | 2.75 - 7.75% |
| Investment rate of return | 7.50% |

Mortality rates were based on the RP-2014 Mortality Tables for Males and Females adjusted using projection scale MP-2017 Table from 2006.

The actuarial assumptions used in the June 30, 2019, valuation were based on the results of an actuarial experience study for the period July 1, 2010 through June 30, 2015.

NOTE 2: Net Pension Liability (Continued)

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.

For each major asset class that is included in the pension plan's target asset allocation as of June 30, 2019, these best estimates are summarized in the following table:

| Asset Allocation | Target | Long-Term Expected Real Rate of Return |
|---|---|---|
| Total equity | 53.0% | 5.1% |
| Fixed income | 15.0% | 1.4% |
| Alternatives | 5.0% | 4.2% |
| Real assets | 15.0% | 5.0% |
| Private equity | 12.0% | 6.3% |
| Cash equivalents | 0.0% | 0.6% |
| | 100.0% | |

Single Discount Rate – A single discount rate of 7.50% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.50%. 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 7.50%, 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 | | |
|---|---|---|---|
| | 1% Decrease 6.50% | Current Rate 7.50% | 1% Increase 8.50% |
| Net pension liability | $ 6,858,101,228 | $ 4,171,365,050 | $ 1,943,113,576 |

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 1

# ARKANSAS TEACHER RETIREMENT SYSTEM
## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
## FOR THE TEN-YEAR PERIOD ENDED JUNE 30, 2019

| | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013* | 2012* | 2011* | 2010* |
|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL PENSION LIABILITY | | | | | | | | | | |
| Service cost | $ 325,464,537 | $ 315,864,318 | $ 307,786,503 | $ 305,086,337 | $ 298,134,477 | $ 326,999,276 | | | | |
| Interest | 1,551,511,422 | 1,504,613,059 | 1,485,759,965 | 1,433,768,167 | 1,371,168,271 | 1,326,709,192 | | | | |
| Changes in benefit terms | | | (469,205,711) | | | (27,405,705) | | | | |
| Difference between actual and expected experience | 119,427,343 | (7,365,993) | (76,812,667) | (15,341,738) | 123,519,055 | (103,017,525) | | | | |
| Changes in assumptions | | | 1,374,950,899 | | | | | | | |
| Benefit payments | (1,205,326,555) | (1,160,738,238) | (1,092,952,357) | (1,035,958,950) | (970,719,484) | (914,250,015) | | | | |
| Refunds | (9,679,783) | (9,455,405) | (10,874,003) | (10,145,471) | (10,774,122) | (10,485,103) | | | | |
| NET CHANGE IN TOTAL PENSION LIABILITY | 781,396,964 | 642,917,741 | 1,518,652,629 | 677,408,345 | 811,328,197 | 598,550,120 | | | | |
| TOTAL PENSION LIABILITY - BEGINNING OF YEAR | 21,131,589,859 | 20,488,672,118 | 18,970,019,489 | 18,292,611,144 | 17,481,282,947 | 16,882,732,827 | | | | |
| TOTAL PENSION LIABILITY - END OF YEAR (A) | $ 21,912,986,823 | $ 21,131,589,859 | $ 20,488,672,118 | $ 18,970,019,489 | $ 18,292,611,144 | $ 17,481,282,947 | | | | |
| PLAN NET POSITION | | | | | | | | | | |
| Contributions - employer | $ 430,864,656 | $ 424,488,126 | $ 414,954,939 | $ 410,358,229 | $ 408,230,472 | $ 404,920,440 | | | | |
| Contributions - member | 141,885,632 | 138,766,747 | 133,109,939 | 131,100,983 | 128,555,684 | 125,225,906 | | | | |
| Net investment income | 898,384,867 | 1,824,094,695 | 2,289,818,591 | 35,579,657 | 632,166,951 | 2,429,334,097 | | | | |
| Benefit payments | (1,205,326,555) | (1,160,738,237) | (1,092,952,357) | (1,035,958,950) | (970,719,484) | (914,250,015) | | | | |
| Refunds | (9,679,783) | (9,455,405) | (10,874,003) | (10,145,471) | (10,774,122) | (10,485,103) | | | | |
| Administrative expense | (7,134,784) | (9,336,430) | (7,825,595) | (8,059,030) | (8,034,857) | (8,034,236) | | | | |
| NET CHANGE IN PLAN NET POSITION | 248,994,033 | 1,207,819,496 | 1,726,231,514 | (477,124,582) | 179,424,644 | 2,026,711,089 | | | | |
| PLAN NET POSITION - BEGINNING OF YEAR | 17,492,627,740 | 16,284,808,244 | 14,558,576,730 | 15,035,701,312 | 14,856,276,668 | 12,829,565,579 | | | | |
| PLAN NET POSITION - END OF YEAR (B) | $ 17,741,621,773 | $ 17,492,627,740 | $ 16,284,808,244 | $ 14,558,576,730 | $ 15,035,701,312 | $ 14,856,276,668 | | | | |
| NET PENSION LIABILITY - END OF YEAR (A) - (B) | $ 4,171,365,050 | $ 3,638,962,119 | $ 4,203,863,874 | $ 4,411,442,759 | $ 3,256,909,832 | $ 2,625,006,279 | | | | |
| Plan net position as a percentage of total pension liability | 80.96% | 82.78% | 79.48% | 76.75% | 82.20% | 84.98% | | | | |
| Covered employee payroll | $ 3,027,154,131 | $ 2,986,026,715 | $ 2,921,965,125 | $ 2,888,392,668 | $ 2,873,988,053 | $ 2,850,860,174 | | | | |
| Net pension liability as a percentage of covered employee payroll | 137.80% | 121.87% | 143.87% | 152.73% | 113.32% | 92.08% | | | | |

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

ARKANSAS TEACHER RETIREMENT SYSTEM
SCHEDULE OF CONTRIBUTIONS
FOR THE TEN-YEAR PERIOD ENDED JUNE 30, 2019

Schedule 2

| | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013* | 2012* | 2011* | 2010* |
|---|---|---|---|---|---|---|---|---|---|---|
| Actuarially-determined contribution | $ 447,791,482 | $ 422,365,685 | $ 423,846,831 | $ 437,434,470 | $ 474,773,530 | $ 485,904,529 | | | | |
| Actual contribution | 430,864,656 | 424,488,126 | 414,954,939 | 410,358,229 | 408,230,472 | 404,920,440 | | | | |
| Contribution deficiency (excess) | $ 16,926,826 | $ (2,122,441) | $ 8,891,892 | $ 27,076,241 | $ 66,543,058 | $ 80,984,089 | | | | |
| Covered employee payroll | $ 3,027,154,131 | $ 2,986,026,715 | $ 2,921,965,125 | $ 2,888,392,668 | $ 2,873,988,053 | $ 2,850,860,174 | | | | |
| Actual contribution as a percentage of covered employee payroll | 14.23% | 14.22% | 14.20% | 14.21% | 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 3

ARKANSAS TEACHER RETIREMENT SYSTEM
SCHEDULE OF INVESTMENT RETURNS
FOR THE TEN-YEAR PERIOD ENDED JUNE 30, 2019

| | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013* | 2012* | 2011* | 2010* |
|---|---|---|---|---|---|---|---|---|---|---|
| Annual money-weighted rate of return | 5.25% | 11.46% | 16.09% | 0.24% | 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.

NOTE 1: Summary of Significant Information Related to Required Supplementary Schedules

A. Changes in Benefit Terms

There were no significant changes in benefit terms for the year ended June 30, 2019.

B. Changes in Assumptions

There were no significant changes in assumptions for the year ended June 30, 2019.

C. Methods and Assumptions Used in Calculations of Actuarially-Determined Contributions

| | |
|---|---|
| Valuation date: | June 30, 2019 |
| | The actuarially-determined contribution rates are calculated as of June 30 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 |
| Remaining amortization period | 28 years |
| Asset valuation method | 4-year closed period ; 20% corridor |
| Wage inflation | 2.75% |
| Projected salary increases | 2.75 - 7.75% |
| Investment rate of return | 7.50% compounded annually |
| Mortality table | RP-2014 Healthy Annuitant, Disabled Annuitant, and Employee Mortality Tables were used for males and females. Mortality rates were adjusted using projection scale MP-2017 from 2006. |

| | Scaling Factor | |
|---|---|---|
| Table | Males | Females |
| Healthy Annuitant | 101% | 91% |
| Disabled Annuitant | 99% | 107% |
| Employee Mortality | 94% | 84% |

# ARKANSAS TEACHER RETIREMENT SYSTEM
## SCHEDULE OF SELECTED INFORMATION
## FOR THE FIVE-YEAR PERIOD ENDED JUNE 30, 2019

Schedule 4

| | For the Year Ended June 30, | | | | |
|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2016 | 2015 |
| Total Assets | $ 18,281,516,802 | $ 18,088,381,003 | $ 16,792,590,856 | $ 15,236,170,821 | $ 15,746,448,807 |
| Total Liabilities | 539,895,029 | 595,753,263 | 507,782,612 | 677,591,091 | 710,747,795 |
| Net Position Restricted for Pension Benefits | 17,741,621,773 | 17,492,627,740 | 16,284,808,244 | 14,558,576,730 | 15,035,701,312 |
| Total Additions (Losses) | 1,471,135,154 | 2,387,349,568 | 2,837,883,469 | 577,038,869 | 1,168,953,107 |
| Total Deductions | 1,222,141,121 | 1,179,530,072 | 1,111,651,955 | 1,054,163,451 | 989,528,463 |